MARKETING BEHAVIOUR OF GROUNDNUT FARMERS IN ANANTAPURAMU DISTRICT OF ANDHRA PRADESH

A. VINEETHA

B.Sc. (Ag.)

MASTER OF SCIENCE IN AGRICULTURE
(AGRICULTURAL EXTENSION)

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MARKETING BEHAVIOUR OF GROUNDNUT FARMERS IN ANANTAPURAMU DISTRICT OF ANDHRA PRADESH

BY

A. VINEETHA

B.Sc. (Ag.)

THESIS SUBMITTED TO THE
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CHAIRPERSON: Dr. V. SAILAJA

ANGRAU

DEPARTMENT OF AGRICULTURAL EXTENSION

SRI VENKATESWARA AGRICULTURAL COLLEGE, TIRUPATI
ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY
GUNTUR – 522 034, A.P.

2018

DECLARATION

I, **A. VINEETHA** hereby declare that the thesis entitled "**MARKETING BEHAVIOUR OF GROUNDNUT FARMERS IN ANANTAPURAMU DISTRICT OF ANDHRA PRADESH"** submitted to the **Acharya N. G. Ranga Agricultural University** for the degree of **Master of Science 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 **(A. VINEETHA)**
I.D.No. TAM/2016-18

Date :

CERTIFICATE

This is to certify that **Miss. A. VINEETHA** has satisfactorily prosecuted the course of research and that the thesis entitled **"MARKETING BEHAVIOUR OF GROUNDNUT FARMERS IN ANANTAPURAMU DISTRICT OF ANDHRA PRADESH"** 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.

Place : Tirupati

Date :

(Dr. V. SAILAJA)
Chairperson
Associate Professor
Dept. of Agricultural Extension
S.V. Agricultural College,
Tirupati – 517 502.

CERTIFICATE

This is to certify that the thesis entitled **"MARKETING BEHAVIOUR OF GROUNDNUT FARMERS IN ANANTAPURAMU DISTRICT OF ANDHRA PRADESH"** submitted in partial fulfilment of the requirements for the degree of **MASTER OF SCIENCE IN AGRICULTURE** of the Acharya N. G. Ranga Agricultural University, Guntur is a record of bonafide research work carried out by **Miss A. VINEETHA** 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.

Thesis approved by the Students Advisory Committee

Chairperson : **Dr. V. SAILAJA**
Associate Professor
Department of Agricultural Extension
S.V. Agricultural college,
Tirupati – 517 502.

_____

Member : **Dr. V. SATHYA GOPAL**
Professor and Head
Department of Agricultural Extension
Agricultural College,
Bapatla – 522 101

_____

Member : **Dr. V. SUMATHI**
Professor
Department of Agronomy
S.V. Agricultural College,
Tirupati – 517 502.

_____

Date of final viva – voce:

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LIST OF SYMBOLS AND ABBREVIATIONS

%	:	Percentage
ADA	:	Assistant Director of Agriculture
AEO	:	Agriculture Extension Officer
ANGRAU	:	Acharya N.G. Ranga Agricultural University
AO	:	Agriculture Officer
DDA	:	Deputy Director of Agriculture
et al.	:	and others
Fig.	:	Figure
Ha	:	Hectare
i.e.	:	That is
JDA	:	Joint Director of Agriculture
kg ha^{-1}	:	Kilogram per hectare
KVK	:	Krishi Vigyan Kendra
M	:	Metric
MLR	:	Multiple Linear Regression
n	:	Number of respondents
NGOs	:	Non-governmental organizations
PACCS	:	Primary Agricultural Cooperative Credit Society
RARS	:	Regional Agricultural Research Station
S.No	:	Serial number
SD	:	Standard deviation
VAO	:	Village Administrative Officer
viz.,	:	Namely

ABSTRACT

Author of the thesis	:	**A. VINEETHA**
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Groundnut is a major oilseed crop that has achieved tremendous popularity in the country. It is one of the most important food and cash crop of the country. While being a valuable source of all the nutrients, it is one of the low priced commodity. India is the world's leading producer of groundnut with 25.00 per cent share in the production. The all India production of groundnut was estimated at 6,733 thousand tons with an average of 991 kg ha^{-1}. In Andhra Pradesh, groundnut crop alone covered an area of 82.39 per cent of the total area under oilseeds. Anantapuramu is one of the predominant groundnut cultivated district in the state with an extent of 6,24,000 hectares with the production of 1,64,000 tons.

An efficient marketing system is precondition for ensuring remunerative prices to the producers for their products and to deliver maximum satisfaction to the consumers for the price they pay. Efficient marketing system helps the farmer to increase the production and productivity on one hand and getting remunerative price, generating additional income and employment on the other.

The groundnut farmers are at a disadvantage particularly in the marketing of groundnut as they lose their bargaining strength and got exploited. Monthly data on minimum prices of groundnut in Anantapuramu

regulated market yard show a highly erratic behaviour. Such kind of fluctuations in the prices of groundnut reflects on the poor withholding capacity of the marginal and small farmers while marketing their final produce. Hence, there is every need to thoroughly understand the groundnut marketing by the farmers in Anantapuramu district of Andhra Pradesh state. Keeping in view the above factors, an attempt was made to study the "Marketing behaviour of groundnut farmers in Anantapuramu district of Andhra Pradesh".

Ex-post-facto research design was used in the present investigation. Anantapuramu district of Andhra Pradesh was purposively selected as groundnut was being extensively cultivated in the district. Out of 63 mandals of Anantapuramu district, three mandals were purposively selected based on the highest area under groundnut cultivation. Four villages from each mandal were selected based on highest area under groundnut cultivation, thus making a total of twelve villages for the study. From each of the twelve selected villages, 10 respondents were selected by following simple random sampling procedure, thus making a total of 120 respondents. The data were collected by personal interview method through a well structured interview schedule and analyzed by employing suitable statistical tools.

The analysis of profile characteristics of the groundnut farmers indicated that majority of the farmers were middle aged with middle to high school level education, less than 2.5 acres of area under groundnut cultivation with medium farming experience, annual income, extension contact, trainings received, agricultural inputs acquisition pattern and social participation,

Majority of the farmers had medium level of marketing behaviour. This trend was observed because majority of the groundnut farmers had medium levels of planning orientation, production orientation, marketing orientation, marketing information sources utilization, decision making ability, risk taking ability and innovativeness which resulted in medium level of marketing behaviour.

The independent variables viz., education, annual income, material possession, extension contact, trainings received and social participation were found to be positively significant with the marketing behaviour of the groundnut farmers whereas age, area under groundnut cultivation, experience in groundnut cultivation and agricultural inputs acquisition pattern were

found negatively significant with the marketing behaviour of the groundnut farmers. All the selected 10 independent variables put together explained about 76.00 per cent variation in the marketing behaviour of groundnut farmers. The partial regression co-efficient values implied that annual income, material possession and extension contact were the most important variables that contributed to most of the variation in the marketing behaviour of groundnut farmers.

The major problems faced by the groundnut farmers were lack of timely market information lack of remunerative prices, improper weighment, fluctuation in market prices, involvement of middle men, high cost of labour during harvesting, lack of cooperative marketing systems, high commission charges, long distances to the markets, delayed cash payment, scarcity of labour for transportation and marketing, absence/insufficient storage facilities and high cost of transportation.

The major suggestions given by the farmers were provision of information about current marketing situations , establishing cooperative and rapid expansion of regulated marketing systems , provision of minimum support price for groundnut, efforts to minimize the commission charges by the concerned authorities , adequate and appropriate transport facilities, provision of sufficient storage facilities, establishment of procurement centers in the villages and recruitment of mandal level marketing officials by the government.

A suitable strategy has been developed keeping in view of the results obtained in the study for efficient marketing of groundnut by the farmers.

Chapter ~ I

Introduction

Chapter – I

INTRODUCTION

Agriculture in India plays a major role in the economic development and it is also the backbone of Indian economy. It provides livelihood to the majority of the population in India. The scenario of Indian agriculture has changed drastically after first green revolution of 1960's and Indian farmer is using wide range of chemical pesticides to limit the losses from pests and diseases. Sustainable growth in agricultural sector is the 'need of the hour' for the country as a whole. Any decline in its hectarage and production will have a perceivable impact on the country's economy and food security. The crop yields are not increasing as expected even though the cost of cultivation is increased many folds due to indiscriminate use of inputs resulting in poor quality of produce leading to poor returns. In order to have a sound agricultural base, rapid uplift of rural people and millions of farmers of the country need to be persuaded to adopt improved agricultural technologies which focus on reduction in cost of cultivation. Indian agriculture has shown encouraging results of changing from traditional to modern ways of farming due to the adoption of latest agricultural technologies by the farming community.

The major crops grown in India can be divided into four main categories which includes food crops (rice, wheat and maize etc.), cash crops (oilseeds, sugarcane and tobacco etc.), plantation crops (Tea, coffee and rubber etc.) and horticulture crops. Among all the cash crops oilseeds playing a vital role in agricultural and industrial economics of India next to food crops. India is one of the largest producers of oilseeds in the world and occupies an important position in the Indian agricultural economy. India has the distinction of world's largest grower of oilseeds with an area of 26.13 million hectares and production of 25.30 million tons (DES, 2016-17). Oilseeds provide vegetable oils which not only form an essential part of human diet but

also serve as an important raw material for the manufacture of soaps, paints, varnishes, hair oils, lubricants and various other products. Oil cakes are used as cattle feed and manures. The requirement of oils and fats in the country are met by the oilseeds like groundnut, rapeseed, mustard, sesame, sunflower, safflower, niger, castor, soybean and cotton seed.

Among all the oilseed crops groundnut is an important oilseed and supplementary food crop. It is also called as 'the king of oilseeds'. It is one of the most important food and cash crop of our country. While being a valuable source of all the nutrients, it is also a low priced commodity. Groundnut popularly known as 'wonder nut' and 'poor man's cashew nut'. The major groundnut producing countries in the world are India, China, Nigeria, Senegal, Sudan, Burma and the United States of America**.** India is the world's leading producer of groundnut with 25 per cent share in production.

Groundnut scenario in India

Groundnut is one of the most important oilseed crop of India. The all India production of groundnut was estimated at 6733 thousand tons with an average of 991 kg/ha. Among all the states five states viz., Andhra Pradesh, Gujarat, Karnataka, Maharashtra and Rajasthan collectively contributed 83.70% of the national production.

Table 1.1. Area, Production and productivity of groundnut in India

Year	Area ('000 ha)	Production ('000 t)	Productivity (kg ha^{-1})
2011-2012	5263.74	6963.70	1323
2012-2013	4721.03	4693.88	994
2013-2014	5504.91	9713.90	1765
2014-2015	4768.65	7401.71	1552
2015-2016	4596.33	6733.33	1465

Source: Ministry of Agriculture & Govt. of India (2015-2016)

Groundnut Scenario in Andhra Pradesh

Andhra Pradesh is one of the important state in the country growing different oilseed crops like groundnut, sunflower, soyabean and castor extensively. The area covered under oilseeds was 12.29 lakh hectares covering 16.57% of the total cropped area, while the groundnut crop alone covered an area of 82.39% of the total area under oil seeds (Directorate of oilseeds Development, Hyderabad, 2016-2017) and with an average yield of 595 kg/ha. Further, the area and production of groundnut was high in Rayalaseema districts of Andhra Pradesh. The major groundnut producing districts are Anantapuramu, Chittoor, Kurnool and Kadapa. All the four districts of the region are jointly accounted for 97% of the state's acreage.

Table 1.2. Area, Production and productivity of groundnut in Andhra Pradesh

Year	Area ('000 ha)	Production ('000 tons)	Productivity (kg ha^{-1})
2012-2013	1157	780	674
2013-2014	1176	881	749
2014-2015	874	493	564
2015-2016	775	801	1033
2016-2017	1013	603	595

Source: Agricultural statistics at a glance (2016-2017)

Groundnut Scenario in Anantapuramu district

In Andhra Pradesh the predominant groundnut cultivated district is Anantapuramu. The highest and half of the state production could be attributed to Anantapuramu district and the crop is grown in an extent of 6,24,000 hectares with the production of 1,64,000 tons.

Table 1.3. District wise area, production and productivity of groundnut in the Rayalaseema region of Andhra Pradesh

S. No.	District	Area ('000 ha)	Production ('000 t)	Productivity (kg ha^{-1})
1.	Anantapuramu	624	164	264
2.	Chittoor	147	120	813
3.	Kurnool	131	135	1033
4.	Kadapa	65	66	1002

Source: Agricultural statistics at a glance (2016-2017)

Groundnut is taken up on large scale by most of the farmers to earn profits but they are being exploited by middlemen and commission agents who control the market prices for their advantage. So the profit from groundnut is divided into farmers and middlemen or commission agents. If we diagnose the reasons for low returns, it is evident that the farmers in their anxiety to reap rich harvest have been using fertilizers and pesticides excessively and indiscriminately, resulting in increased cost of cultivation. Further, inefficient use of available resources is being commonly reported to be the prime cause of low productivity under the given set of ecological, social, managerial and technological conditions at a particular point in time. The inefficiencies in the use of various resources affect the productivity of the crop and also their costs and returns structure and producer's incentive as well. Hence, the success of farm business largely depends on the availability and the proper use of resources particularly of land, labour and capital.

In the world of modern agriculture and globalization, marketing plays a major role for getting more profits by wisely using information for trading produce. The farmers who are cultivating the groundnut are facing the high level of problems in the regulated markets during selling period due to improper weighment, delayed cash payment, lack of cooperative marketing system etc. Marketing of any agricultural produce requires knowledge about

the vast information and demand of particular commodity with which a person deals. It is also true in the case of groundnut marketing. Middlemen are playing an important role in the marketing of groundnut there by reducing the margin of groundnut farmers. This situation needs to be corrected by sensitizing the farmers on the above aspects and to advise them on measures which would help them to increase the yields and sell their produce economically what the market want rather than selling their produce at unremunerated prices. However, an efficient marketing system is pre requisite for ensuring remunerative prices to the producers for their products and to deliver maximum satisfaction to the consumers for the price they pay. An efficient marketing system helps the farmer to increase the production and productivity on the one hand and to generate additional income and employment on the other.

Under these circumstances, there is every need for development of an efficient marketing system along with efficient production management in the whole range of marketing activities viz., avoiding distress sale at the time of harvest, storage, product standardization and number of intermediaries etc. Further marketing system should have provision for price information, marketing technology transfer, forward and backward linkages for increasing marketing access etc. This requires intensified effort on marketing policy research, marketing intelligence, centers of excellence, mode of operations and new approaches to generate appropriate marketing technologies.

An efficient network of agricultural marketing system is a vital link between farmers and consumers. Higher productivity gained in the farmers fields is lost when they take the produce to market. Though the government is implementing various programs like Co-operative marketing societies, state trading corporation etc., still the weaknesses prevailing in the marketing system such as pre-harvest or immediate post-harvest sales at low prices, tie in sales, huge benefits obtained by the intermediaries and the absence of

adequate number of bidders in regulated markets etc., which resulted in uneconomic price to the farmers. In the light of above facts, it is felt necessary to conduct a study to find out the marketing behaviour of the groundnut farmers in the study area.

1.1 NEED AND IMPORTANCE OF THE STUDY

The groundnut farmers are at a disadvantage particularly in the marketing of their produce as they lose their bargaining strength and got exploited. It is due to various malpractices taking place while marketing the produce by the involvement of market intermediaries like commission agents, traders, brokers etc. All the market intermediaries are taking the advantage of illiteracy and ignorance of the farmers. In addition to this there is no fixed price/pre-determined price for the produce. As the farmer is low literate he is unable to get the market information regarding the price of the produce, storage/warehouse facilities available in the market, auction method followed in the market etc.

Monthly data on minimum prices of groundnut in Anantapuramu regulated market yard show a highly erratic behaviour. Such kind of fluctuations in the prices of groundnut reflects on the poor withholding capacity of the marginal and small farmers while marketing their final produce. Further, the groundnut farmers purchased seeds, fertilizers and pesticides from private sources, who charged more on the sale of inputs and also higher interest rates on the credit obtained by the farmers which finally lead to high cost of production.

In this backdrop, it has been increasingly felt that providing market extension service would be an option to mitigate the aforesaid problems. Market extension service should be provided to guide the farmers about the enterprise and the varieties suitable to the area based on the market demand. Apart from all these factors, the marketing behaviour of the groundnut farmer is also one of the vital aspect which play an important role in attaining the remunerative price.

Thus it is duly justified to take up a problem, which reflects the grass root reality of much hype and well-adorned groundnut cultivation, and to critically examine the real plight in selling the produce and to elicit suggestions to overcome various problems in marketing of the groundnut. The results of the present study might also be useful for the agricultural department, extension personnel and policy makers to deliver their duties in an efficient manner. With this background, the present study was taken up with the following objectives.

1.2. OBJECTIVES OF THE STUDY

Keeping this in view, the research problem entitled 'Marketing behaviour of groundnut farmers in Anantapuramu district of Andhra Pradesh' was designed with the following objectives

Objectives

1. To study the Profile characteristics of groundnut farmers.
2. To analyze the marketing behaviour of groundnut farmers.
3. To find out the relationship between the profile characteristics of groundnut farmers and their marketing behaviour.
4. To identify the problems encountered by the groundnut farmers in marketing of the produce.
5. To elicit the suggestions from the groundnut farmers and to develop a suitable marketing strategy based on the suggestions.

1.3 SCOPE OF THE STUDY

The studies conducted in the area of marketing behaviour of groundnut farmers are very limited. Some of the studies were conducted on marketing behaviour of the vegetable growers, floriculture, banana etc. Further these studies were restricted only to the personal characteristics, mode of packing, mode of transport, distance of the market, place of sale, planning orientation, production orientation, marketing orientation, information sources utilization and terms and conditions for sale etc. The aspects like Agricultural inputs acquisition pattern, decision making ability, risk taking ability, innovativeness of farmers were not investigated in the past studies. Hence, a study which reveals the marketing behaviour of groundnut farmers, will help the extension worker and other agencies to know the present level of marketing behaviour of the farmers.

The present study would throw light on the relationship as well as direct and indirect effects of profile characteristics associated with the marketing behaviour of groundnut farmers. Problems faced by the groundnut farmers and their suggestions to overcome which would also helpful to planners, policy makers, scientists and administrators to overcome the constraints. The findings of the study were also useful to the planners for preparing the programs concerned with groundnut marketing; to the scientists in formulating location specific research programs; to the trainers for developing training programs in the area of market led extension.

1.4 LIMITATIONS OF THE STUDY

Since all the social science researches were subjected to certain limitations, this study was no exception to that rule. As such the study has certain limitations as indicated below.

1. One of the important limitations of the study is lack of adequate time, physical facilities and finances.

2. The items included in the study for detailed investigation were also limited because it was not possible to study all the areas in a short time.

3. 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.

4. The area of the study was restricted to three mandals viz., Vajrakarur, Kanaganapalle and Ramagiri of Anantapuramu district. Hence generalizations if any based on this could be restricted to other areas with similar conditions.

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

6. The study was limited to a sample of 120 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' gave a brief account of need and importance of the study, specific objectives, 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 and appendix were appended at the end.

Chapter ~ II

Review of Literature

Chapter – II

REVIEW OF LITERATURE

Review of literature is of paramount importance for any research study as it helps to acquire a broad general background in a given field. It helps to identify the gaps in research findings, the documentation and the events relating to a particular aspect of investigation. Thus available literature on profile characteristics and components of marketing behaviour of groundnut farmers was collected and organized under the following headings for the sake of clarity.

2.1 Profile characteristics of groundnut farmers

2.2 Marketing behaviour of groundnut farmers

2.3 Relationship between the profile characteristics and marketing behaviour of farmers

2.4 Problems encountered by the groundnut farmers

2.5 Suggestions to overcome the problems of groundnut farmers

2.6 Conceptual model of the study

2.1 PROFILE CHARACTERISTICS OF GROUNDNUT FARMERS

2.1.1 Age

Naik (2006) found that 39.33 per cent of the groundnut farmers belonged to middle age category followed by old (30.67%) and young age (30.00%) categories.

Pallavi (2006) concluded that a little less half of the respondents belonged to young age (48.75%) followed by middle (40.00%) and old age (11.25%) groups.

Chavda (2007) revealed that the more than half of the groundnut farmers (58.50%) belonged to middle age group followed by old age (30.00%) and young age (11.50%) groups.

Begum (2008) indicated that majority (71.67%) of the groundnut farmers belonged to middle age category followed by young (17.50%) and old age (10.83%) categories.

Khodifad (2010) revealed that majority (61.88%) of the groundnut growers were in the middle age group followed by old (21.87%) and young age (16.25%) groups.

Kumar and Popat (2010) reported that majority (67.20%) of the groundnut farmers belonged to middle age category followed by old (16.70%) and young age (16.10%) categories

Kikon (2010) concluded that majority (83.33%) of the demonstrator farmers in groundnut were middle aged, whereas 10.00 and 6.67 per cent of them belonged to ‘old age’ and ‘young age’ categories respectively.

Kalyan (2011) concluded that 52.50 per cent of the groundnut farmers belonged to middle age category followed by young (25.84%) and old age (21.66%) categories.

Saiva (2012) reported that majority of the groundnut farmers (65.00 %) belonged to middle age group followed by old (21.11%) and young (13.89%) age groups.

Ranjan (2013) concluded that more than half (59.16%) of the groundnut farmers belonged to middle age category followed by old (22.50%) and young age (18.34%) categories.

Maratha and Badodiya (2017) reported that more than half (60.00%) of the vegetable growers belonged to middle age group followed by young age (21.67%) and old (18.33%) age groups.

2.1.2 Education:

Naik (2006) revealed that 27.33 per cent of the ground nut farmers were educated up to primary school level followed by functionally literate (21.33 %), illiterates (19.33 %), middle school (14.67 %), high school (12.67 %) and higher secondary/PUC (4.67 %).

Pallavi (2006) revealed that more than half of the respondents were illiterate (58.75%) followed by primary education (37.50%) and only a meager percentage (3.75%) of the respondents had high school education.

Chavda (2007) revealed that the majority of groundnut farmers (71.00%) had medium level of education followed by low (17.00%) and high (12.00%) levels of education.

Aghazia (2008) reported that, a little more than one third of the farmers were illiterate (36.30%) followed by primary school (34.82%), middle school (12.60%), high school (8.88%) and degree holders (7.40%).

Begum (2008) reported that 30.00 per cent of the groundnut farmers were illiterate followed by functionally literate (18.33%), middle school (16.67%), primary school (15.83%), high school (15.00%) and college level (4.17%) categories.

Chidananda (2008) found that more than one third of the farmers (35.00%) were educated up to high school level, followed by 21.67 per cent up to middle school, 15.83 per cent up to primary school, 13.33 per cent up to intermediate level ,10.00 per cent illiterate and 4.17 per cent were educated up to graduate level.

Khodifad (2010) revealed that more than half (52.50%) groundnut growers had secondary school of education followed by primary school (27.50%), secondary school (8.13%) and no education (11.87%).

Kumar and Popat (2010) reported that 65.00 per cent of the groundnut farmers educated up to 10th standard followed by 17.90 per cent up to 7th standard, 10.00 per cent illiterate and 7.10 per cent can read and write.

Kikon (2010) concluded that more than half of the number of the demonstrator farmers (56.67%) studied up to 'high school' level followed by 16.66 per cent of them were graduates and only 3.33 per cent of them were illiterates.

Kalyan (2011) found that 23.33 per cent of the groundnut farmers were educated up to middle school level followed by illiterate (20.00%), functionally literate (13.34%), primary school (13.34%), high school (12.50%) and Intermediate (10.83%) categories and 6.66 per cent educated only up to college level.

Saiva (2012) revealed that 41.10 per cent of the groundnut farmers were functionally literate followed by 26.67 per cent were educated up to primary level followed by secondary school (20.56 %), 7.78 per cent illiterate and 3.89 per cent of them educated up to graduate and above college level of education.

Ranjan (2013) revealed that half of the groundnut farmers were under middle school (20.00%), high school (20.00%) and primary school (10.00%) education categories.

Maruddi *et al*. (2014) reported that 37.50 per cent of the farmers educated up to primary school followed by illiterate (31.66%), middle school (24.16%), secondary school (4.16%) and intermediate (2.50%) levels.

Hameed and Sawicka (2017) reported that more than one third (35.15%) of potato growers were educated up to degree, followed by 30.46 per cent of the farmers up to intermediate, 15.65 per cent up to degree, 11.71 per cent up to elementary school and 7.03 per cent educated up to middle school.

2.1.3 Area under Groundnut Cultivation

Javiya (2004) revealed that 32.00 per cent and 29.00 per cent of the groundnut farmers had medium and large size of land holding respectively. He further, revealed that 26.00 per cent and 13.00 per cent of respondents had small and marginal land holdings respectively.

Sahoo (2004) observed that 33.44 per cent of groundnut farmers had more than 2 ha of land, followed by 46.66 per cent of respondents had more than 4 ha of land and 20.00 per cent had less than 1 ha land.

Begum (2008) reported that 63.33 per cent of the groundnut farmers were marginal farmers followed by 22.50 per cent were small farmers and 14.17 per cent were big farmers.

Kumar and Popat (2010) reported that majority (64.44%) of the groundnut farmers had medium size of area under groundnut, followed by small (23.20%) and large (12.20%) size areas.

Kikon (2010) averred that majority (70.00 %) of the demonstrator groundnut farmers were marginal farmers followed by small (20.00%), semi–medium category (6.67%) and medium (3.33%) categories.

Kalyan (2011) concluded that 58.33 per cent of the groundnut farmers were small followed by marginal (29.17%) and big farmers (12.50%).

Saiva (2012) revealed that 51.67 per cent respondents were having 2 to 4 ha of land holding and 25.55 per cent having up to 2 ha of land while, only 22.78 per cent of groundnut farmers having more than 4 ha of land holding.

Ranjan (2013) revealed that 45.84 per cent of the groundnut farmers were small followed by marginal (33.33 %) and big farmers (20.83 %).

Kanniammal and Dhivya (2016) revealed that nearly half (49.00 %) of the farmers had five acres area under Jasmine cultivation, followed by 39.50 per cent had 5-10 acres, 9.50 per cent of the farmers had 11-15 acres and 2.00 per cent of the farmers had more than 15 acres.

2.1.4 Experience in Groundnut Cultivation

Naik (2006) revealed that 39.33 per cent of ground nut farmers had medium experience in groundnut cultivation, followed by high (34.67 %) and low (26.00%) levels of experience in groundnut cultivation.

Begum (2008) observed that 58.33 per cent of groundnut farmers had medium farming experience followed by low (30.83%) and high (10.84%) levels of farming experience.

Madhusekhar (2009) reported that 41.25 per cent of the chilli growers had medium experience followed by low (37.50%) and high (21.25%) levels of experience in chilli cultivation.

Viresh *et al.* (2010) reported that more than half (59.33 %) of the respondents had medium level of farming experience, followed by high (21.33%) and low (19.34%) levels of experience.

Kikon (2010) stated that 46.67 per cent of the demonstrator groundnut farmers had high farming experience followed by low (40.00%) and medium levels of experience (13.33%) in groundnut cultivation.

Kalyan (2011) found that majority of the groundnut farmers had medium farming experience (65.00%) followed by high (19.16%) and low (15.84%) levels of farming experience in groundnut cultivation.

Ranjan (2013) revealed that 43.34 per cent of the groundnut farmers had medium farming experience followed by high (30.00%) and low (26.66%) levels of farming experience in groundnut cultivation.

Maruddi *et al*. (2014) reported that nearly half (49.17%) of the groundnut farmers had low level of farming experience followed by medium(31.67%) and low(19.17%) levels of farming experience in groundnut cultivation.

Maratha and Badodiya (2017) reported that more than two third (68.33%) of the vegetable growers had medium level of experience, followed by high (21.67%) and low (10.00%) levels of experience.

2.1.5 Annual Income

Sahoo (2004) found that 83.34 per cent of groundnut farmers had an annual income of more than ₹ 30,000 followed by equal (8.33%) percentage of the groundnut farmers had up to ₹ 20,000 and ₹ 20,000 to ₹ 30,000.

Sasidhar (2004) reported that nearly half (49.17%) of the farmers belonged to medium income category, followed by low (26.67%) and high (24.16%) income categories.

Chavda (2007) revealed that the majority of groundnut farmers (67.50%) had medium annual income followed by high (16.50%) and low (16.00%) levels of annual income.

Madhusekhar (2009) observed that 40.62 per cent of chilli growers had medium economic status followed by low (33.75%) and high (25.63%) economic status groups.

Viresh *et al*. (2010) reported that 44.00 per cent of the respondents had low annual income, followed by medium (34.00%) and high (22.00%) levels of annual income.

Saiva (2012) revealed that majority (67.22%) of the groundnut farmers were under medium annual income group followed by high (17.78%) and low (15.00%) annual income groups respectively.

Sadvi *et al.* (2015) revealed that 50.00 per cent of the rice farmers were found in the medium annual group followed by low (34.00%) and high (16.00%) annual groups respectively.

Maratha and Badodiya (2017) reported that majority (69.17%) of the vegetable growers had medium level of annual income, followed by low (17.50%) and high (13.33%) levels of annual income.

2.1.6 Material Possession

Babu (2002) reported that 71.76 per cent of the operational research project beneficiaries belonged to medium level of material possession followed by low (20.00%) and high (8.23%) levels of material possession.

Obaiah (2004) indicated that more than half (52.14%) of the trained farmers had medium material possession while one third (30.00%) had high and 17.86 per cent with low material possession, whereas 45.71 per cent of the untrained farmers belonged to medium category of material possession followed by high (35.72%) and low (18.57%) material possession categories.

Pradiptaacharya (2005) revealed that half (51.66%) of the farmers had medium material possession followed by low (35.00%) and high (13.34%) levels of material possession.

Gangadhar (2009) indicated that 41.66 per cent of the cotton farmers had medium level of material possession followed by high (34.16%) and low (24.16%) levels of material possession.

Satyagopal (2009) expressed that just above one fourth (25.56%) of un-reached farmers were under ‘no material possession’ category, just above half (52.22%) had ‘1 to 4’, followed by 20.00 per cent had ‘5 to 8’ and only 2.22 per cent of un-reached farmers were under ‘9 and above’ category.

Ranjan (2013) revealed that most of the groundnut farmers (78.33%) had medium level of material possession followed by low (17.50%), high (4.17%) levels of material possession.

2.1.7 Extension Contact

Kumar (2006) showed that majority (76.67%) of groundnut farmers had medium extension contact followed by high (12.78%) and low (10.56%) levels of extension contact

Naik (2006) indicated that 40.66 per cent of the ground nut farmers had low level of extension contact followed by medium (36.67%) and high (22.67%) levels of extension contact.

Begum (2008) revealed that 57.50 per cent of groundnut farmers had medium extension contact followed by low (26.67%) and high (15.83%) levels of extension contact.

Madhusekhar (2009) inferred that 45.63 per cent had low extension contact, followed by medium (42.50%) and high (11.87%) levels of extension contact.

Kikon (2010) expressed that 43.33 per cent of the demonstrator groundnut farmers had high extension contact followed by medium (36.67%) and low (20.00%) levels of extension contact.

Kumar and Popat (2010) reported that majority (76.10%) of the groundnut farmers had high extension contact followed by medium (13.33%) and low (10.50%) levels of extension contact.

Arathy (2011) reported that 46.67 per cent of the respondents had medium extension contact followed by low (32.50%) and high (20.83%) levels of extension contact.

Kalyan (2011) revealed that more than half (56.66%) of the groundnut farmers were having medium extension contact followed by low (26.67%) and high (16.67%) levels of extension contact.

Saiva (2012) reported that majority (72.22%) of groundnut farmers were in medium extension participation category followed by high (15.00%) and low (12.78%) categories.

Ranjan (2013) indicated that 46.66 per cent of the respondents were having medium extension contact followed by low (39.17%) and high (14.17%) levels of extension contact.

Maratha and Badodiya (2017) reported that nearly two third (66.67%) of the respondents had medium extension contact followed by low (18.33%) and high (15.00%) levels of extension contact

2.1.8 Trainings Received

Feroz Khan (2003) reported that more than half (57.50%) of the coconut farmers were under medium level of training category (5-7 days) followed by 35.00 per cent and 7.50 per cent of them had low level of training (2 – 4 days), and high level of training (8-10 days) categories.

Reddy (2003) stated that majority of the sericulture farmers were under medium (74.67%) level of training category followed by low (16.66 %) and high levels (8.67 %) of training categories.

Dhulipalla (2004) reported that more than two third (67.20%) of the farmers had received one to three trainings followed by 32.00 per cent four to six trainings and less than one per cent (0.80%) had undergone more than seven trainings

Kumar (2004) found that nearly half of the coconut farmers were under low (48.00%) level of training received category followed by medium (30.67 %) and high (21.33 %) levels of categories.

Sangeetha (2004) observed that more than half (54.17%) of the cotton farmers were under low level of training received category followed by medium (29.16 %) and high (16.67%) levels of categories.

Navasakthi (2005) reported that majority of the coconut cultivators were under medium (77.50 %) level of training received category followed by low (18.33 %) and high (14.17%) levels of categories.

Pallavi (2006) revealed that half (50.00%) of the respondents were under low level of training received category followed by an equal proportion (25.00%) of respondents were under medium and high levels of training categories.

Viresh *et al.* (2010) reported that more than two third (68.33 %) of the respondents attended more than two training programs, followed by two trainings (18.67%) and one training (13.00%).

Naidu (2012) indicated that majority (68.33%) of the respondents were under medium level of training received category followed by low (18.33%) and high (13.34%) levels of categories.

Saiva (2012) that 50.56 per cent groundnut farmers were medium trained followed by 28.33 per cent of groundnut farmers were low/untrained. The slightly more than one fifth (21.11%) of the groundnut farmers had more trainings regarding the groundnut production technology.

Kanniammal and Dhivya (2016) revealed that more than half (55.00%) of the jasmine farmers have undergone training provided by the government and other agencies and rest of the respondents have not attended training.

2.1.9 Agricultural Inputs Acquisition Pattern

Gangadhar (2009) observed that nearly half (46.66%) of the cotton farmers had high agricultural inputs acquisition pattern followed by medium (39.16%) and low (14.16%) levels of acquisition pattern.

Venkatesh and NithyaSree (2014) stated that majority of the farmers procured financial inputs from commercial banks.

Kanniammal and Dhivya (2016) revealed that more than one third (38.00%) of the farmers are borrowing money from money lender followed by (29.00 %) of the farmers are from commission agent and (23.00%) per cent of the farmers having own fund and (9.00%) of the farmers are from nationalized banks.

2.1.10 Social Participation

Javiya (2004) inferred that majority (68.00%) of the groundnut farmers had medium social participation followed by low (19.00%) and high (13.00%) levels of social participation

Naik (2006) concluded that 42.00 per cent of the groundnut farmers had medium social participation followed by low (32.00%) and high (26.00%) levels of social participation.

Khodifad (2010) indicated that the majority (70.00 %) of the groundnut farmers had medium level of social participation followed by low (18.75 %) and high (11.25%) levels of social participation.

Kumar and Popat (2010) reported that 39.40 per cent of the groundnut farmers had low level of social participation followed by medium (38.33%) and high (29.22%) levels of social participation.

Saiva (2012) observed that more than half (58.33%) of the groundnut farmers had medium social participation followed by low (22.78%) and high (18.89%) levels of social participation.

Ranjan (2013) reported that half (50.84%) of the respondents had medium level of social participation followed by high (35.83%) and low (13.33%) levels of social participation.

Satyanarayana (2014) revealed that 42.50 per cent of the respondents had medium level of social participation followed by low (35.00%) and high (20.83%) levels of social participation.

Siddeswari (2015) reported that 52.50 per cent of the respondent farmers had medium level of social participation followed by low (36.00%) and high (12.00%) levels of social participation.

2.2 MARKETING BEHAVIOUR OF GROUNDNUT FARMERS

2.2.1 Overall Marketing Behaviour of Groundnut Farmers

Anitha (2003) indicated that more than half (58.75%) of the women entrepreneurs had high marketing behaviour followed by medium marketing behaviour (41.25 %).

Kumari (2004) found that less than half (45.55%) of the tribal women had medium marketing behaviour followed by high (31.25%) and low (23.20%) levels of marketing behaviour.

Pallavi (2006) indicated that 58.75 per cent of the respondents had medium marketing behaviour followed by high (35.00%) and low (6.25%) levels of marketing behaviour.

Johnson and Manoharan (2009) reported that more than half of the Cashew farmers (54.44%) had medium level of marketing behaviour followed by low (26.67%) and high (18.89%) levels of marketing behaviour.

Madhusekhar (2009) revealed that less than half of the chilli growers had medium marketing behaviour (43.12%), followed by low (38.13%) and high (18.75%) levels of marketing behaviour

Jaisridhar *et al.* (2012) inferred that two fifth of maize growers (63.33 %) had medium level of marketing behaviour followed by high (27.77%) and low levels (23.33%) of marketing behaviour.

Kad *et al.* (2013) observed that nearly three fourth (73.33%) of the farmers had medium level of marketing behaviour, followed by equal (13.3%) percentage of the farmers had low and high levels of marketing behaviour.

Dhara *et al.* (2015) revealed that more than half of the coconut growers had medium to high level of marketing behaviour.

2.2.1.1 Planning orientation

Roy (2003) reported that more than half (60.00%) the respondents had medium planning orientation followed by high (40.00%) planning orientation.

Babu (2004) indicated that a little more than half (51.11%) of the vegetable growers had medium planning orientation followed by high (45.55%) and low (3.34%) levels of planning orientation.

Navasakthi (2005) viewed that 67.50 per cent of the coconut cultivators had high planning orientation followed by medium (31.67%) and low (0.83%) levels of planning orientation.

Gangadhar (2009) revealed that more than half (56.66%) of the cotton farmers had medium planning orientation followed by high (24.16%) and low (19.16%) levels of planning orientation.

Madhusekhar (2009) revealed that 46.87 per cent of the chilli growers had medium planning orientation, followed by high (38.13%) and low (15.00%) levels of planning orientation

2.2.1.2 Production orientation

Roy (2003) stated that equal number of the respondents had high and medium levels of production orientation.

Babu (2004) indicated that a little more than half (51.11%) of the vegetable growers had high production orientation followed by medium (36.67%) and low (12.22%) levels of production orientation.

Gangadhar (2009) concluded that a little more than half (51.66%) of the cotton farmers had medium production orientation followed by high (30.08%) and low (18.26%) levels of production orientation.

2.2.1.3 Marketing orientation

Shirur (2003) revealed that majority (66.67%) of the grape growers had high market orientation followed by medium (21.30%) and low (12.03%) levels of market orientation.

Gopinath (2005) found that more than half (52.67%) of the respondents had medium market orientation followed by low (36.00%) and high (11.33%) levels of market orientation.

Pradiptaacharya (2005) found that nearly half (45.00%) of the farmers had high market orientation followed by medium (36.66%) and low (18.32%) levels of market orientation.

Ravishankar (2005) concluded that more than half (58.89%) of the respondents had high market orientation followed by medium (31.67%) and low (9.44%) levels of market orientation.

Tiwary (2006) reported that more than half (58.53%) of the pea growers had low level of marketing orientation.

Chidananda (2008) revealed that more than half (55.00%) of the farmers had medium marketing orientation followed by low (25.83%) and high (19.17%) levels of marketing orientation.

Gangadhar (2009) indicated that nearly half (47.50%) of the cotton farmers had medium marketing orientation followed by high (26.66%) and low (25.83%) levels of marketing orientation.

Kumar and Popat (2010) reported that majority (63.90%) of the groundnut farmers had medium marketing orientation followed by medium (33.00%) and low (32.00%) levels of market orientation.

Maratha and Badodiya (2017) concluded that majority (65.83%) of the respondents had medium level of market orientation followed by high (20.00%) and low (14.17%) levels of market orientation.

2.2.1.4 Marketing information sources utilization

Purnima (2004) indicated that, 42.08 per cent had medium information source utilization followed by low (31.67%) and high (26.25%) levels of information source utilization.

Pallavi (2006) indicated that half (50.00%) of the respondents fall under medium category of utilization sources of market information followed by low (42.50%) and high (7.50%) categories.

Viresh *et al.* (2010) reported that more than half (51.00%) of the respondents fall under medium category of utilization of information sources, followed by high (26.33%) and low (22.67%) categories.

Raina *et al.* (2011) reported that little more than half (52.91%) of the respondents got market information through neighbors and relatives followed by 13.75 per cent through market officials, 10.83 per cent through extension agents, 8.34 per cent through commission agents, 7.50 per cent through progressive farmers and 6.67 per cent through family members.

Yashodhara and Narasimha (2012) reported that majority (83.75%) of the onion farmers got market price information through neighbors and relatives followed by telephone (71.25%), television (43.75%), newspaper (26.25%), personal visits to the markets (2.50%) and radio (1.25%).

Srinivas *et al*. (2014) concluded that 93.33 per cent of the farmers approached friends for market information followed by neighbors (80.93%), newspaper (29.17%), television (21.66%), village merchants (13.13%), input dealers (12.50%) and traders (7.50%).

Ekhande *et al*. (2015) reported that nearly two thirds (62.00%) of the farmers getting information through pomegranate research, extension and marketing followed by agriculture department (19.30%), newspaper (12.30%) and television (6.30%).

Kumar and Aski (2016) reported that more than half (57.50%) of the cabbage growers approached fellow farmers for market information followed by mobile services (32.50%) and personally visiting the markets (10.00%).

Srinivas *et al.* (2016) reported that majority (95.83%) of the vegetable growers approached commission agents for getting market information.

2.2.1.5 Decision making ability

Anitha **(**2003) revealed that nearly two third (62.50%) of the women entrepreneurs had high decision making ability followed by medium (25.00%) and low (12.50%) levels of decision making ability.

Kumari (2004) reported that little more than two third (68.33%)of the tribal women had medium decision making ability followed by low (21.11%) and high (10.56%) levels of decision making ability.

Ravishankar (2005) indicated that (63.00%) of the respondents possessed medium decision making behaviour followed by high (35.00%) and low (2.00%) levels of decision making behaviour.

Pallavi (2006) found that more than half (53.75%) of the respondents had medium decision making ability followed by high (28.75%) and low (17.50%) levels of decision making ability.

Gangadhar (2009) concluded that more than half (57.50%) of the cotton farmers had medium level of decision making ability followed by high (26.00%) and low(17.50%) levels of decision making ability.

Viresh *et al.* (2010) concluded that nearly half (48.30%)of the respondents took decision by self-intuition, whereas 47.67 per cent of the respondents consulted family member while taking decisions and 4.03 per cent of the respondents consulted other than family members.

Lad *et al.* (2012) concluded that majority (50.53%) of the respondents had medium decision making ability followed by low (32.50%) and high (16.67%) levels of decision making ability.

Vidyarani (2014) reported that 41.67 per cent of the woman had medium decision making ability followed by high (39.16%) and low (19.17%) levels of decision making ability.

Kumar and Aski (2016) reported that before selling cabbage to the traders more than half (54.16%) of the farmers make self-decision followed by consultation with friends and relatives (27.50%), progressive farmers (11.67%) and market officials (6.67%).

2.2.1.6 Risk taking ability

Naik (2006) revealed that, 44.67 per cent of the ground nut farmers had medium risk orientation followed by low (31.33 %) and high (24.00 %) levels of risk orientation.

Chavda (2007) showed that majority of groundnut farmers (74.50%) had medium level of risk taking ability followed by high (14.00%) and low (14.00%) levels of risk taking ability.

Chidananda (2008) revealed that nearly two third (65.83%) of the respondents farmers had medium risk taking ability, followed by high (20.00%) and low (14.17%) levels of risk taking ability.

Madhusekhar (2009) found that 53.12 per cent of respondents had medium risk taking ability followed by high (26.25%) and low (20.63%) levels of risk taking ability.

Khodifad (2010) opined that nearly three fourth (73.75 %) of the respondents had medium risk taking ability followed by high (18.12%) and low (8.13%) levels of risk taking ability.

Kikon (2010) averred that more than half of the demonstrator groundnut farmers had high risk orientation (63.33%) followed by low (36.67%) levels of risk orientation

Arathy (2011) reported that more than half (61.67%) of the respondents had medium risk orientation followed by high (32.50%) and low (5.83%) levels of risk orientation.

Thiyagarajan (2011) found that 43.30 per cent of the SRI farmers had high level of risk orientation followed by medium (42.50%) and low (14.20%) levels of risk orientation.

Saiva (2012) revealed that majority (64.44 %) of the groundnut farmers had medium risk orientation followed by high (18.89%) and low (16.67%) levels of risk orientation

Ranjan (2013) revealed that more than half (54.18%) of the groundnut farmers had medium level of risk orientation followed by low (31.66%) and high (15.86%) levels of risk orientation.

Maruddi *et al*. (2014) reported that 45.00 per cent of the farmers had low level of risk orientation followed by medium (35.00%) and high (20.00%) levels of risk orientations.

2.2.1.7 Innovativeness

Javiya (2004) stated that majority of groundnut farmers (62.00%) had medium level of innovativeness followed by low (21.00%) and high (17.00%) levels of innovativeness.

Kumar (2006) reported that majority of groundnut farmers (85.56 %) had medium innovativeness followed by equal (7.22 %) percentage of the respondents with low and high levels of innovativeness.

Khodifad (2010) revealed that 28.75 per cent of the groundnut farmers were early majorities followed by 21.88 per cent early adopters and 18.12 per cent late majority. Only 14.37 per cent respondents were innovators and remaining 16.88 per cent respondents were laggards.

Kumar and Popat (2010) reported that majority (85.64%) of the groundnut farmers had high innovativeness followed by equal (7.20%) percentage with low and medium levels of innovativeness.

Saiva (2012) revealed that majority of the groundnut farmers (61.12%) were under medium innovativeness category followed by equal (19.44%) percentage under low and high innovativeness categories.

Siddeswari (2015) reported that 56.00 per cent of the participant farmers had medium level of innovativeness, followed by high (28.00%) and low (16.00%) levels of innovativeness. In case of non-participant farmers 54.67 per cent of the respondents had medium level of innovativeness followed by low (24.00%) and high (21.33%) levels of innovativeness.

Maratha and Badodiya (2017) indicated that nearly two third (63.33%) of the vegetable growers had medium innovativeness, followed by high (19.17%) and low (17.50%) levels of innovativeness

2.2.1.8 Mode of transport

Babu (2004) stated that nearly one third of the vegetable growers transported their produce by lorry (32.23%), followed by bus (28.88%), Head load (12.22%), Tempo Van (10.00%), Auto (7.78%), Bicycle (6.67%) and Tractor (2.22%).

Viresh *et al.* (2010) concluded that nearly half (44.00%) of the respondents carried farm produce by private vehicle, followed by 41.00 per cent by own vehicle and rest of them through other means.

Raina *et al.* (2011) revealed that more than half (55.84%)of the flower growers carried through combination of transport means, followed by 27.08 per cent through two wheeler, 11.25 per cent through bus and 5.83 per cent through cycle.

Jaisridhar *et al*. (2012) inferred that 68.89 per cent of the maize growers transported their produce through tractor and rest of the farmers transported through buses.

Srinivas *et al.* (2014) concluded that more than two third (71.67%) of the tomato growers transported their produce through tempo, followed by tractor (53.33%), 33.33 per cent through bus and 14.17 per cent through lorry.

Kumar and Aski (2016) reported that exactly equal (40.00%) percentage of the respondents transported through truck and mini tempo followed by tractor (12.00%) and bullock cart (8.00%).

Srinivas *et al.* (2016) inferred that nearly half (48.33%) of the farmers transported their produce through tempo, followed by tractor (28.33%), 11.67 per cent through lorry , 6.67 per cent through bullock cart and only 5.00 per cent through bus for transportation.

2.2.1.9 Place of sale

Kumar *et al.* (2008) concluded that majority (85.15%) of the paddy farmers sold their produce in local market while 10.89 per cent of them in district market.

Walke *et al.* (2009) concluded that majority (87.50%) of the brinjal growers sold their produce in whole sale markets and 12.50 per cent sold their produce in the local markets.

Sidaram *et al*. (2010) indicated that majority (90.00%) of the pigeon pea growers sold the produce in regulated markets and 10.00 per cent sold in their village itself.

Jaisridhar *et.al.* (2012) inferred that little more than half (52.22%) of the maize growers sold their produce in nearby towns.

Yashodhara and Narasimha (2012) reported that more than half (53.75%) of the onion farmers marketed to commission agents followed by traders (21.25%), wholesaler (16.25%) and village level traders (8.75%).

Mathivavan (2013) revealed that little more than half (52.00%) of the rose growers sold their flowers to local retailers followed by 42.00 per cent involved in direct marketing and 4.00 per cent through commission agents**.**

Ekhande *et al*. (2015) reported that cent per cent of the pomegranate farmers sold their produce in agricultural marketing committees.

Kumar and Aski (2016) indicated that farm gate (57.50%) acted as the major venue for marketing followed by exactly equal (16.67%) percentage of the cabbage growers sold their produce in local Agricultural marketing committees and distant markets and meager (9.16%) of them sold their produce directly to the consumers.

Kanniammal and Dhivya (2016) revealed that 40.00 per cent of jasmine farmers sold directly to the market, where as 30.00 per cent through commission agents, 24.50 per cent through retailers and 5.5 per cent of farmers deal through others.

Srinivas *et al*.(2016) inferred that majority of farmers (76.66%) sold their produce nearby markets, followed by 14.17 per cent sold in faraway markets and 9.17 per cent sold in the villages itself.

2.2.1.10 Terms and conditions of sale

Babu (2004) observed that nearly two third (64.45%) of the vegetable growers sold on prior payment, rest of them on immediate payment (35.55%).

Raina *et al*. (2011) revealed that nearly half (45.41%) of the flower growers receive full payment on the spot after sale.

Jaisridhar *et al.* (2012) inferred that more than half (57.78 %) of the respondents received full payment and the rest (42.22 %) received only partial payment.

Srinivas *et al*. (2014) concluded that majority (85.83%) of the tomato growers indicated spot payment is made, while 10.83 per cent of them indicated advance payment and 3.34 per cent of the growers said delayed payment.

Kumar and Aski (2016) indicated that less than half (45.83%) of the cabbage growers had spot payment followed by delayed payment (43.34%).

Srinivas *et al*. (2016) reported that more than two third (71.67%) of the vegetable growers receive full payment on the spot after sale.

2.3 RELATIONSHIP BETWEEN PROFILE CHARACTERISTICS AND MARKETING BEHAVIOUR OF GROUNDNUT FARMERS

Babu (2004) reported that education, economic status, social status, extension contact and knowledge on vegetable marketing were positively and significantly correlated with marketing behaviour of vegetable growers, whereas, age, area under vegetable cultivation and experience in vegetable cultivation were not having any significant relationship with marketing behaviour.

Kumar (2004) revealed that mass media exposure and education had positive and significant relationship with marketing behaviour of vegetable growers.

Tiwary (2006) reported that marketing orientation had positive and significant relationship with marketing behaviour of vegetable growers.

Johnson and Manoharan (2009) reported that education status, extension agency contact, mass media exposure had positive and significant association with marketing behavior of cashew farmers.

Jaisridhar *et al.* (2012) inferred that mode of transport, terms and conditions of sale had positive and significant relationship with marketing behaviour of maize growers.

Desai and Solanki (2013) observed that education, education of family, land holding, annual income and level of knowledge of summer cabbage growers were established positively and highly significant association with their extent of adoption of market intelligence. Age of the summer cabbage growers was associated negatively and highly significant with their extent of adoption of market intelligence.

Kad *et al*. (2013) observed that education, cosmopoliteness, extension contact, market orientation and mass media availability of the respondents showed positive and significant correlation with level of marketing behaviour.

Dhara *et al.* (2015) revealed that farm size and decision making ability exhibited significant and positive correlation with marketing behaviour of coconut growers.

Hameed and Sawicka (2017) reported that age, education level, marital status, farming experience and family size of potato growers had significant and positive relationship with the marketing behaviour of potato growers.

2.4 PROBLEMS ENCOUNTERED BY THE GROUNDNUT FARMERS

Kumar *et al.* (2008) reported that major problems faced by the paddy growers were uncertain contact of extension personnel(82.85%),high cost of chemical fertilizers (71.90%),lack of capital fund(66.67%),weak market infrastructure (46.67%),limited transport facilities(41.13%),fluctuating market prices(20.95%).

Chodavadia *et al.* (2013) reported that major problems faced by the groundnut farmers were unremunerated price of crop (97.11%), high price of

improved seeds (94.23%), lack of irrigation facilities (91.34%) and non-availability of extension workers in the village as per time schedule (76.92%).

Mathivavan (2013) revealed that majority of the rose growers expressed the marketing problems like fluctuation in market price (40.00%) , low price for flowers (28.00%) and exploitation by middle men (24.00%) .

Sudhagar (2013) reported that major problems faced by the cut flowers growers were seasonal demand (85.45 %), absence of organized retail markets (85.45%), lack of cold storage facilities (74.00%) and price fluctuations (54.54%).

Hemambara and Yogesh (2014) observed that all the papaya growers opined markets are far away from the farm, 82.00 per cent opined that high commission charges, lack of market information (79.00%) price fluctuations (37.00%) and lack of skilled labour for packing (19.00%) were some of the constraints in papaya marketing.

Dangore *et al*. (2015) concluded that major problems faced by the dry chilli growers were lack of marketing intelligence (84.44%), high cost of transport (65.55%), heavy commission charges (50.50%), lack of storage facilities (46.66%), irregular payment by intermediaries (38.88%) and lack of finance (35.55%)

Dhara *et al*. (2016) inferred that major problems expressed by the coconut growers were lack of government procurement system (100.00%), lack of exclusive market for coconut (99.00%), lack of cooperative marketing system (87.00%), scarcity of labour for transportation and marketing (85.00%) and lack of market information (80.00%).

Gangisetty *et al*. (2016) reported that main problems faced by the groundnut farmers were high marketing cost with mean value of 7.43 followed by unscientific weighing machines (7.00), lack of market

information (6.98), poor government support (6.83), poor storage facilities (6.78), poor customer relationship (6.74), improper method of sale (6.72), price fluctuation (6.69), insufficient pledge loan facility (6.66) and the last is poor quality of packing materials (6.58).

Kanniammal and Dhivya (2016) revealed that major problems faced by the jasmine farmers were distance to the market (60.00%) lack of transportation facilities (49.00%).

Kumar and Aski (2016) observed that major problems faced by the cabbage growers were price fluctuation in market price, exploitation by the middle men, high cost of transportation, markets are far away, high commission charges and lack of market information.

Srinivas *et al.* (2016) reported that the major problems faced by the respondents in marketing were price fluctuation (97.50%), followed by high hamali charges (66.67%) and high transport charges (64.17%).

Hameed and Sawicka (2017) reported that major problems faced by the potato growers in marketing were low price of the product(58.59%) ,high cost of transportation(53.90%) and markets are far away(35.93%).

2.5 SUGGESTIONS TO OVERCOME THE PROBLEMS OF GROUNDNUT FARMERS

Babu (2004) found that majority of vegetable growers suggested to provide subsidies on inputs (92.22%), followed by improving credit facilities (91.11%), providing cold storage facilities (88.88%), establishing vegetable processing units and value addition centers (74.44%), improvementation of infrastructural facilities (72.22%) were identified as ranks I, II, III, IV and V respectively. They also suggested to increase number of rythu bazars (58.88%), supply of pure seed for better quality of produce (56.66%) and to provide latest market information (55.55%).

Kumar *et al.* (2008) concluded that major suggestions given by the paddy growers were training to needy farmers (49.52%), effective and efficient marketing system (43.34%) and establishment of co-operative marketing societies (29.05%)

Walke *et al.* (2009) indicated that major suggestions given by the brinjal growers were stable market price for brinjal (78.33%), effective and efficient marketing system (52.50%) and establishment of co-operative marketing societies (37.50%).

Chodavadia *et al.*(2013) reported that major suggestions given by the groundnut farmers were remunerative price of the product should be made available (Rank I), farmers should be protected by crop insurance, if crops fails (Rank II), inputs should be made available at subsidized rate (Rank III) and multiple resistance varieties should be developed (Rank IV).

Sudhagar (2013) reported that major suggestions given by the cut flower growers were establishment of adequate cold storage units (100.00%) and adequate government support for export orientation (75.00%).

Dhara *et al.* (2016) inferred that major suggestions given by the coconut growers were establishing exclusive market for coconut by the government (100.00%), stabilizing price of the produce (98.33%), installing more cooperative marketing facilities (90.00%) and wide publicity about the market information (82.50%).

Kumar and Aski (2016) reported that majority (73.33%) of the cabbage growers suggested for minimum support price, reduce commission charges (68.33%), well established markets (60.00%) and storage facilities (28.33%) as some of the important suggestions.

Srinivas *et al.* (2016) reported that major suggestions given by the vegetable growers were establishment of markets at village level, cold storage facilities in order to avoid price fluctuations.

2.6 CONCEPTUAL MODEL OF THE STUDY

Conceptual model is a diagrammatic representation 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 in to independent and dependent variable.

It is clear from the model that the dependent variable marketing behaviour was assessed on the basis of review of relevant literature with 10 important components and 10 independent variables representing the profile of groundnut farmers were chosen to examine their nature and extent of relationship with marketing behaviour of the groundnut farmers.

This model was hopefully conceived to give an objective assessment of the marketing behaviour of groundnut farmers in terms of dependent and independent variables selected for the study.

The relationship was diagrammatically represented in Fig 2.1 which helps to derive the following given hypotheses for empirical testing. Based on the objectives of the study and the theoretical framework, the following hypotheses were formulated.

General hypothesis I: There will be significant relationship between the marketing behaviour of groundnut farmers and their selected profile.

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

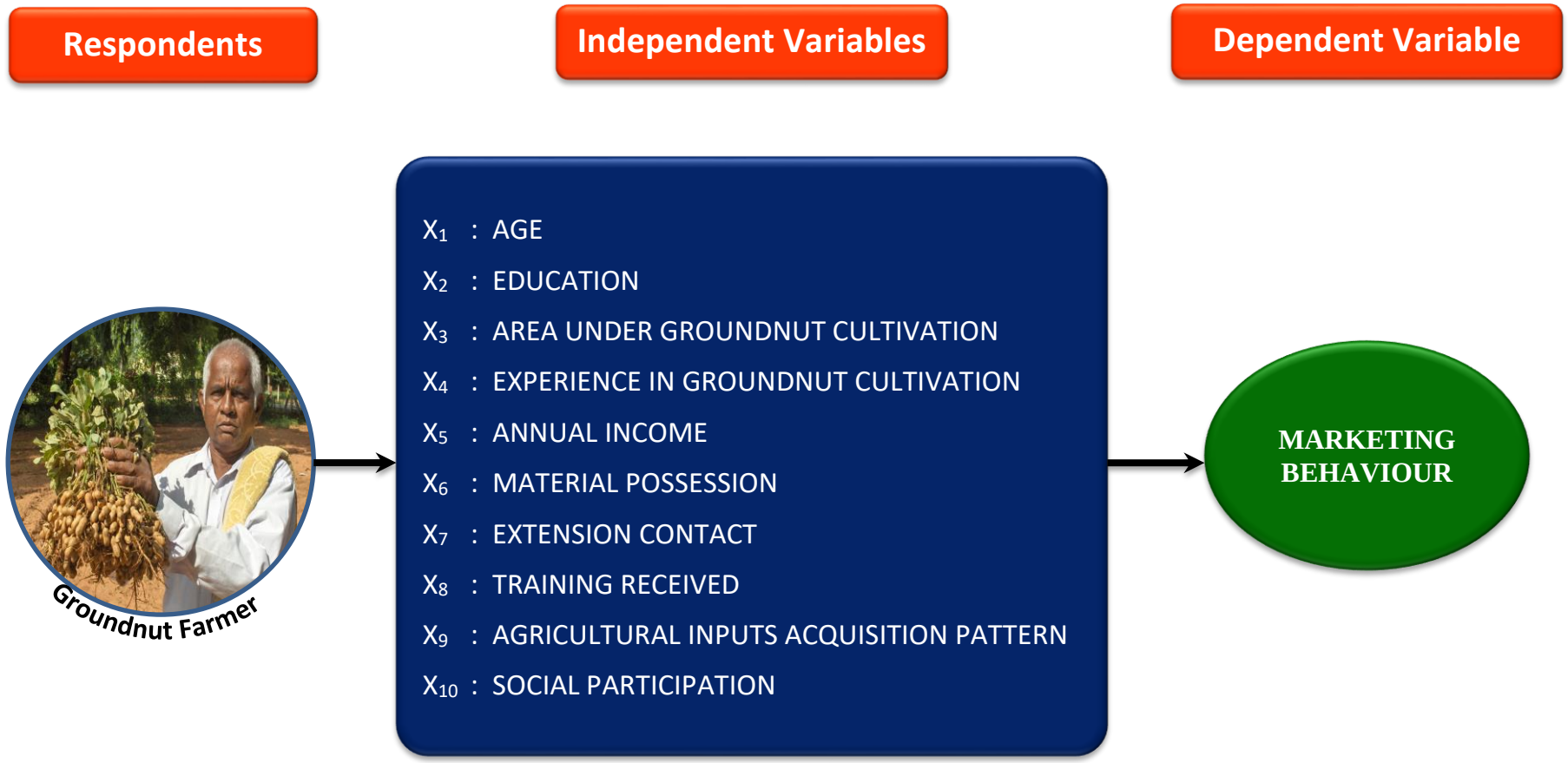


Fig 2.1. Conceptual model of the study

Chapter ~ III

Material and Methods

Chapter – III

MATERIAL AND METHODS

This chapter deals with methods and procedures followed in carrying out the study. It describes and classifies methods used for measuring dependent and independent variables as well as techniques followed for the collection and analysis of data. The details of methodology followed for the present investigation are presented in this chapter under the following subheads.

3.1 Research design

3.2 Sampling procedure

3.3 Variables and their empirical measurement

3.4 Problems faced and suggestions given by the groundnut farmers in marketing of the produce

3.5 Instruments and methods used for collection of data

3.6 Statistical tools and procedures followed

3.7 Preparation of report

3.1 RESEARCH DESIGN

Based on the objectives of the study, *ex-post-facto* research design was followed in the present investigation. *Ex-post-facto* 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. *Ex-post-facto* studies can be devised to identify behavioral phenomenon and to explore conditions under which a phenomenon occurs (Kerlinger, 1973).

3.2 SAMPLING PROCEDURE

3.2.1 Locale of the Study

The Andhra Pradesh state was chosen as the locale of the study, since the researcher belongs to the state and was familiar with the local language and culture. Hence, building up rapport with the respondents would become easier.

3.2.2 Selection of the District

Anantapuramu district was purposively selected for the study with the following reasons

i. Anantapuramu district has maximum area under groundnut cultivation and highest production in Andhra Pradesh.

ii. No similar research work has been carried out in this district to find out the marketing behaviour of groundnut farmers.

3.2.3 Selection of Mandals

Out of 63 mandals of Anantapuramu district, three mandals viz., Vajrakarur, Kanaganapalle, Ramagiri were purposively selected based on the highest area under groundnut cultivation.

3.2.4 Selection of Villages

The list of villages in each selected mandal was prepared and four villages from each mandal were purposively selected based on the highest area under groundnut cultivation, thus making a total of 12 villages.

3.2.5 Selection of Respondents

From each selected village, 10 respondents were selected by following simple random sampling procedure, thus making a total of 120 respondents who were cultivating groundnut crop. The details of sampling procedure is shown in Table 3.1 and fig 3.3.

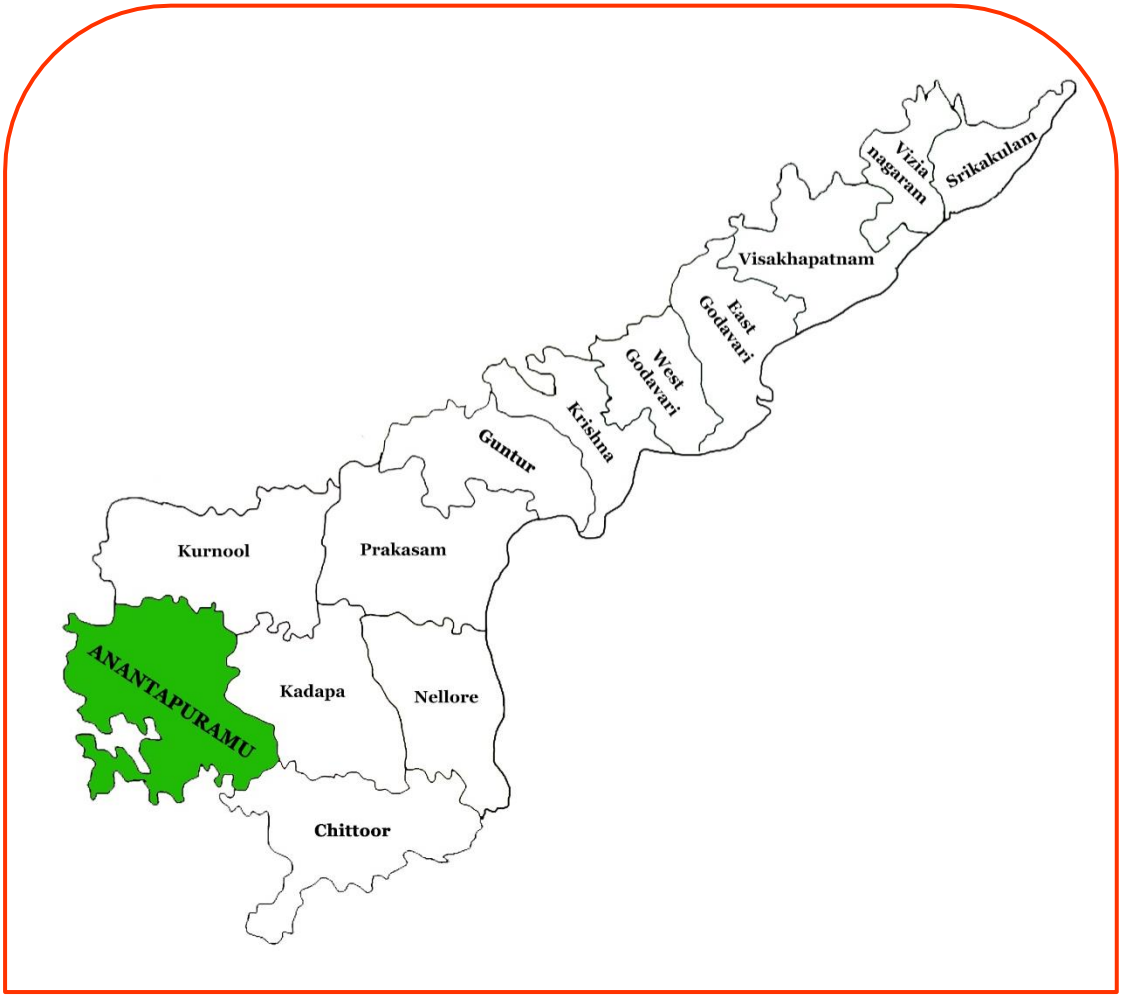


Fig. 3.1. Map showing Anantapuramu district of Andhra Pradesh

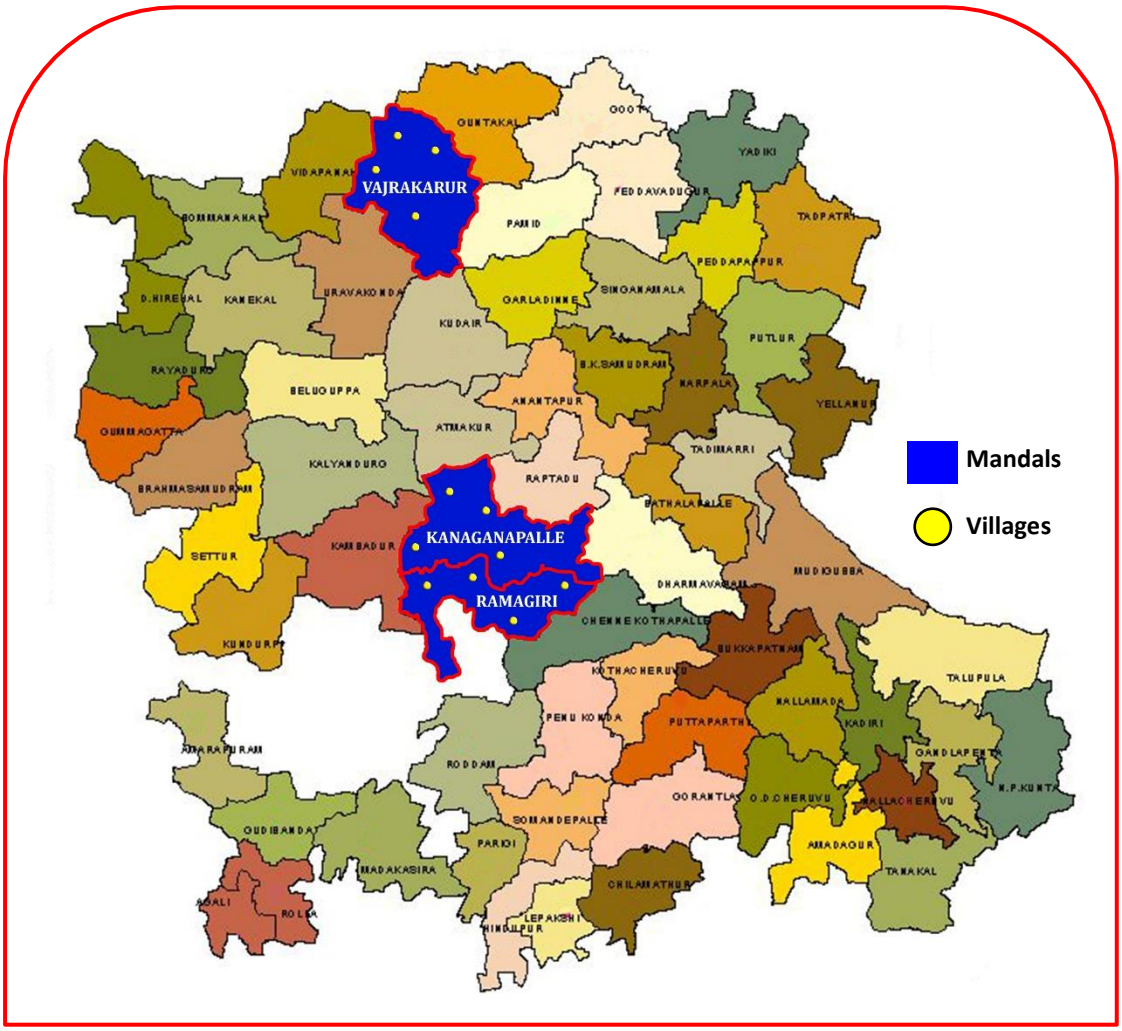


Fig. 3.2. Map showing the selected mandals and villages in Anantapuramu district

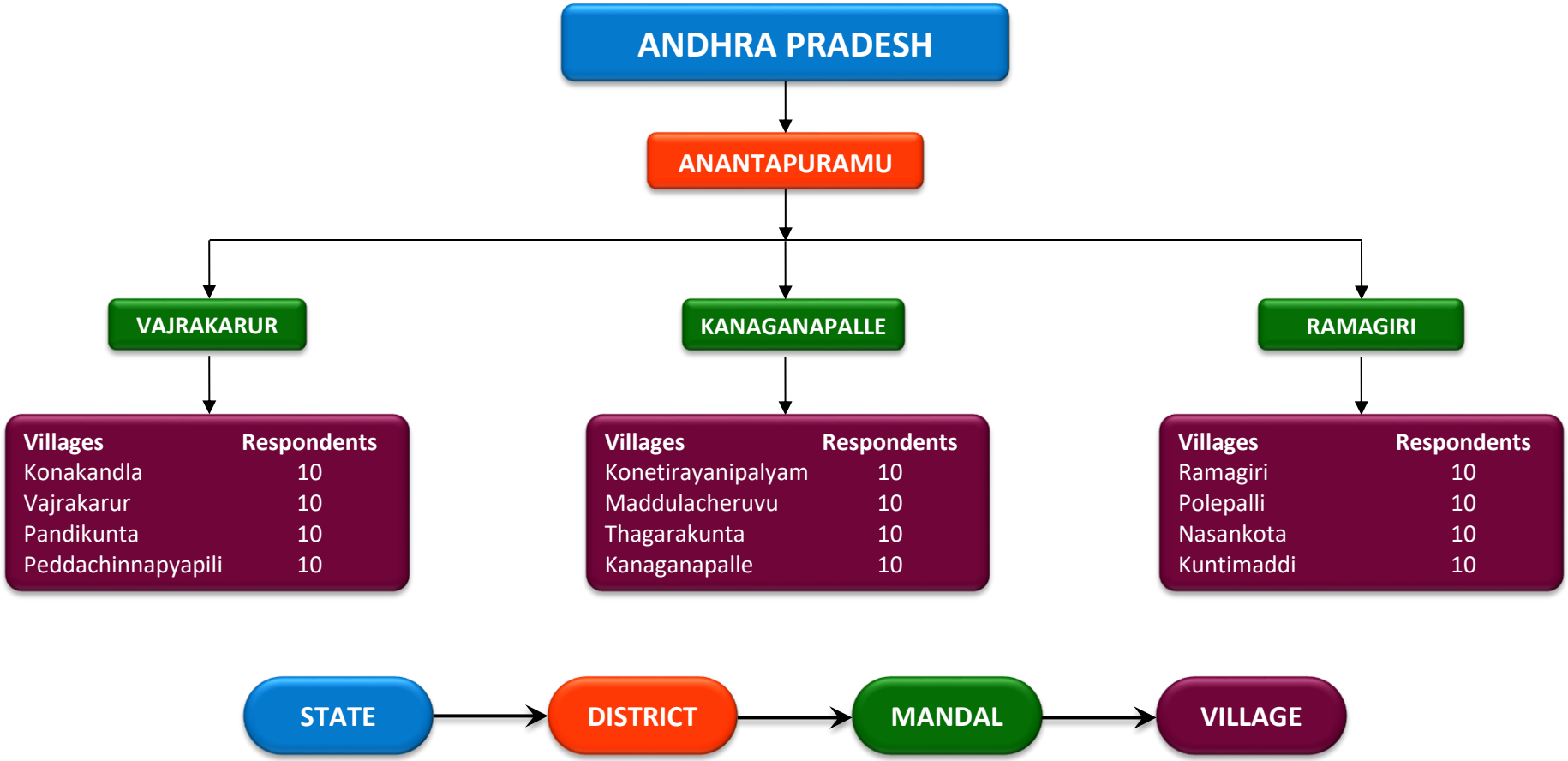


Fig. 3.3. Sampling procedure followed in the study

Table 3.1. Selection of mandals, villages and respondents from Anantapuramu district of Andhra Pradesh

S. No.	Name of the Mandal	Name of the village	No. of respondents
1.	**Vajrakarur**	Konakandla	10
		Vajrakarur	10
		Pandikunta	10
		Peddachinnapyapili	10
2.	**Kanaganapalle**	Konetirayanipalyam	10
		Maddulacheruvu	10
		Thagarakunta	10
		Kanaganapalle	10
3.	**Ramagiri**	Ramagiri	10
		Polepalli	10
		Nasankota	10
		Kuntimaddi	10
	Grand Total		**120**

3.3 VARIABLES AND THEIR EMPIRICAL MEASUREMENT

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

Table 3.2. Variables and their empirical measurement

S. No	Variable	Empirical measurement
A	**Independent variables**	
1	Age	Chronological age of the respondent
2	Education	Schedule developed for the study
3	Area under groundnut cultivation	No of acres the respondent has taken up for groundnut cultivation at the time of investigation
4	Experience in groundnut cultivation	Number of years of experience completed in groundnut cultivation by the respondent at the time of investigation
5	Annual income	Schedule developed for the study
6	Material possession	Schedule developed for the study
7	Extension contact	Schedule developed for the study
8	Trainings received	Schedule developed for the study
9	Agricultural inputs acquisition pattern	Schedule developed for the study
10	Social Participation	Schedule developed for the study
B	**Dependent variable**	
	Marketing behaviour of groundnut farmers	
1	Planning orientation	Schedule developed for the study
2	Production orientation	Schedule developed for the study
3	Marketing orientation	Scale developed by Samantha(1977) with suitable modifications
4	Marketing information sources utilization	Schedule developed for the study
5	Decision making ability	Schedule developed for the study
6	Risk taking ability	Scale developed by Supe (1969) with suitable modifications
7	Innovativeness	Schedule developed for the study
8	Mode of transport	Schedule developed for the study
9	Place of sale	Schedule developed for the study
10	Terms and conditions of sale	Schedule developed for the study

3.3.1 Profile Characteristics of Groundnut Farmers

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 'one' was given for every completed year. The respondents were grouped into three categories based on number of completed years as follows.

S. No.	Category	Range
1	Young age	Below 35 years
2	Middle age	36 years to 55 years
3	Old age	Above 55 years

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	1
2.	Functionally literate	2
3.	Primary school	3
4.	Middle school	4
5.	High school	5
6.	Intermediate	6
7.	Graduation and above	7

3.3.1.3 Area under groundnut cultivation(X_3)

It was operationally defined as the number of acres of land the farmer utilizing for groundnut cultivation out of total cultivated land. The respondents individual scores were noted for calculation and based on the scores obtained, the respondents were classified into five groups as follows.

Category	Score
< 2.5 acres	1
2.5 to 5 acres	2
5.0 to 7.5 acres	3
7.5 to 10 acres	4
Above 10 acres	5

3.3.1.4 Experience in Groundnut cultivation (X_4)

It was operationalized as the number of years of experience a respondent had in groundnut cultivation. Weightage of one score was assigned for one year of experience in groundnut cultivation.

The respondents were grouped into low, medium and high experience categories based on mean and standard deviation.

S. No.	Category	Score
1.	Low experience	Below Mean – S.D
2.	Medium experience	Between Mean ± S.D
3.	High experience	Above mean + S.D

3.3.1.5 Annual income (X_5)

This variable was operationalized as the actual income of the respondent summed up for the whole year from groundnut cultivation and other than groundnut cultivation excluding debts. For every thousand rupees of income a score of ‘one’ was given. Based on total scores obtained, the respondents were categorized into three categories based on mean and standard deviation as follows.

S. No.	Category	Score
1	Low annual income	Below Mean – S.D
2	Medium annual income	Between Mean ± S.D
3	High annual income	Above mean +S.D

3.3.1.6 Material possession (X_6)

Material possession by the family was considered as status symbol, which facilitates the acquisition of the knowledge. It refers to the material possession as well as farm animals possessed by the respondents like T.V, radio, improved agricultural implements, pump sets, tractor and furniture. For each item a score of 'one' was given. Based on total scores obtained by the respondents were divided into three categories namely low, medium and high using mean and standard deviation as follows.

S. No.	Category	Score
1.	Low Material possession	Below Mean – S.D
2.	Medium Material possession	Between Mean ± S.D
3.	High Material possession	Above mean + S.D

3.3.1.7 Extension contact (X_7)

This variable was measured in terms of frequency of meeting of the groundnut farmer i.e. "Frequency of extension contact" with the extension workers like Agricultural extension officers, Agriculture officers, Deputy Director of Agriculture, Input agents and any others related to groundnut cultivation. The responses were recorded in three point continuum, i.e., 'Regularly', 'Occasionally', 'Never' and the scoring followed was 3, 2 and 1 respectively. The possible minimum and maximum scores were 10 and 30.

S. No.	Official / Personal contact	Frequency of contact		
		Regularly	Occasionally	Never
	Score	3	2	1
1.	A.E.O / V.A.O			
2.	A.O			
3.	A.D.A			
4.	D.D.A			
5.	J.D.A			
6.	Agricultural university scientists			
7.	Input agents			
8.	NGO personnel			
9.	Agricultural market committee officials			
10.	Bank officials			

Based on the total score obtained the respondents were classified into three categories based on the mean and standard deviation as follows

S. No	Category	Score
1	Low extension contact	Below mean – S.D.
2	Medium extension contact	Between mean ± S.D.
3	High extension contact	Above mean + S.D.

3.3.1.8 Trainings received (X_8)

Training was operationally defined as an intensive learning activity for a group of selected groundnut farmers assigned by competent trainers to understand and practice the skills required in the adoption of new agricultural technology.

It was measured in terms of number of trainings attended by the respondents as revealed by them at the time of interview. A score of ‘one’ was

given for each day of the training received by the respondents. The respondents were grouped into 3 categories namely low, medium and high level of training based on mean and standard deviation as given below.

S. No.	Category	Score
1	Low level of training	Below mean – S.D
2	Medium level of training	Between mean ± S.D.
3	High level of training	Above mean + S.D.

3.3.1.9 Agricultural input acquisition pattern (X_9)

It was operationalized as how frequently the respondents are acquiring different inputs like financial, nonfinancial (seeds, fertilizers, pesticides, herbicides, farm machinery and plant protection equipment) and technical information from the specified sources like State Agricultural university, state Department of Agriculture, Private input agencies, NGOs, PACCs , other cooperatives, commercial banks , Money lenders and fellow farmers.

The responses were recorded in three point continuum i.e., 'often,' 'sometimes' and 'never' with scores 3, 2 and 1 respectively. Based on total scores obtained by the respondents were divided into three categories by using mean and standard deviation.

S. No.	Category	Score
1	Low Agricultural input acquisition pattern	Below mean – S.D
2	Medium Agricultural input acquisition pattern	Between mean ± S.D
3	High Agricultural input acquisition pattern	Above mean + S.D.

3.3.1.10 Social participation (X_{10})

It was operationalized as the degree to which the respondent was involved in formal, social and political organizations as a member or as an office bearer in one or more organizations.

S. No.	Organization	Nonmember (0)	Member (1)	Office bearer (2)
1.	Gram panchayat			
2.	Mandal Parma Parishad			
3.	Zilla Praja Parishad			
4.	Primary cooperative societies			
5.	Watershed association			
6.	Water users association			
4.	Farmers forum			
5.	Youth club			
6.	Religious associations			
7.	Any others(Specify)			

Based on the total scores obtained by the respondents, they were grouped into three categories based on the mean and standard deviation as follows.

S. No.	Category	Score
1.	Low social participation	Below mean – S.D
2.	Medium social participation	Between mean ± S.D
3.	High social participation	Above mean + S.D.

3.3.2 Marketing Behaviour

It was operationalized as the degree to which the respondents were oriented towards marketing of their produce to get remunerative price.

The components selected to study the marketing behaviour of groundnut farmers were planning orientation, production orientation ,marketing orientation, marketing information sources utilization, decision making ability, risk taking ability, innovativeness, mode of transport, place of sale and terms and conditions of the sale.

3.3.2.1 Planning orientation

It was operationally defined as the degree to which the respondents were oriented towards planning their activities towards raising the crop based on the market demand.

The scale consists of nine statements out of which five were positive and four were negative. The respondents were asked to give their response on a five point continuum of 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, respectively. The scores obtained for each statement were summed up to get individual respondent planning orientation score. The maximum and minimum possible scores could be 45 and 9. The respondents were classified into three categories based on mean and standard deviation as follows.

S. No.	Category	Score
1	Low planning orientation	Below mean – S.D
2	Medium planning orientation	Between mean ± S.D
3	High planning orientation	Above mean + S.D.

3.3.2.2 Production orientation

It was operationalized as the degree to which the respondents were oriented towards production activities of the groundnut crop based on the market demand.

The scale consists of 8 statements out of which four were positive and four were negative. The responses given were rated on a five point continuum viz., strongly agree, agree, undecided, disagree and strongly disagree with weightages of 5, 4, 3, 2 and 1 for positive statements and 1, 2, 3, 4 and 5 for negative statements, respectively. The possible maximum and minimum scores were 40 and 8. The respondents were classified into three categories based on mean and standard deviation as follows.

S. No.	Category	Score
1	Low production orientation	Below mean – S.D
2	Medium production orientation	Between mean ± S.D
3	High production orientation	Above mean + S.D.

3.3.2.3 Marketing orientation

Marketing orientation was operationally defined as the degree to which a farmer is acquainted with the market intelligence on groundnut crop for good sale.

The scale developed by Samantha (1977) was used with suitable modifications to measure the marketing orientation of groundnut farmers. The scale consisted seven statements out of which three were positive and four were negative. Scoring was done on a five point continuum viz.,strongly agree, agree, undecided, disagree and strongly disagree with the weightages of 5,4,3,2 and 1 for positive statements and 1, 2, 3, 4 and 5 for negative statements. The maximum possible score was 35 and minimum possible score was 7. Scores obtained for all the statements were summed up to get the individual respondents marketing orientation score. Based on this score the respondents were classified into three categories by using mean and standard deviation as follows.

S. No.	Category	Score
1	Low marketing orientation	Below mean – S.D
2	Medium marketing orientation	Between mean ± S.D
3	High marketing orientation	Above mean + S.D.

3.3.2.4 Marketing information sources utilization

This variable was operationally as the degree to which an individual respondent maintain contacts with formal, informal and mass media sources for obtaining market information in order to perform his day to day marketing activities.

The degree of contact with each source is measured on the three point continuum of ‘often’, ‘sometimes’ and ‘never’ with the weightages of 3, 2 and 1 respectively. The overall score of an individual respondent was arrived by summing up all the corresponding response scores. The maximum and minimum possible scores were 75 and 25 respectively. The categorization of respondents was done based on mean and standard deviation as follows.

S. No.	Category	Score
1	Low Marketing information sources utilization	Below mean – S.D
2	Medium Marketing information sources utilization	Between mean ± S.D
3	High Marketing information sources utilization	Above mean + S.D

3.3.2.5 Decision making ability

It was operationally defined as the ability of groundnut farmers to make their decisions regarding raising the groundnut crop in accordance with the market demand.

This variable consists of fourteen statements with three point continuum namely ‘considered independently’, ‘considered after consultation with family members’ and ‘considered after consultation with other than family members’ with the weightages of 3, 2 and 1 respectively. The minimum possible score was 14 and the maximum possible score was 42. Total score was computed for each respondent by summing up the scores for all the statements and then they were grouped into three categories namely low, medium and high based on mean and standard deviation.

S. No.	Category	Score
1	Low decision making ability	Below mean – S.D
2	Medium decision making ability	Between mean ± S.D
3	High decision making ability	Above mean + S.D

3.3.2.6 Risk taking ability

It was operationalized as the degree to which the farmer was oriented towards encountering risk and uncertainty in adopting any new ideas. This was measured with the help of risk preference scale developed by Supe (1969).

The scale consisted of six statements with three positive and three negative statements. The respondents were asked to give their response on a five point continuum of strongly agree, agree, undecided, disagree and strongly disagree with corresponding weightages of 5, 4, 3, 2 and 1 for positive statements and in reverse order for negative statements. The scores obtained on each statement were summed up to get individual respondents risk orientation score. The maximum and minimum possible score were 30 and 6 respectively. The respondents were grouped into three categories namely low, medium and high based on mean and Standard deviation.

S. No.	Category	Score
1	Low risk taking ability	Below mean – S.D
2	Medium risk taking ability	Between mean ± S.D
3	High risk taking ability	Above mean + S.D

3.3.2.7 Innovativeness

It was operationalized as the degree to which an individual adopts new ideas relatively earlier than others in his social system (Rogers, 1963).

The scale consisted of eight different statements. Among these four were positive and four were negative statements. The respondents were asked to give their agreement (or) disagreement on a five point continuum. The statements were having the weightages of 5, 4, 3, 2 and 1 respectively. The minimum possible score was 8 and the maximum possible score was 40. Scores secured by an individual for all the statements were summed up to get

total score. The respondents were grouped into three categories namely low, medium and high based on mean and standard deviation.

S. No.	Category	Score
1	Low innovativeness	Below mean – S.D
2	Medium innovativeness	Between mean ± S.D
3	High innovativeness	Above mean + S.D

3.3.2.8 Mode of transport

It was operationalized as the means of carrying the produce by a farmer to the market. A schedule was developed to measure the mode of transport which consists of five modes of transport which they were in locally use. The respondents were grouped into frequency and percentages based on their different modes of transport of groundnut produce.

S. No.	Mode of transport	Score
1	Bullock cart	1
2	Tractor	2
3	Bus	3
4	Tempo van	4
5	Lorry	5

3.3.2.9 Place of sale

It was operationalized as the exchange location of the produce. A schedule was developed to measure the place of sale which consists of five locations and the scores were given as follows. The respondents were grouped into frequency and percentages based on their place of sale of the groundnut produce.

S. No.	Place of sale	Score
1	Middle men	1
2	Local market	2
3	Wholesale market	3
4	Retail market	4
5	Market yard	5
6	Any other(Specify)	6

3.3.2.10 Terms and conditions for sale

It was operationalized as the grower's agreement with regard to payment. A schedule consists of three conditions was developed and scores were given as follows.

S. No	Terms and conditions of sale	Score
1	Prior payment before sale	1
2	Immediate payment at the time of sale	2
3	Payment after sale	3

3.3.2.10.1 Scoring and Categorization of marketing behaviour

The overall score of individual marketing behaviour was arrived by summing up the scores of all ten components. The maximum and minimum possible scores were 320 and 80 respectively. The classification of respondents was done into three categories based on mean and standard deviation.

S. No.	Total marketing behaviour	Score
1	Low marketing behaviour	Below mean – S.D
2	Medium marketing behaviour	Between mean ± S.D
3	High marketing behaviour	Above mean + S.D

3.4 PROBLEMS FACED AND SUGGESTIONS GIVEN BY THE GROUNDNUT FARMERS IN THE MARKETING OF GROUNDNUT

3.4.1 Problems Faced by the Groundnut Farmers

The respondents were asked to express the problems faced by them in marketing of groundnut. The problems as stated by the respondents were recorded. The problems expressed by the most of the respondents would become the first problem, similarly the rest followed in order of their magnitude.

3.4.2 Suggestions from the Farmers to Improve the Marketing Aspects of Groundnut

The respondents were requested to elicit their suggestions to improve the marketing in groundnut. The suggestions as stated by the respondents were recorded. The suggestions given by most of the respondents would become the first suggestion, similarly the rest followed in order of their magnitude.

3.5 INSTRUMENTS AND METHODS USED FOR THE COLLECTION OF DATA

3.5.1 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 the experts from the departments of Agricultural Extension ,Agronomy of S.V. Agricultural College, Tirupati and Regional Agricultural Research Station, Tirupati and Agricultural Officers of State Department of Agriculture, Anantapuramu district. Most of the items included in the interview schedule were structured questions which were simple and easy to reply.

3.5.2 Pretesting of Interview Schedule

Before giving a final shape to the interview schedule the schedule was pretested with 30 farmers who were actively participating in agricultural operations in Tallakalva village of Gandlapenta mandal of Anantapuramu district which falls in non-sample area with identical situation.

3.5.3 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 study with 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 modification was appended in Appendix.

3.5.4 Method of Data Collection

The field investigation was carried out during the month of November and December, 2017. The data was collected by administering the structured interview schedule to the respondents. The questions were asked in local language *i.e.* Telugu. The groundnut farmers 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 by the investigator with due care. Every effort was made to check and cross check the data collected from all the sample respondents.

3.5.5 Data Collection

The investigator interviewed all the selected respondents personally and the data were recorded directly on the schedule, which enabled her to get

firsthand information and gave an opportunity to observe their reactions. Friendly atmosphere was maintained during the interview to see that the respondents were at ease and expressed their opinions freely, fairly and frankly.

3.5.6 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.

3.6 STATISTICAL TOOLS AND PROCEDURES FOLLOWED

Statistical method is the scientific method of judging collective natural or social phenomena from the results obtained by the analysis or enumerated or collected estimates (Siegel, 1956).

For the purpose of statistical analysis to fulfill the set objectives, the following statistical tools were used:

1. Arithmetic mean ($\bar{X}$)

2. Standard deviation (σ)

3. Frequency and percentage

4. Pearson's correlation coefficient (r)

5. Multiple Linear Regression (MLR)

The following statistical tests and measures were used for the analysis of the data.

3.6.1 Arithmetic Mean

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.

The formula is: $(\bar{x}) = \frac{\Sigma x}{n}$

where,

$\bar{x}$ = Mean

Σx = sum of scores

n = Number of respondents

3.6.2 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 variables 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

3.6.3 Frequency and Percentage

Frequency 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.

3.6.4 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
Σ x	=	Sum of scores of variables x
Σ y	=	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
Σ xy	=	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 5% and 1% level of significance at (*n*-2) degree 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.

3.6.5 Multiple Linear Regression Analysis

It was defined as the average expected change in the dependent variable to a unit change in each independent variable put together. MLR was used to study the combined effect of selected independent variables over dependent variables. MLR provides amount of relation among two or more predicted variables and the single criterion variable. The regression co-efficient b may be interpreted as the change in Y corresponding to a unit increase in X when all the other variables are held constant. The Multiple Regression Coefficient of determination ‘R^2’ is the highest possible constant between least squares of the independent variables and the squares of the independent variables and the observed dependent variable and R^2 the portion of the variation on the criterion variable.

The regression equation may be written as

$$Y = a + b_1x_1 + b_2 x_2 + b_3x_3 + \ldots\ldots\ldots + b_kx_k$$

where,

a = intercept

b_1 = the partial regression coefficient represents the amount of change in Y that can be associated with a unit change in x_1 the remaining independent variables held constant

X_k = k^{th} independent variable for k =1, 2, 3…k

3.7 PREPARATION OF REPORT

The data thus collected through interview schedule were coded, tabulated, analyzed and presented in tables to make findings easily understandable. The findings emerged out of data were suitably interpreted, necessary conclusions and inferences were drawn.

Chapter ~ IV

Results & Discussion

Chapter – IV

RESULTS AND DISCUSSION

This chapter highlights the findings of the investigation with reference to the objectives of the study. The data collected during the study were coded, analyzed, interpreted and meaningful conclusions were drawn based on the results. The results and discussion of the study were presented based on the objectives under the following heads:

4.1 To study the profile characteristics of groundnut farmers.

4.2 To analyze the marketing behaviour of groundnut farmers.

4.3 To find out the relationship between the profile characteristics of groundnut farmers and the marketing behaviour.

4.4 To identify the problems encountered by the groundnut farmers in marketing of the produce.

4.5 To elicit the suggestions from the groundnut farmers and to develop a suitable strategy based on the suggestions.

4.1 PROFILE CHARACTERISTICS OF GROUNDNUT FARMERS

4.1.1 Age

It is clear from Table 4.1 and Fig. 4.1 that 44.16 per cent of the farmers belonged to middle age, followed by old (41.16%) and young (14.16%) age categories.

Table 4.1. Distribution of respondents according to their age

(n=120)

S. No.	Category	Frequency	Percentage
1	Young age	17	14.16
2	Middle age	53	44.16
3	Old age	50	41.16
	Total	**120**	**100**
Mean: 51			**SD: 12.50**

The probable reason for the above result might be due to the fact that, young people might have been engaged in activities other than agriculture or prefer to go to towns and cities for higher education or employment or business and were not interested in land based activities. The old age farmers preferred to stay at their homes and being less energetic looked after supporting activities of agriculture like taking care of household works and cattle rearing. The above two reasons accounts for low percentage of young and old age group farmers in the farming activities.

The middle age group being more challenging and enthusiastic were staying in village and looking after the activities of the farming. Hence, the Agriculture Department should encourage young farmers as they are more innovative and enthusiastic and the future of agriculture will wholly depend on them. It is necessary to motivate the young farmers to take up farming by utilizing modern technologies. This finding was in line with the findings of Naik (2006), Begum (2008) and Kalyan (2011).

4.1.2 Education

A cursory look at Table 4.2 and Fig. 4.2 inferred that 32.50 per cent of the farmers educated up to middle school followed by 23.33 per cent up to high school. While 16.66 per cent of the farmers were illiterate, equal percentage (8.33%) of the farmers were functionally literate and studied intermediate and 5.00 per cent of the farmers completed graduation.

Table 4.2. Distribution of respondents according to their education

(n=120)

S. No.	Education	Frequency	Percentage
1.	Illiterate	20	16.66
2.	Functionally literate	10	8.33
3.	Primary school	7	5.83
4.	Middle school	39	32.50
5.	High school	28	23.33
6.	Intermediate	10	8.33
7.	Graduation and above	6	5.00
	Total	**120**	**100**
Mean: 4			**SD: 1.76**

The results in the Table 4.2 indicated that more than half of the groundnut farmers had education up to middle and high school. This trend might be due to poor financial conditions, non-availability of good educational facilities and ignorance about the educational programs provided by the government. Lack of awareness among the farmers about need and importance of education and there might be unavoidable need to help their parents in farming instead of continuing their education. School dropouts are more after the middle school and many could not go for higher education due to non-availability of higher educational facilities in their villages. Therefore, efforts are needed to increase the educational facilities in the villages to improve the present educational conditions. This finding was in line with the findings of Kikon (2010) and Kalyan (2011)

4.1.3 Area under Groundnut Cultivation

A glance at Table 4.3 and Fig. 4.3 indicated that more than half (55.83%) of the respondents had possessed less than 2.5 acres of the area under groundnut cultivation followed by 35.83 per cent having 2.5 to 5.0

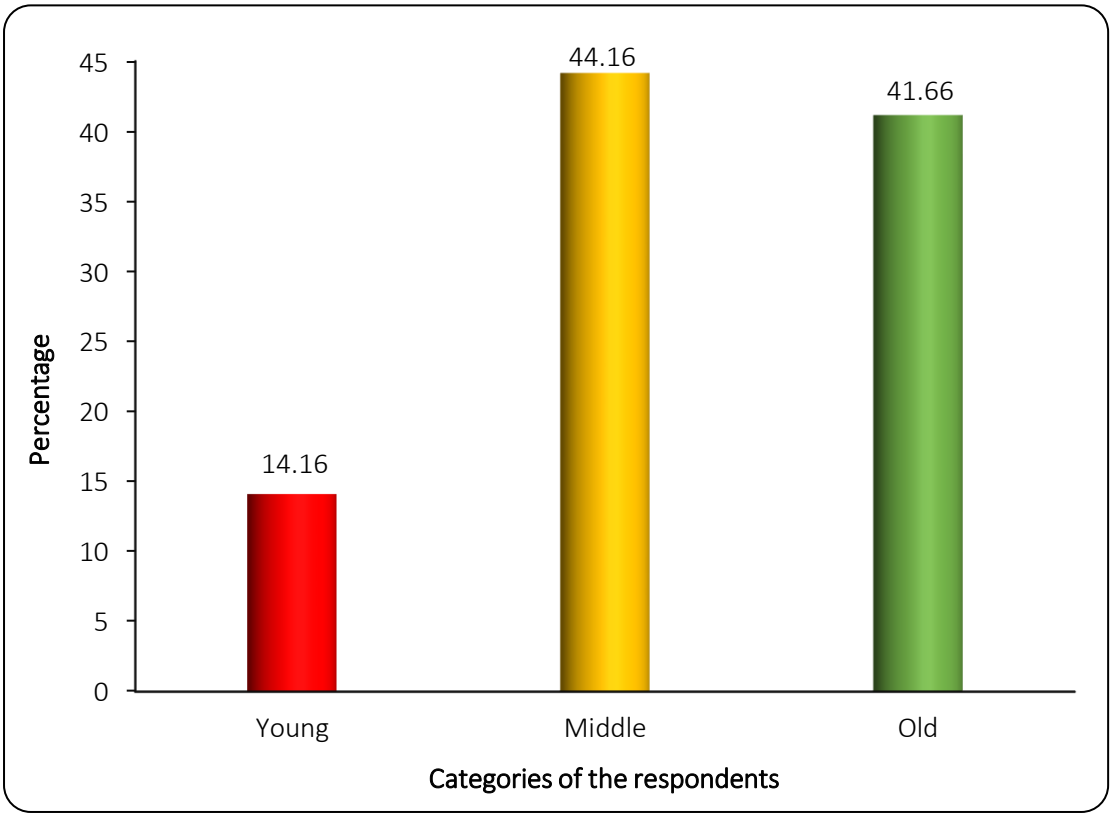


Fig. 4.1. Distribution of respondents according to their age

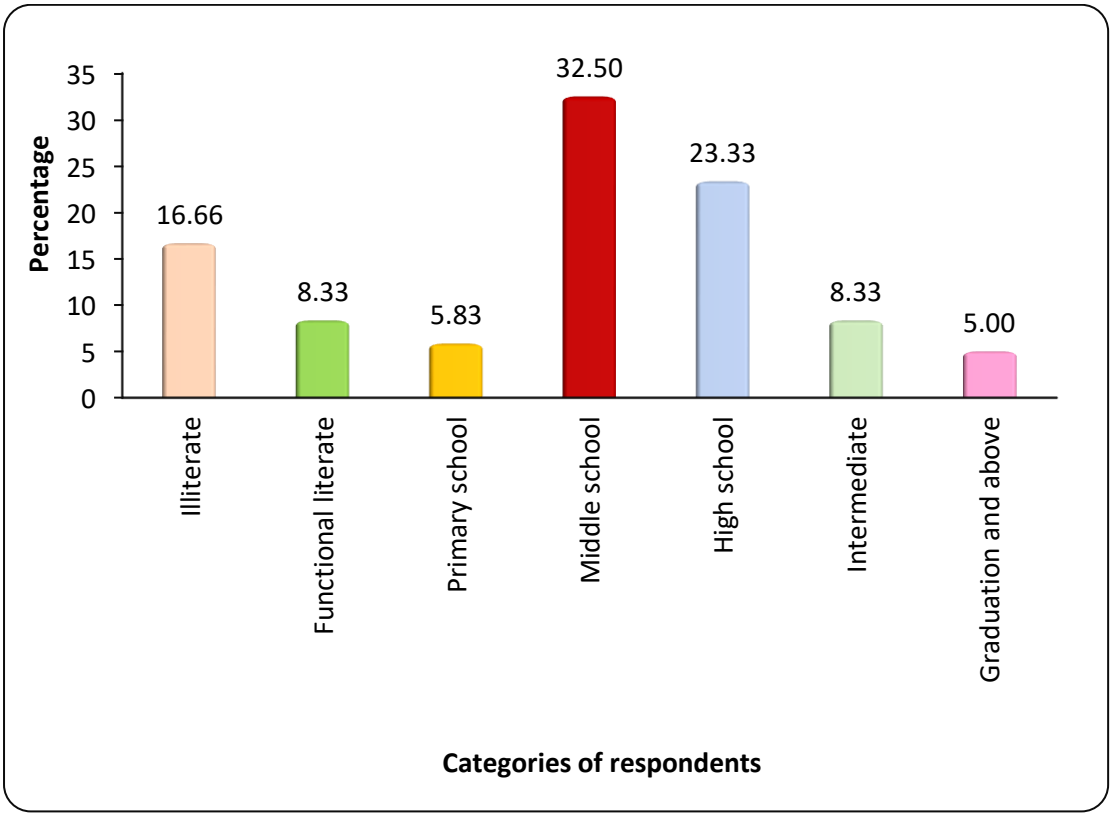


Fig. 4.2. Distribution of respondents according to their education

acres, 5.00 per cent having 5 to 7.5 acres, 1.66 per cent having 7.5 to 10 acres and 1.66 per cent having more than 10 acres.

Table 4.3. Distribution of respondents according to their area under groundnut cultivation

(n=120)

S. No	Category	Frequency	Percentage
1.	< 2.5 acres	67	55.83
2.	2.5 to 5.0 acres	43	35.83
3.	5.0 to 7.50 acres	6	5.00
4.	7.50 to 10 acres	2	1.66
5.	> 10 acres	2	1.66
	Total	**120**	**100**
Mean: 2			**SD: 0.88**

This might be due to the fact that, the landholdings were small in the case of groundnut farmers and they also cultivate other crops such as bengal gram, red gram etc. apart from groundnut which is also a cost intensive crop. As it may not be possible to increase the area under cultivation, the farmers need to adopt new technologies which increase the productivity per unit area. To uplift the productivity, it is necessary to impart more knowledge about latest recommended practices to the farmers by arranging various demonstrations, trainings programs, exposure visits as well as providing them with subsidies on inputs etc. This finding was in agreement with the findings of Begum (2008), Kalyan (2011) and Saiva (2012).

4.1.4 Experience in Groundnut Cultivation

It is clear from the Table 4.4 and Fig 4.4, with regard to the variable on experience in groundnut cultivation, that majority of the farmers (65.00%) had medium level of experience followed by high (20.00%) and low experiences (15.00%) in groundnut cultivation.

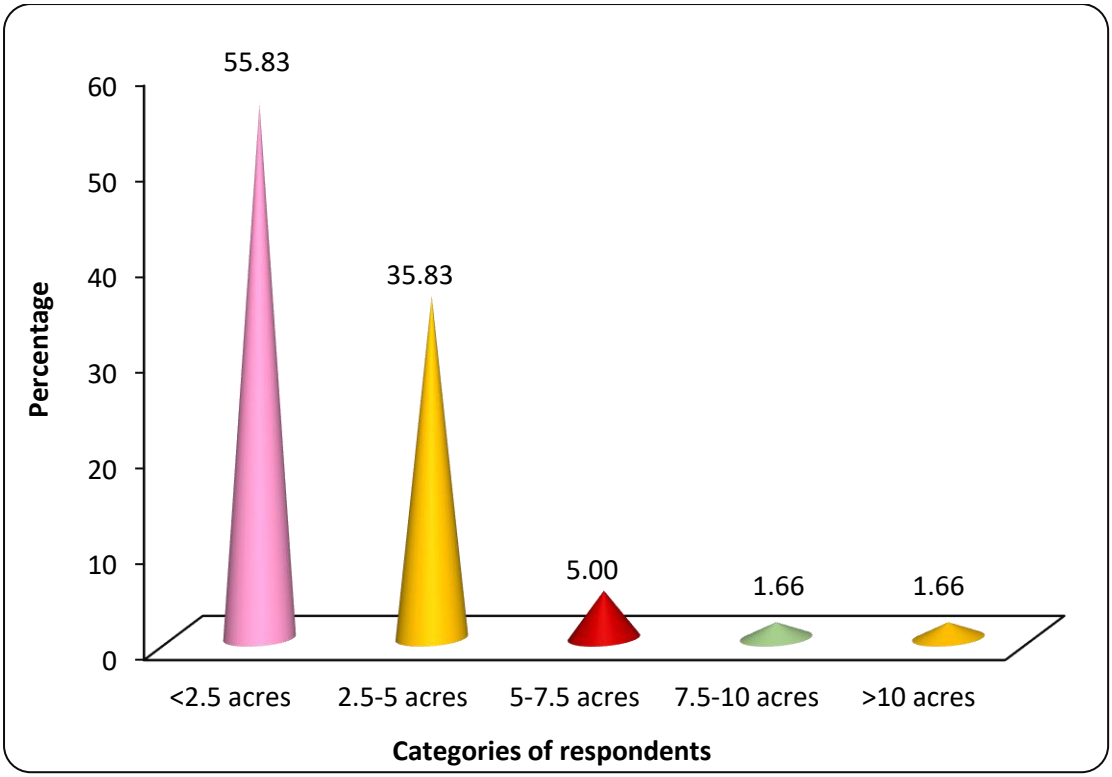


Fig. 4.3. Distribution of respondents according to their area under groundnut cultivation

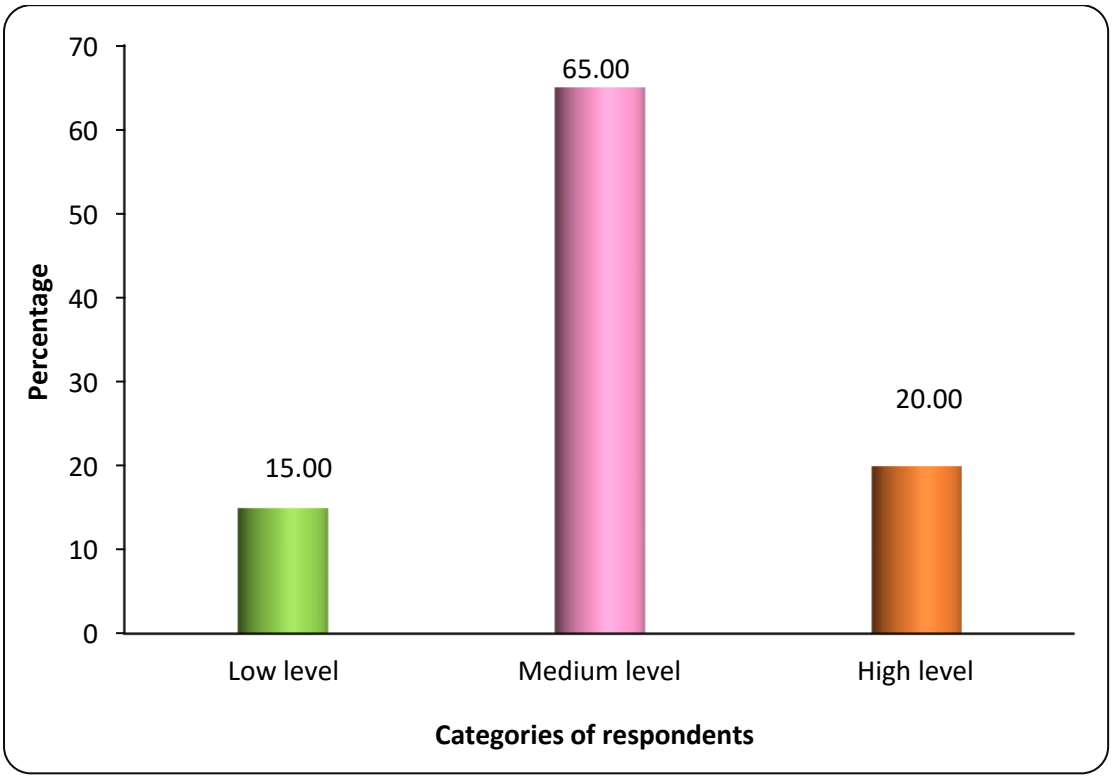


Fig. 4.4. Distribution of respondents according to their experience in groundnut cultivation

Table 4.4. Distribution of respondents according to their experience in groundnut cultivation

(n=120)

S. No.	Category	Frequency	Percentage
1	Low level of experience	18	15.00
2	Medium level of experience	78	65.00
3	High level of experience	24	20.00
	Total	**120**	**100**
Mean: 28			**SD: 10.18**

The above trend might be due to the fact that majority of the respondents were middle aged with middle school education having moderate experience in farming. Definitely the experience is an important factor which influences the farmers to accept, evaluate and experiment the innovative technologies in their farm. As most of the groundnut farmers were middle aged they had medium level of experience in groundnut cultivation. This finding was in line with the findings of Begum (2008) and Kalyan (2011)

4.1.5 Annual Income

The findings presented in Table 4.5 and Fig 4.5 clearly indicated that majority (60.00%) of the farmers were grouped under the category of medium annual income followed by high (28.33%) and low (11.66%) annual income categories

Table 4.5 Distribution of respondents according to their annual income

(n=120)

S. No.	Category	Frequency	Percentage
1.	Low Annual income	14	11.66
2.	Medium annual income	72	60.00
3.	High annual income	34	28.33
	Total	**120**	**100**
Mean: 140			**SD: 38.93**

The probable reason for the above trend might be due to the fact that, most of the farmers had less than 2.5 acres of land holding. The farmers who were financially sound would not find it difficult to invest on purchasing inputs, labour etc. They were also able to get more information on technologies, subsidies provided by the government, good credit facilities because of their large land holdings and their contacts with extension officials with regard to farm advisory services helped them to get good returns. But this is not same in the case of the groundnut farmers with small land holdings. Hence, majority fall under medium annual income category. This finding was in line with the findings of Chavda (2007) and Saiva (2012).

4.1.6 Material Possession

It is revealed from the Table 4.6 and Fig 4.6 that majority (81.66%) of the groundnut farmers had medium level of material possession, followed by equal (9.16%) per cent of the farmers having low and high level of material possessions.

Table 4.6. Distribution of respondents according to their material possession

(n=120)

S. No.	Category	Frequency	Percentage
1	Low	11	9.16
2	Medium	98	81.66
3	High	11	9.16
	Total	**120**	**100**
Mean: 16			**SD: 1.82**

The possible reason for the above trend might be due to the fact that, the farmers with small land holdings, middle school level of education, middle level of annual income will naturally possess medium level of material possession for their farm and home activities. Further, farmers were also habituated to hiring of machinery from their fellow farmers if necessary which

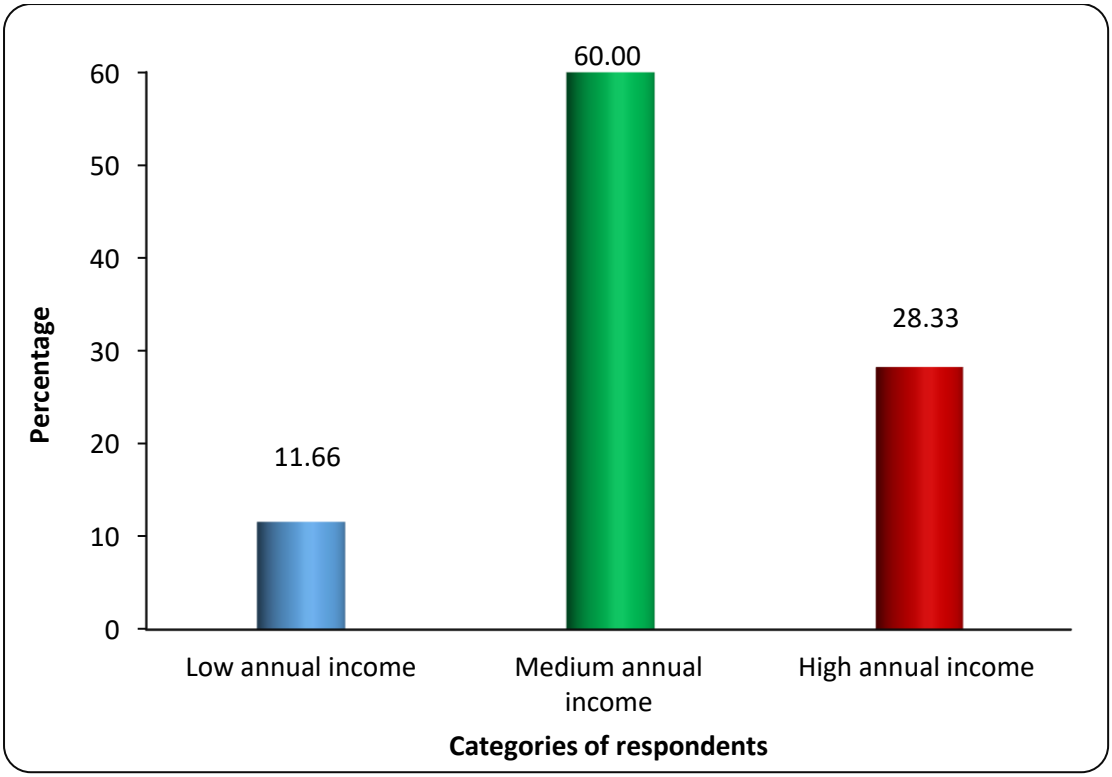


Fig. 4.5. Distribution of respondents according to their annual income

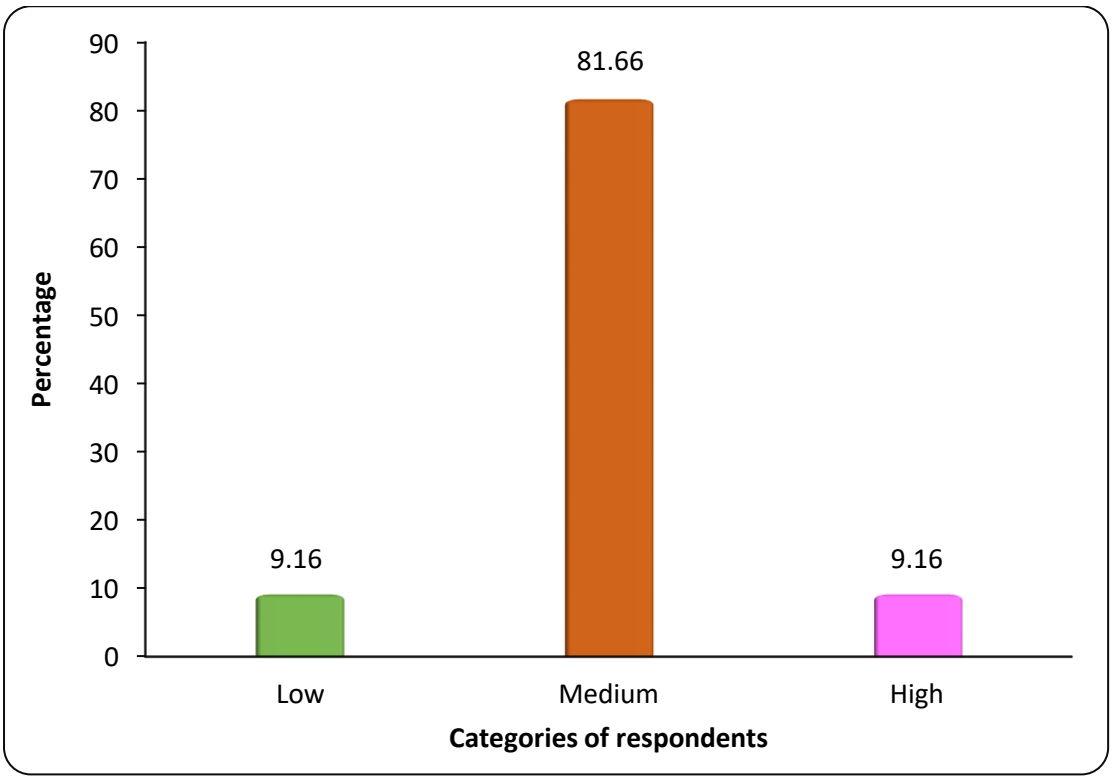


Fig. 4.6. Distribution of respondents according to their material possession

is also one of the reason for their medium level of material possession. This findings were in line with the results of Pradipthaacharya (2005) and Ranjan (2013).

4.1.7 Extension Contact

The findings presented in Table 4.7 and Fig 4.7 clearly indicated that majority of the respondents (66.66%) had medium level of extension contact, followed by high (20.83%) and low (12.50%) levels of extension contacts.

Table 4.7. Distribution of respondents according to their extension contact

(n = 120)

S. No.	Category	Frequency	Percentage
1	Low	15	12.50
2	Medium	80	66.66
3	High	25	20.83
	Total	**120**	**100**
Mean: 16			**SD: 2.41**

The probable reason for above trend might be that, lack of sufficient numbers of field level extension functionaries, especially Agricultural Extension Officers, who are working at grass root level for transfer of technologies. The farmers with more inclination towards latest production technologies might have been approaching the agricultural officers and other higher cadre extension officers for getting latest technical knowhow. Majority of the respondents had middle school education hence would not go out regularly to meet the officials of agriculture department, scientists etc., and also hesitate to communicate freely with the officials. So, it is desirable to improve the level of extension contact of the farmers through regular visits by the extension personnel by conducting demonstrations, exposure visits, meetings and training programs etc., in the villages. In addition, agricultural

officers and their services must be made available from mandal headquarters rather than sub-divisional headquarters. It was in conformity with Begum (2008) and Kalyan (2011).

4.1.8 Trainings Received

The findings presented in Table 4.8 and Fig 4.8 clearly indicated that 45.00 per cent of the respondents were received medium level of training followed by low (29.16%) and high (25.83%) levels of training.

Table 4.8. Distribution of respondents according to training received

(n = 120)

S. No.	Category	Frequency	Percentage
1	Low	35	29.16
2	Medium	54	45.00
3	High	31	25.83
	Total	**120**	**100**
Mean: 1			**SD: 0.79**

This trend might be due to the reason that most of the groundnut farmers were traditional and did not get an opportunity to receive training from the experts due to various reasons like lack of awareness, engaged busily in farming activities etc. Further, majority of the farmers were middle aged and had medium level of education which led to less contact with extension personnel hence they might have not been involved in trainings.

Hence, there is a need to motivate the groundnut farmers to attend the training programs to update their knowledge and skill related to groundnut cultivation. The extension personnel should build the confidence levels of the farmers and should have good rapport with them and involve them in the activities of the agriculture department like trainings, exposure visits, demonstrations etc. Because a trained farmer could manage his crop in a better

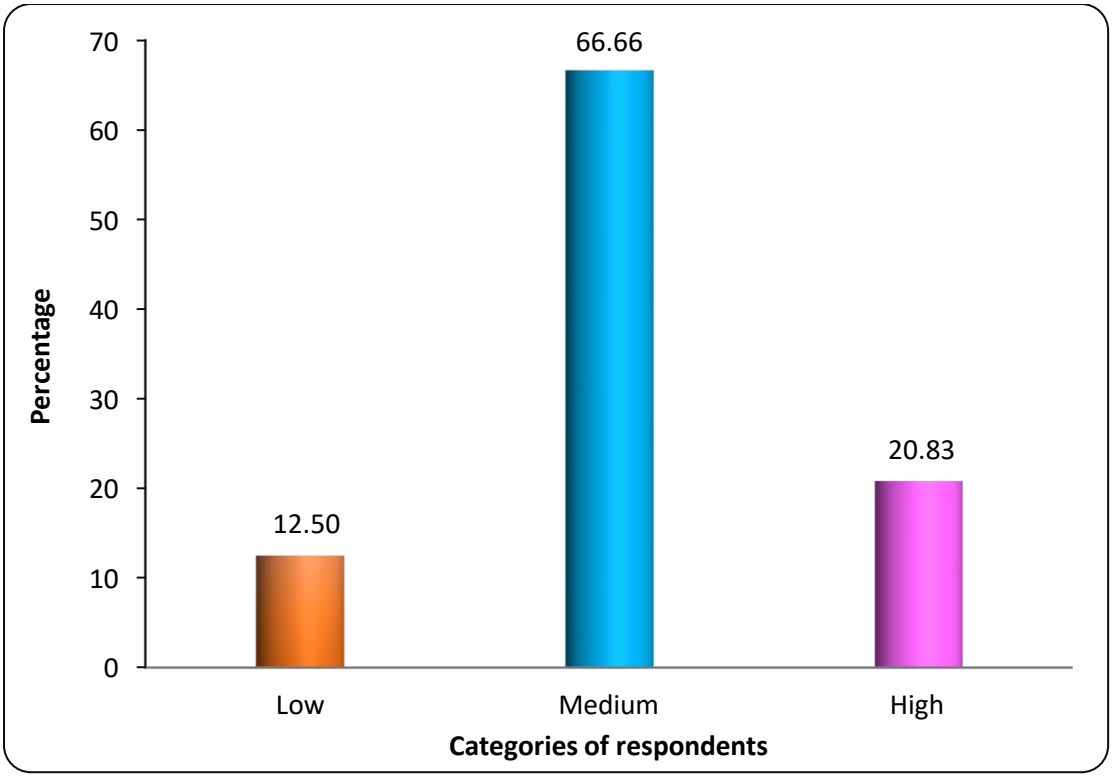


Fig. 4.7 Distribution of respondents according to their extension contact

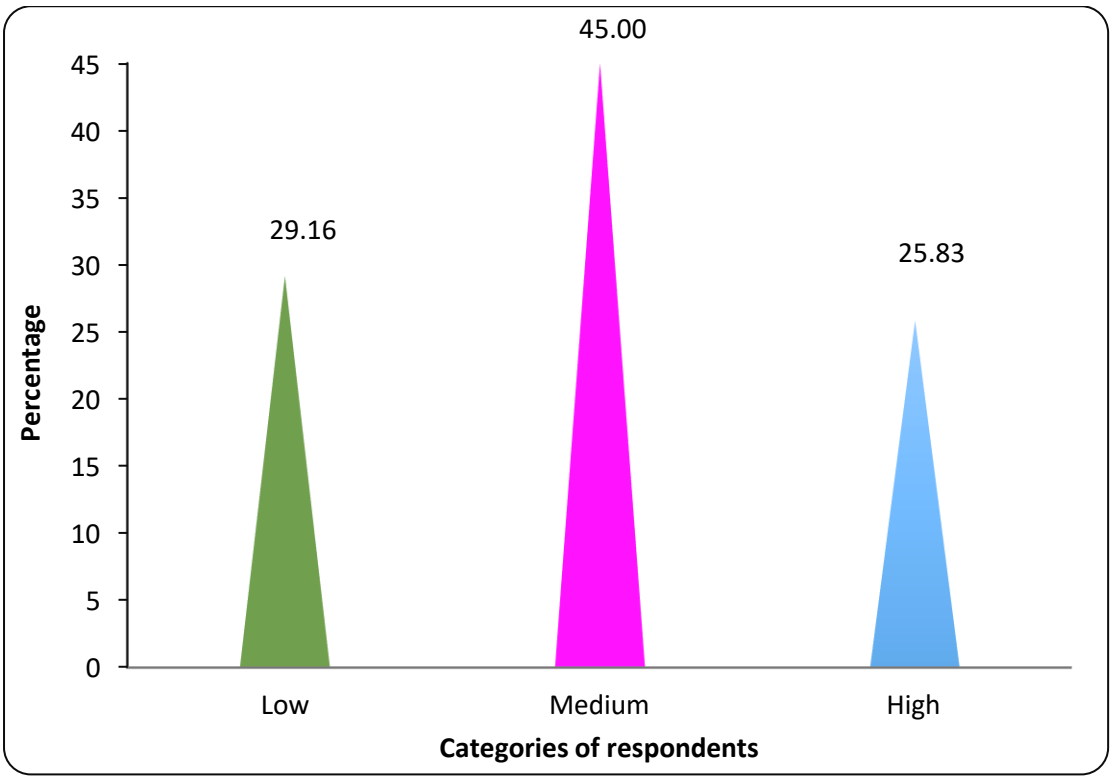


Fig. 4.8. Distribution of respondents according to trainings received

way and get more profits which in turn contribute for economic development. This finding was in tune with the results of Naidu (2012) and Saiva (2012).

4.1.9 Agricultural Inputs Acquisition Pattern

It is found from the Table 4.9 and Fig 4.9 that majority (75.00%) of the respondents had medium level of agricultural inputs acquisition pattern, followed by high (17.50%) and low (7.50%) levels of agricultural inputs acquisition pattern.

Table 4.9. Distribution of respondents according to agricultural inputs acquisition pattern

(n=120)

S. No.	Category	Frequency	Percentage
1.	Low	9	7.50
2.	Medium	90	75.00
3.	High	21	17.50
	Total	**120**	**100**
Mean: 13			**SD: 1.42**

This trend might be due to the reason that majority of the groundnut farmers had medium level of extension contact and medium level of annual income. Most of the farmers in the study area were small farmers and in order to meet the cost of cultivation they get money from moneylenders. In order to repay the money borrowed, most of them would market their produce to those moneylenders and intermediaries at the price, which is not remunerative. Hence, this trend was noticed. This finding was in tune with the results of Gangadhar (2009).

4.1.10 Social Participation

It is revealed from the Table 4.10 and Fig 4.10 that a little more than half (52.50%) of the respondents had medium level of social participation,

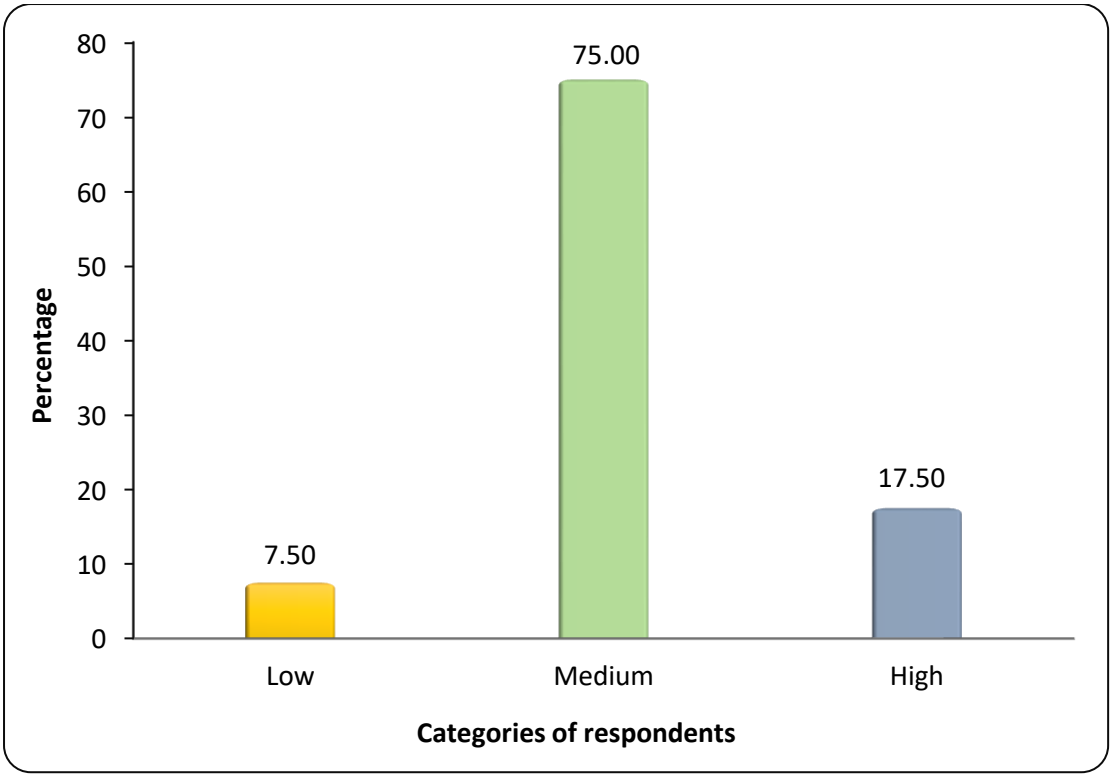


Fig. 4.9. Distribution of respondents according to agricultural inputs acquisition pattern

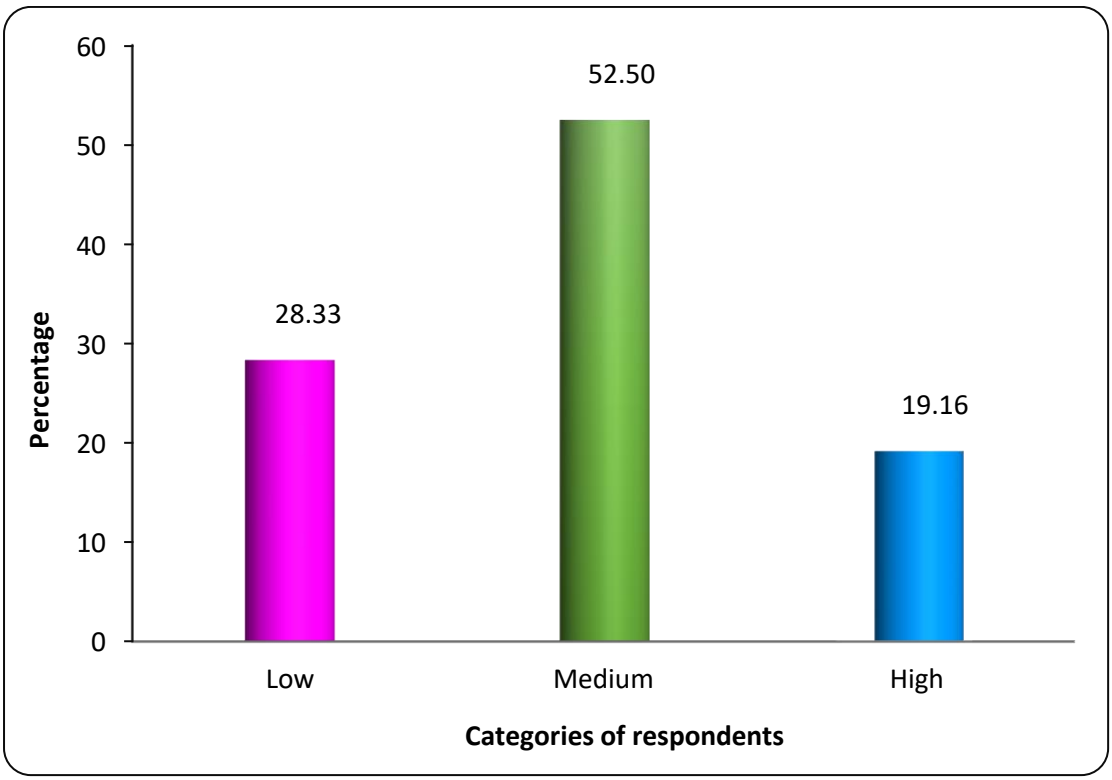


Fig. 4.10. Distribution of respondents according to their social participation

followed by low (28.33%) and high (19.16%) levels of medium social participation.

Table 4.10. Distribution of respondents according to social participation

(n = 120)

S. No.	Category	Frequency	Percentage
1	Low	34	28.33
2	Medium	63	52.50
3	High	23	19.16
	Total	**120**	**100**
Mean: 4			**SD: 2.34**

The probable reason for the above trend might be due to their membership in limited number of social organizations, and medium exposure to different sources of information. The other reason for the medium level of social participation could be due to the presence of cooperatives in the villages. Hence, there is a need to enhance the social participation of farmers by educating and encouraging them to become members in various social organizations and local village institutions for better interaction. This finding was in line with the results of Naik (2006), Khodifad (2010) and Saiva (2012)

4.2 MARKETING BEHAVIOUR OF GROUNDNUT FARMERS

It was operationally defined as the degree to which groundnut farmers were oriented towards marketing of their produce to get remunerative price.

This section analyses the marketing behaviour of the groundnut farmers. Marketing behaviour of groundnut farmers comprises of ten components viz., planning orientation, production orientation, marketing orientation, marketing information sources utilization, decision making ability, risk taking ability, innovativeness, mode of transport, place of sale and terms and conditions of the sale.

4.2.1 Planning Orientation

It is found from the Table 4.11 and Fig 4.11 that majority of the respondents (79.16%) had medium level of planning orientation, followed by high (14.16%) and low (6.66%) levels of planning orientation.

Table 4.11. Distribution of respondents according to planning orientation

(n = 120)

S. No.	Category	Frequency	Percentage
1	Low	8	6.66
2	Medium	95	79.16
3	High	17	14.16
	Total	**120**	**100**
Mean: 32.58			**SD: 1.96**

The possible reason for the above trend might be due to the fact that, most of the farmers were not planned their activities timely and effectively. They possessed inadequate knowledge on the various activities involved in planning. Hence this trend was noticed.

Planning is very important in agriculture. “Everything else can wait… but not agriculture” as quoted by our former prime minister Late Pandit Jawaharlal Nehru is very apt to mention here. Groundnut being an important oilseed crop, it requires lot of attention in procuring inputs and attending to field operations on time and hence, there is every need to improve planning orientation of the farmers to fetch more yields and income. Extension officers need to organize training programs on management aspects in groundnut cultivation. These findings are in line with the results of Babu (2004) and Madhusekhar (2009), Gangadhar (2009).

4.2.2 Production orientation

The findings presented in Table 4.12 and Fig 4.12 clearly indicated that majority of the respondents (79.16%) had medium level of production orientation followed by low (15.00%) and high (5.83%) levels of production orientation

Table 4.12. Distribution of respondents according to production orientation

(n = 120)

S. No.	Category	Frequency	Percentage
1	Low	18	15.00
2	Medium	95	79.16
3	High	7	5.83
	Total	**120**	**100**
Mean: 27.6			**SD: 1.42**

The possible reason for this situation might be due to the fact that, majority of the farmers were not followed timely sowing of the crop, recommended seed rate given by the specialists and also recommended fertilizer doses for the crop. Application of biological control measures was least preferred by the respondent farmers. This opinion might be expressed due to the absence of sufficient bio agents and failure to understand the mechanism of using various bio-agents. These are some of the reasons for the medium level of production orientation of the respondents. Hence officials of State Department of Agriculture should educate the farmers on techniques involved in biological control measures along with supplying bio-agents. The preferred areas should be well addressed by the departmental officials to improve the production levels of the groundnut farmers. These findings were in conformity with Gangadhar (2009).

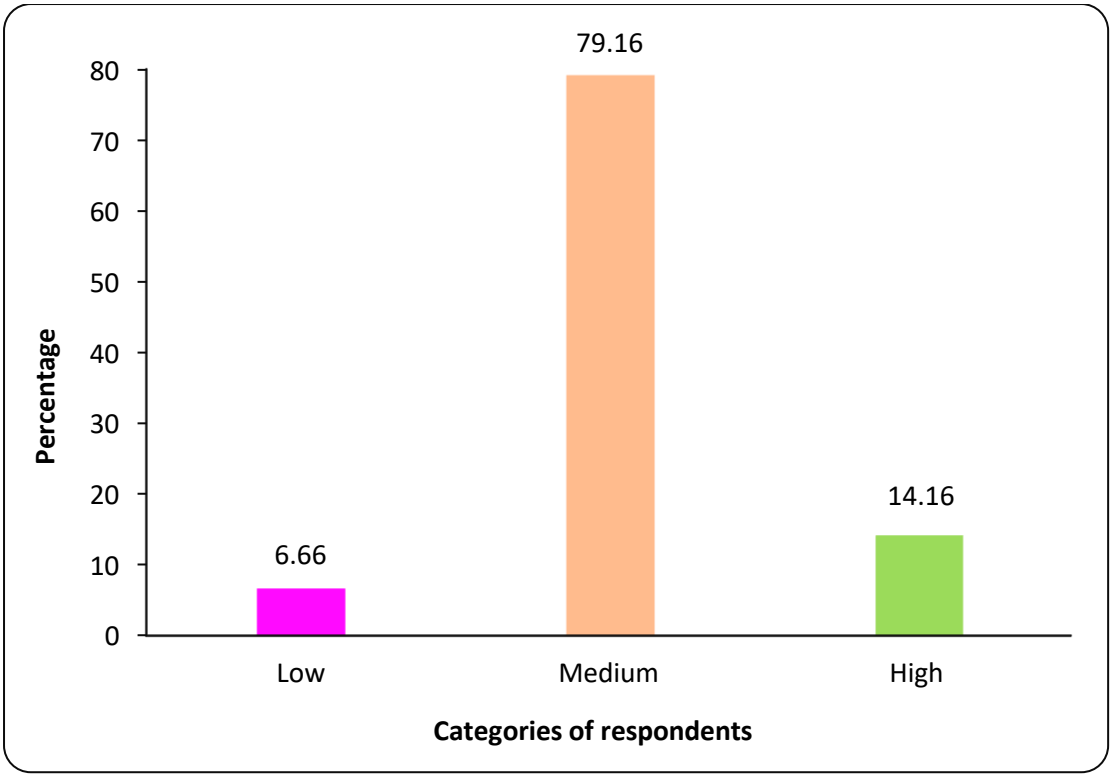


Fig. 4.11. Distribution of respondents according to their planning orientation

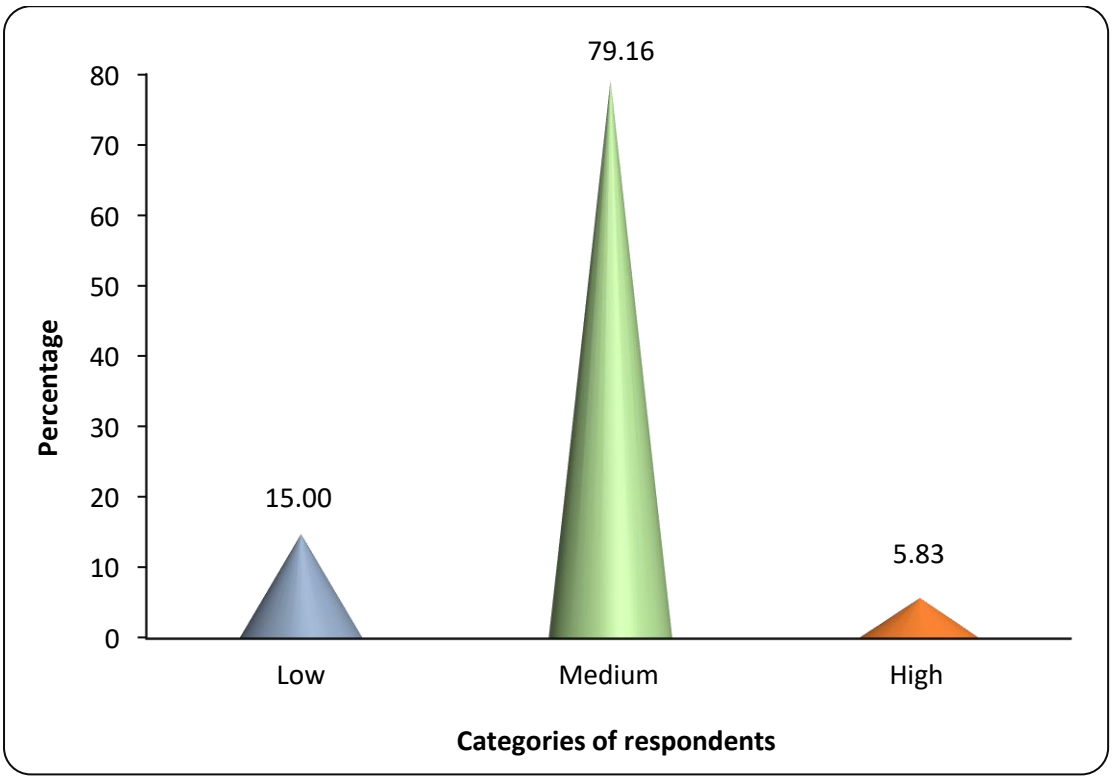


Fig. 4.12. Distribution of respondents according to their production orientation

4.2.3 Marketing Orientation

The findings presented in Table 4.13 and Fig 4.13 clearly indicated that majority of the respondents (69.16%) had medium level of marketing orientation followed by low (15.83%) and high (15.00%) levels of marketing orientation.

Table 4.13. Distribution of respondents according to marketing orientation

(n = 120)

S. No.	Category	Frequency	Percentage
1	Low	19	15.83
2	Medium	83	69.16
3	High	18	15.00
	Total	**120**	**100**
Mean: 25.44			**SD: 1.60**

This trend might be due to the reason that lack of good understanding by the farmers about current market demands and also their inability to market the produce effectively to avoid the distress sales at low prices and also their incapability in getting the remunerative price for the graded produce coupled with improper selection of the varieties which were not meeting the market demand. In this connection State Department of Agriculture has to provide guidance to the farmers about crops and varieties to be selected according to the market demand. These findings were in line with the results of Kumar and Popat (2010).

4.2.4 Marketing Information Sources Utilization

It is found from the Table 4.14 and Fig 4.14 that majority (74.17%) of the groundnut farmers had medium level of marketing information sources utilization followed by high (14.17%) and low (11.66%) levels of marketing information sources utilization.

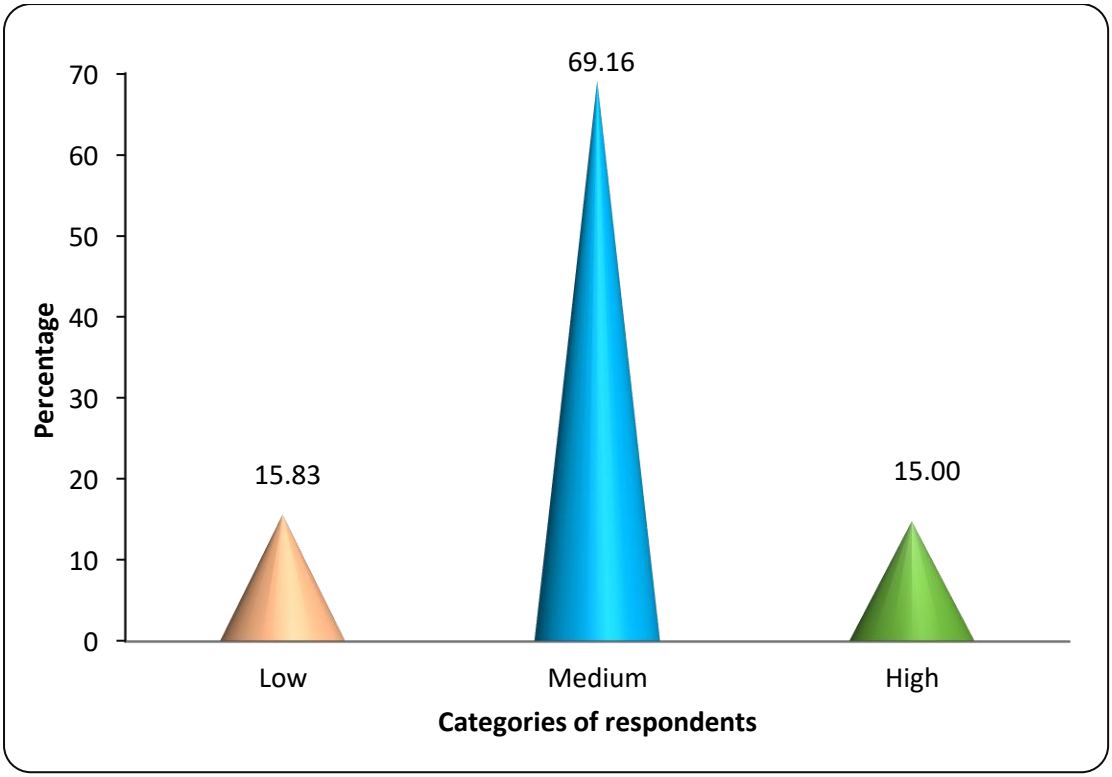


Fig. 4.13. Distribution of respondents according to their marketing orientation

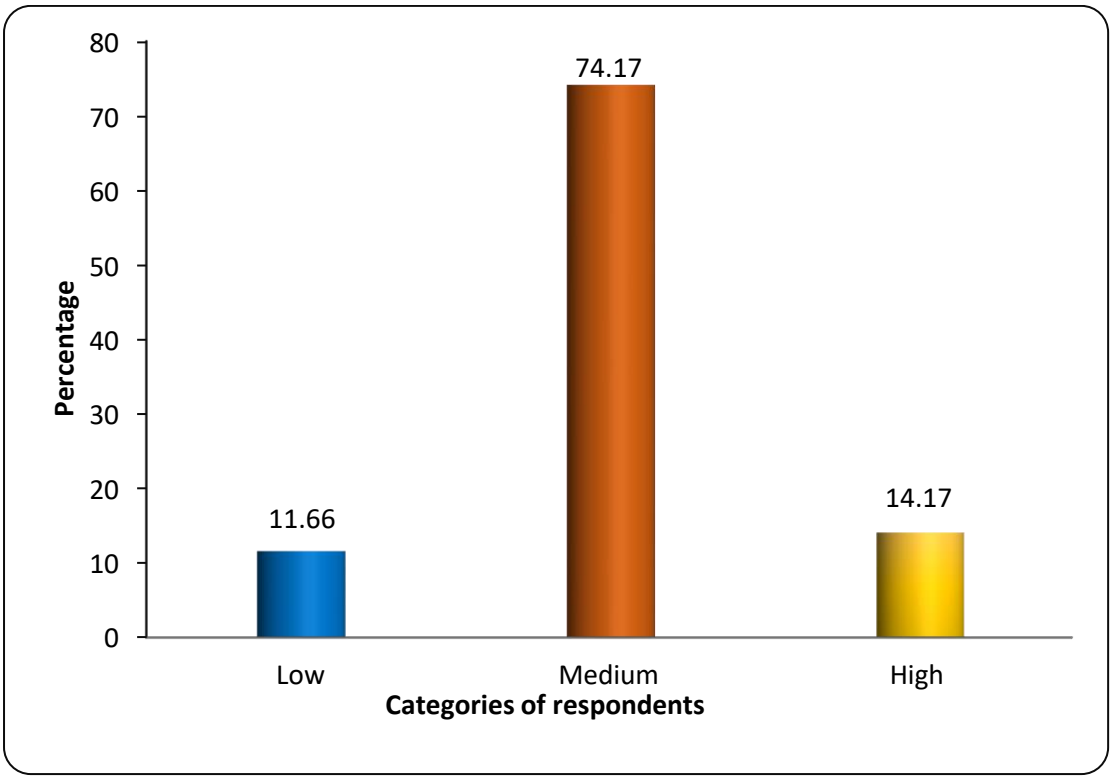


Fig 4.14. Distribution of respondents according to their marketing information sources utilization

Table 4.14. Distribution of respondents according to marketing information sources utilization

(n = 120)

S. No.	Category	Frequency	Percentage
1.	Low	14	11.66
2.	Medium	89	74.17
3.	High	17	14.17
	Total	**120**	**100**
Mean: 41.16			**SD: 3.24**

The reason for medium utilization of the information sources by higher proportion of groundnut farmers might be due to the fact that, the farmers were preferring more informal sources rather than formal sources to get the required information such as input dealers, commission agents, neighboring farmers, panchayat members rather than the government officials. Retrieval of information was also very less. Very few big farmers had access to agricultural officials and scientists. So it is desirable to create awareness on utility and credibility of various information sources among the farmers. The government should also initiate the steps to transfer the valid, reliable and latest market information through highly preferred sources like Television, News Papers, and Radio etc. These findings were in line with the results of Viresh *et al*. (2010)

4.2.5 Decision Making Ability

The findings presented in Table 4.15 and Fig 4.15 clearly indicated that majority of the respondents (70.83%) had medium level of decision making ability followed by low (16.66%) and high (12.50%) levels of decision making ability.

Table 4.15. Distribution of respondents according to decision making ability

(n = 120)

S. No.	Category	Frequency	Percentage
1	Low	20	16.66
2	Medium	85	70.83
3	High	15	12.50
	Total	**120**	**100**
Mean: 34.35			**SD: 2.20**

The possible reason for this situation might be that respondents had strong decision making ability for obtaining latest technical know-how from various sources followed by kind of activities to be taken up for groundnut cultivation and attending training programs on income generating activity. It indicates, that the respondents are involved in deciding themselves in the matters where no financial commitment is involved. Poor decision making was observed in the matters where financial commitment was involved like utilization of profits for personal purpose, for future investments, amount of loan to be borrowed and changing the price of the product with changing demands with the consultation of their family members or other than family members. Hence the above trend was noticed. This finding was in conformity with the findings of Ravi Shankar (2005) and Gangadhar (2009).

4.2.6 Risk Taking Ability

It is found from the Table 4.16 and Fig 4.16 that majority of the respondents (68.33%) had medium level of risk taking ability followed by low (16.66%) and high (15.00%) levels of risk taking ability.

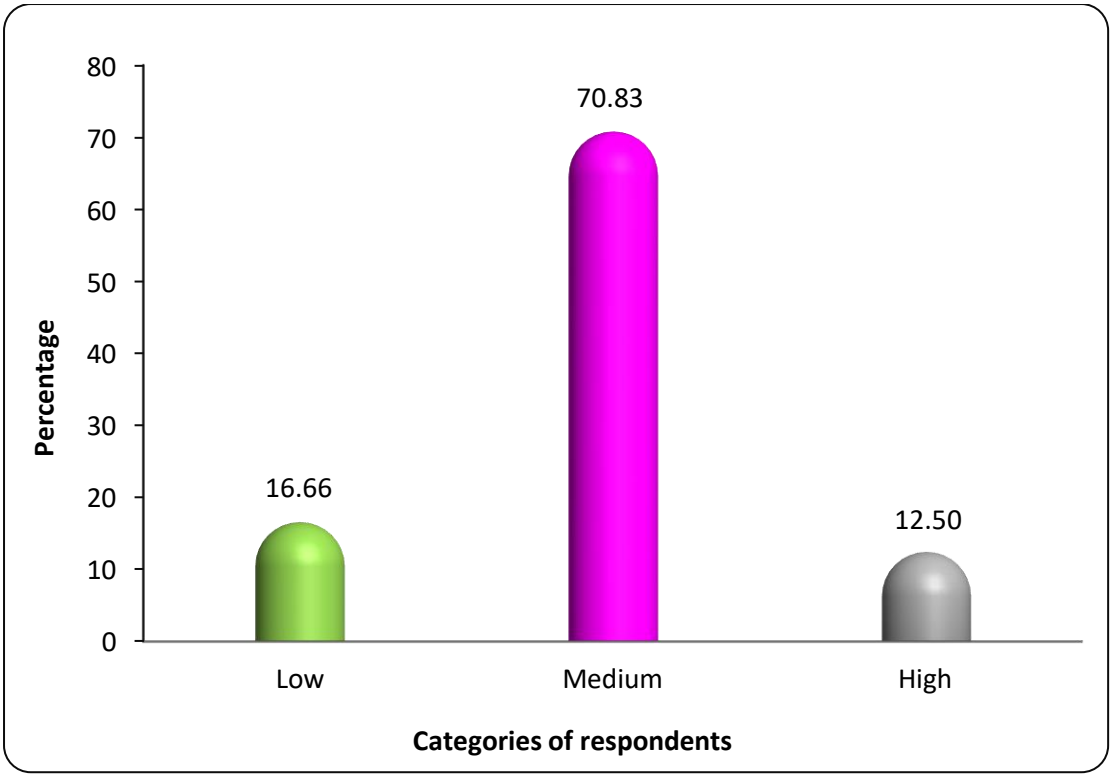


Fig. 4.15. Distribution of respondents according to their decision making ability

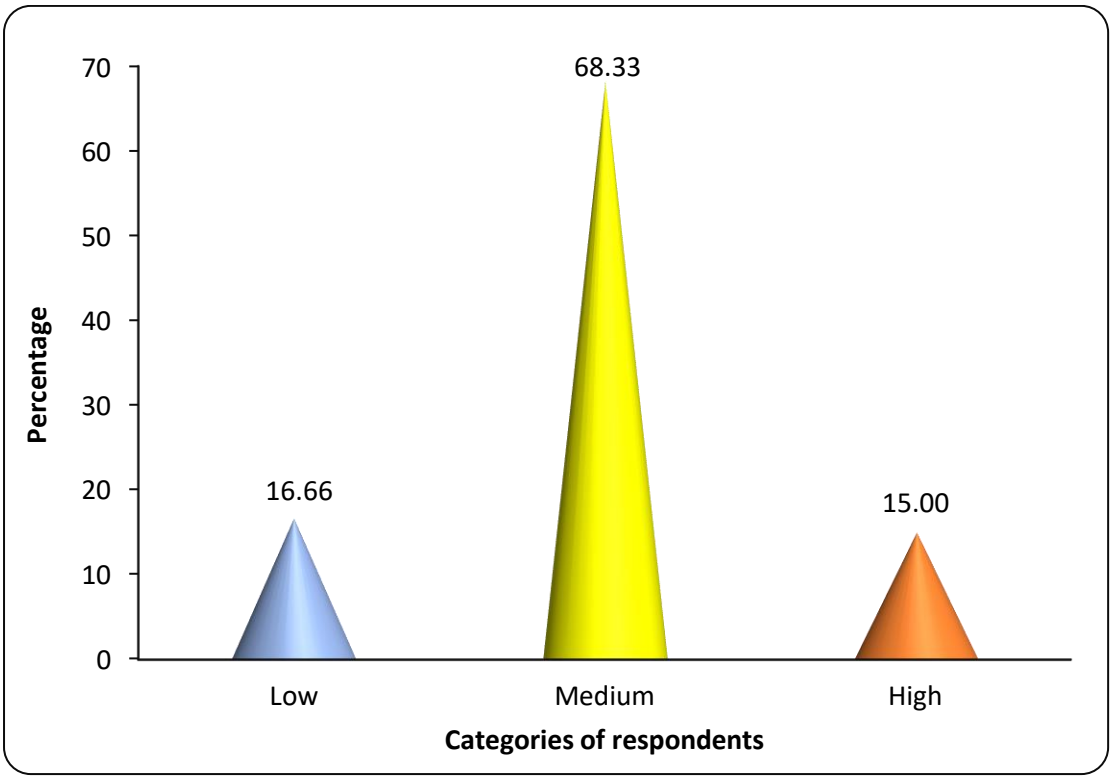


Fig. 4.16. Distribution of respondents according to their risk taking ability

Table 4.16. Distribution of respondents according to risk taking ability

(n = 120)

S. No.	Category	Frequency	Percentage
1	Low	20	16.66
2	Medium	82	68.33
3	High	18	15.00
	Total	**120**	**100**
Mean: 19.71			**SD: 1.46**

Majority of the groundnut farmers had medium risk taking ability as most of the respondents were having medium level of annual income, medium extension contact, which led them not venture to take risk. The possible reason for this situation might be the failure and vagaries of monsoon for the past few years. Further, the farmers were financially not sound to face the risk and were dependent only on agriculture mostly to earn their livelihood so they wanted to minimize the risks to have better profits. Hence, the extension officers need to demonstrate the technologies and build confidence on the part of the farmers. This finding was in line with the results of Chavda (2007) and Khodifad (2010).

4.2.7 Innovativeness

The findings presented in Table 4.17 and Fig 4.17 clearly indicated that majority of the respondents (65.00%) had medium level of innovativeness followed by high (20.83%) and low (14.16%) levels of innovativeness.

Table 4.17. Distribution of respondents according to innovativeness

(n = 120)

S. No.	Category	Frequency	Percentage
1	Low	17	14.16
2	Medium	78	65.00
3	High	25	20.83
	Total	**120**	**100**
Mean: 25.60			**SD: 2.92**

Majority of the groundnut farmers had medium innovativeness as they were showing resistance to adopt new technologies due to the common fact that, majority of the farmers had education up to middle school only and they were also not keen to take risks.

Innovativeness involves an element of risk and uncertainty and is the prime requisite for any sort of modernization and this can be improved among the groundnut farmers by making them to adopt modern agricultural technologies with high predictability. It is desirable to increase innovativeness by taking up suitable awareness programs through advertisements and success stories. Moreover, more number of result demonstrations need to be conducted by the extension agents to build confidence among the farmers to take up new technologies. This finding was in line with the results of Kumar (2006) and Saiva (2012).

4.2.8 Mode of Transport

It is revealed from the Table 4.18 and Fig 4.18 that majority (66.66%) of the respondents transported their groundnut produce to the markets by lorry followed by tractor (26.66 %) and tempo van (6.66%).

Table 4.18. Distribution of respondents according to mode of transport

(n = 120)

S. No.	Mode of transport	Frequency	Percentage
1	Bullock cart	-	-
2	Tractor	32	26.66
3	Bus	-	-
4	Tempo van	8	6.66
5	Lorry	80	66.66
6	Any other(specify)	-	-

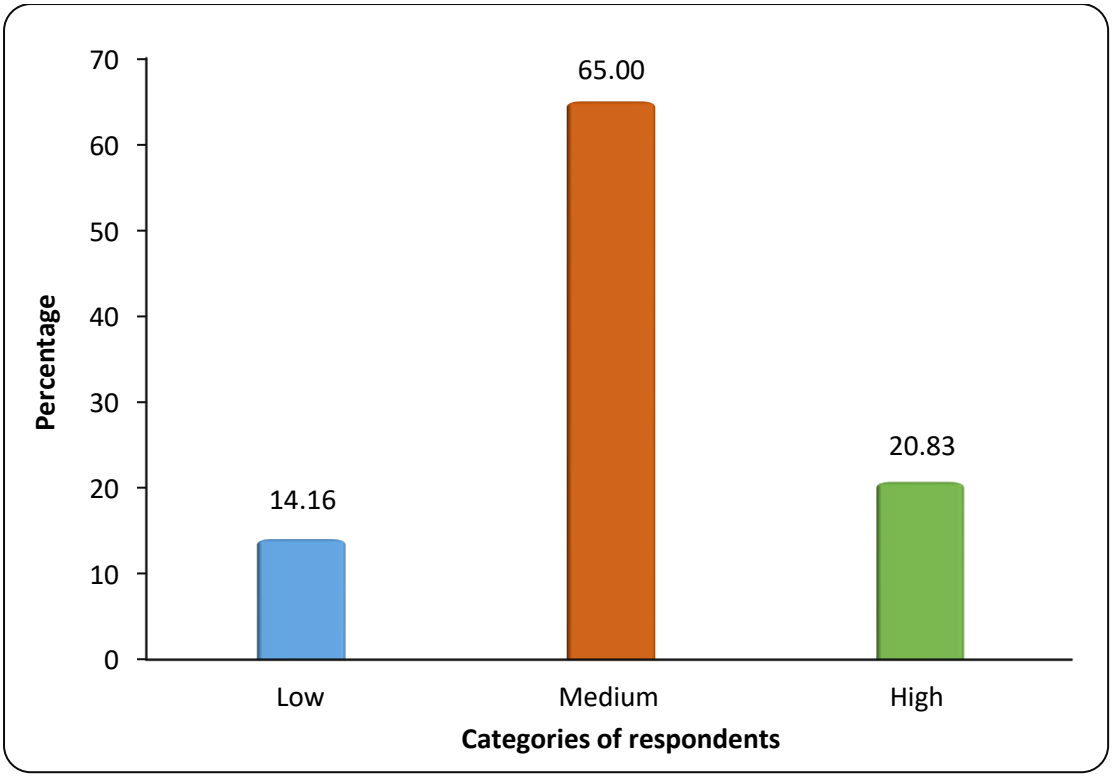


Fig. 4.17. Distribution of respondents according to their innovativeness

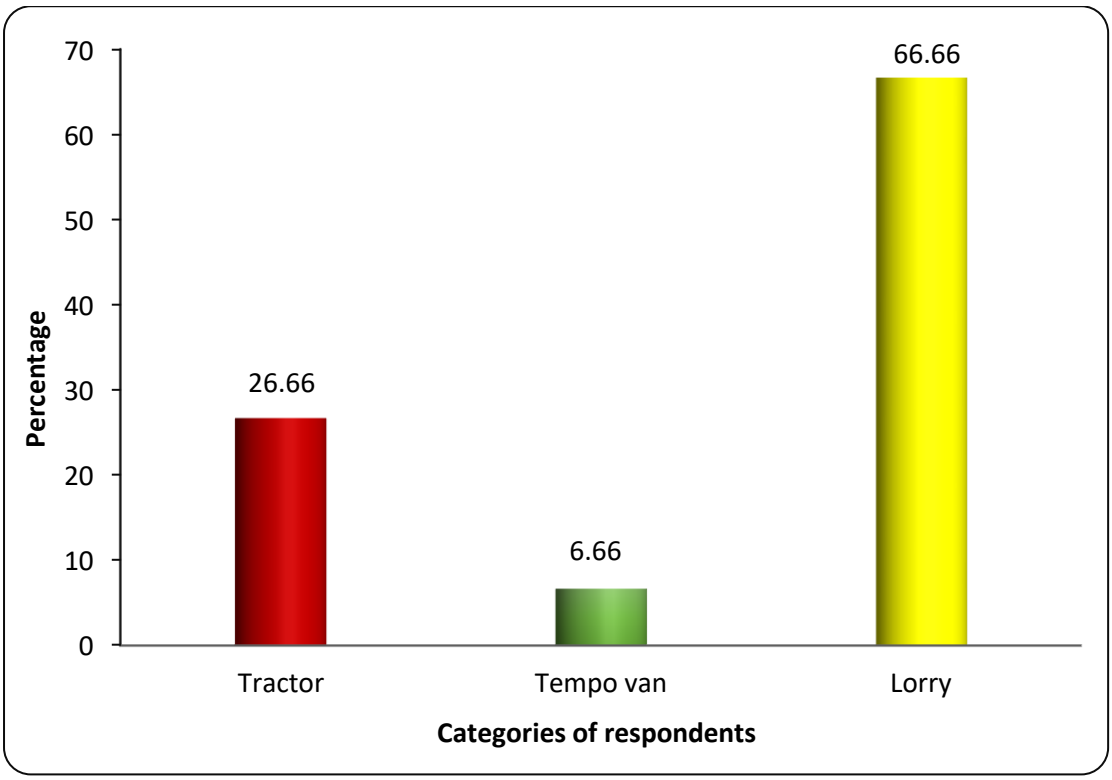


Fig. 4.18. Distribution of respondents according to their mode of transport

It was observed that, most of the respondents preferred lorry for transporting the final produce. Bus was mostly not preferred by the farmers as the quantity of the produce for sale was more. Tractor was also preferred next to lorry by the respondents for transportation. It was observed that farmers mostly plan their transport of the produce based upon the distance from the market.

4.2.9 Place of Sale

It is revealed from the Table 4.19 and Fig 4.19 that, 45.83 per cent of the groundnut farmers sold their groundnut produce in the market yards, followed by 40.83 per cent through middle men, 13.33 per cent in local markets and none of them sold in the wholesale and retail markets

Table 4.19. Distribution of respondents according to place of sale

(n = 120)

S. No.	Place of sale	Frequency	Percentage
1	Middle men	49	40.83
2	Local market	16	13.33
3	Wholesale market	-	-
4	Retail market	-	-
5	Market yard	55	45.83
6	Any other(Specify)	-	-

Nearly half of the groundnut farmers sold their produce in the market yards in order to get immediate payment. Some of the respondents sold their produce to middle men within the village where their villages were distant from the markets. Further, few farmers sold their produce in the local markets of the villages to cater their immediate needs. This results were in tune with the findings of Ekhande *et al.* (2015).

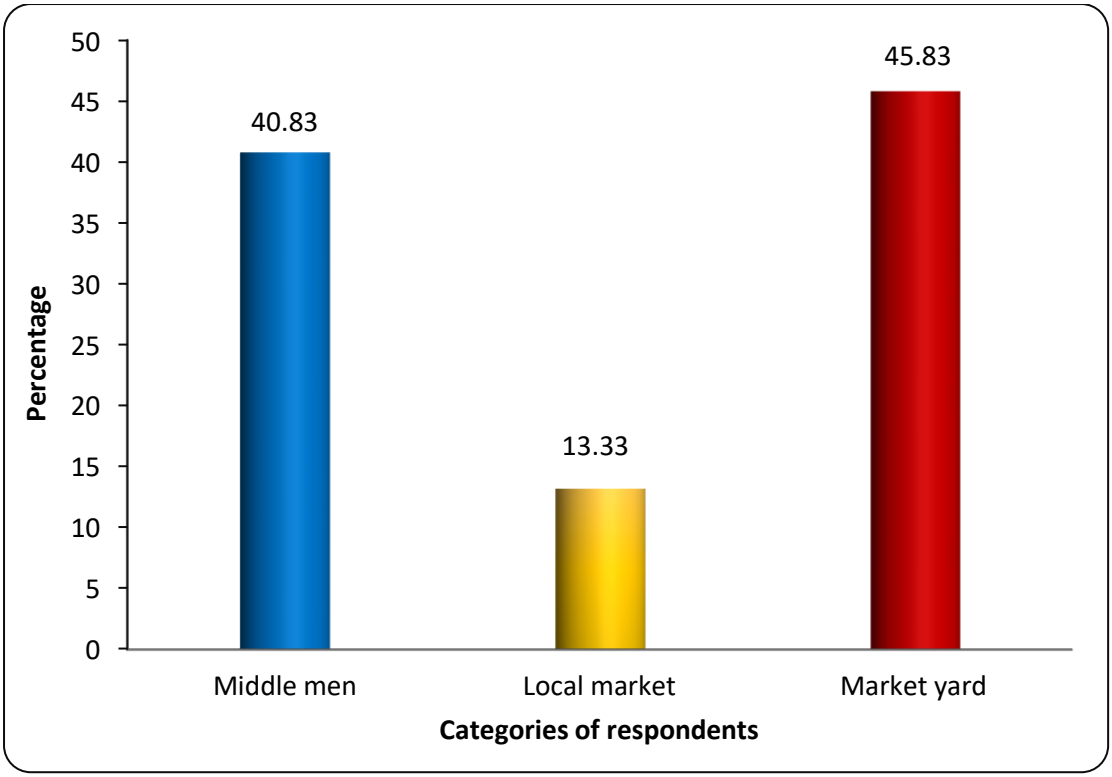


Fig. 4.19. Distribution of respondents according to their place of sale

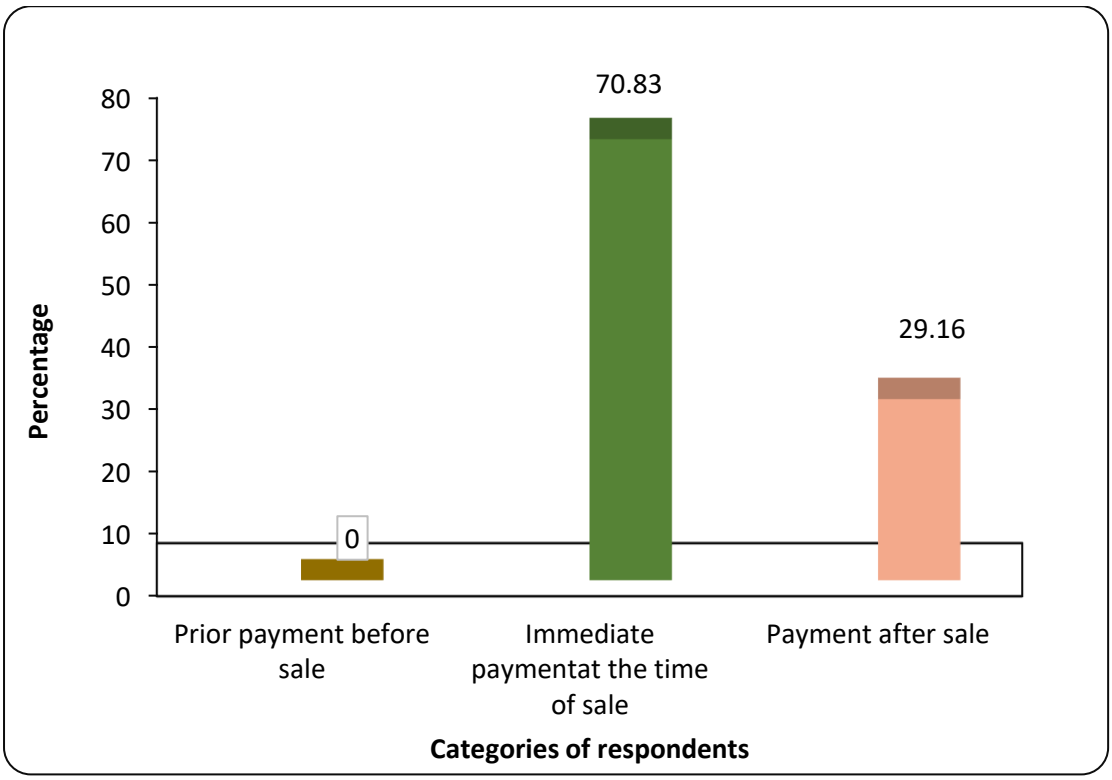


Fig. 4.20. Distribution of respondents according to terms and conditions of sale

4.2.10 Terms and Conditions of Sale

The findings presented in Table 4.20 and Fig 4.20 clearly indicated that, majority (70.83%) of the groundnut farmers belonged to 'immediate payment at the time of sale' category, followed by 'payment after sale' (29.16%) and none from the 'prior payment before sale' category.

Table 4.20. Distribution of respondents according to terms and conditions of sale

(n = 120)

S. No.	Terms and conditions of sale	Frequency	Percentage
1	Prior payment before sale	-	-
2	Immediate payment at the time of sale	85	70.83
3	Payment after sale	35	29.16

Nearly 70.00 per cent of the groundnut farmers sold their produce either to the traders or middle men by immediate payment at the time of sale as they had immediate payment arrangements to meet their day to day expenditure and also for repaying their debts. This result was in tune with the findings of Srinivas *et al*. (2014).

OVER ALL MARKETING BEHAVIOUR OF THE GROUNDNUT FARMERS

The overall marketing behaviour of groundnut farmers was attained by summing up the scores of the ten components viz., planning orientation, production orientation, marketing orientation, marketing information sources utilization, decision making ability, risk taking ability, innovativeness, mode of transport, place of sale and terms and conditions of the sale. The classification of respondents was done into three categories based on mean and standard deviation.

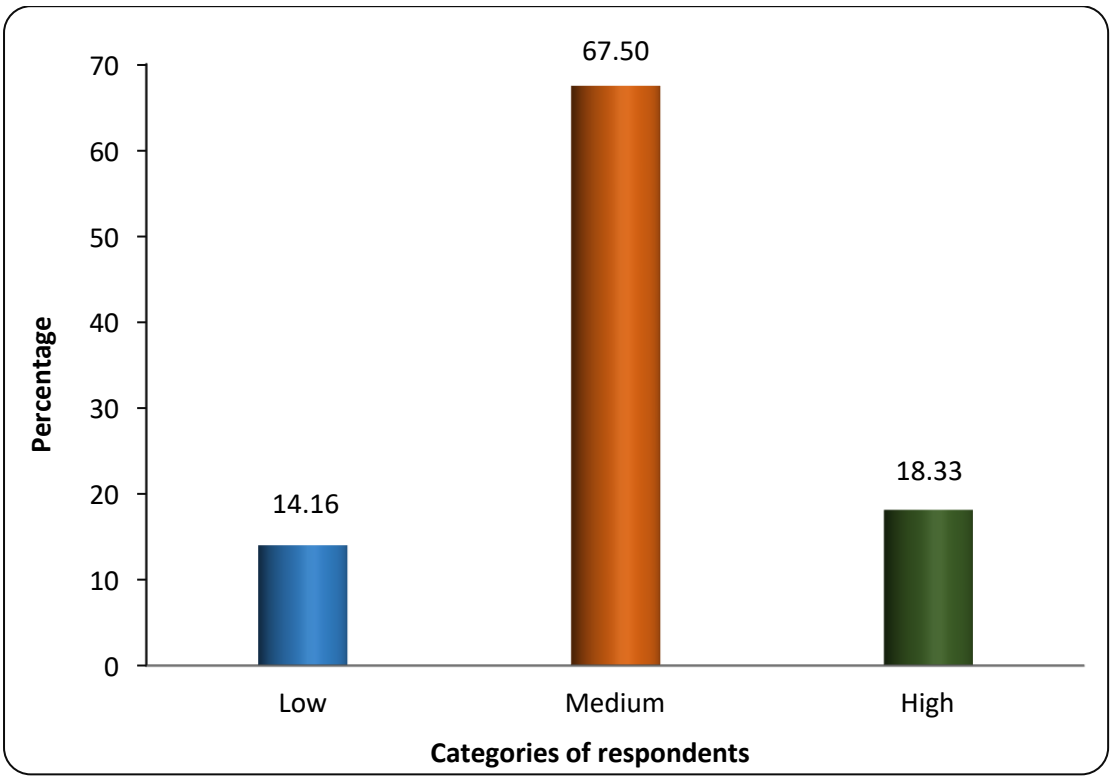


Fig. 4.21. Distribution of respondents according to their overall marketing behaviour

Table 4.21. Distribution of respondents according to overall marketing behaviour

S. No.	Category	Frequency	Percentage
1	Low marketing behaviour	17	14.16
2	Medium marketing behaviour	81	67.50
3	High marketing behaviour	22	18.33
Mean: 216			**SD: 8.35**

The findings presented in the Table 4.21 and Fig 4.21 revealed that, majority (67.50%) of the groundnut farmers had medium marketing behaviour, followed by high (18.33 %) and low (14.16 %) levels of marketing behaviour.

Medium level of marketing behaviour of the respondents was observed in the study area. The possible reasons for the above trend might be due to the fact that majority of the groundnut farmers had medium levels of planning orientation, production orientation, marketing orientation, marketing information sources utilization, decision making ability, risk taking ability and innovativeness which resulted in medium level of marketing behaviour. This result was in tune with the findings of Kad *et al.* (2013).

4.3 RELATIONSHIP BETWEEN PROFILE CHARACTERISTICS OF GROUNDNUT FARMERS AND THEIR MARKETING BEHAVIOUR

This section analyses the nature of relationship of the selected independent variables with that of dependent variable i.e., marketing behaviour. In order to study the relationship, the data related to the above aspects were subjected to correlation coefficient analysis. The values of correlation coefficients (r) were then tested for their statistical difference.

4.3.1 Relationship between Profile Characteristics of Groundnut Farmers and their Marketing Behaviour

In order to study the nature of relationship between the selected independent variables and the marketing behaviour of groundnut farmers, correlation coefficient (r) were computed and the values are presented in Table 4.22 and Fig 4.22.

The relationship between the selected profile characteristics and marketing behaviour of groundnut farmers were tested by null hypothesis and empirical hypothesis.

Null Hypothesis (H_0)

There will be no significant relationship between the selected profile characteristics and the marketing behaviour of groundnut farmers.

Empirical Hypothesis (H_1)

There will be a significant relationship between the selected profile characteristics and the marketing behaviour of groundnut farmers.

4.3.1.1 Age Vs marketing behaviour

From the Table 4.22 and Fig. 4.22, it is evident that co-efficient of correlation (r = 0.104) between age and marketing behaviour of groundnut farmers was less than the table value of ‘r’ at 0.05 level of significance. Hence, null hypothesis was accepted and empirical hypothesis was rejected. Therefore, it could be inferred that there was a positive and non-significant relationship between age and marketing behaviour of the groundnut farmers.

The results indicated that variation in marketing behaviour had no influence on the age of the respondents. The possible reason might be due to the fact that irrespective of age of the respondent, the marketing behaviour of groundnut farmers was dependent on individual’s personal interest and

educational level. Farmers relatively of all age groups might have come in contact with friends, neighbors, relatives or others to seek information. The interpersonal contacts among the farmers have greater chances to get information. This finding was in agreement with the findings of Gangadhar (2009).

Table 4.22. Correlation coefficients between the selected profile characteristics with the marketing behaviour of groundnut farmers

S. No.	Variable No.	Independent variable	Correlation coefficient (r) values
1	X_1	Age	0.104^{NS}
2	X_2	Education	0.193^{*}
3	X_3	Area under groundnut cultivation	0.136^{NS}
4	X_4	Experience in groundnut cultivation	0.096^{NS}
5	X_5	Annual income	0.483^{**}
6	X_6	Material possession	0.586^{**}
7	X_7	Extension contact	0.809^{**}
8	X_8	Trainings received	0.226^{*}
9	X_9	Agricultural inputs acquisition pattern	0.126^{NS}
10	X_{10}	Social participation	0.246^{**}

* : Significant at 0.05 level of probability

** : Significant at 0.01 level of probability

NS : Non-significant

Dependent Variable

Y_1 = Marketing behaviour

Independent Variables

X_1 - Age

X_2 - Education

X_3 - Area under groundnut cultivation

X_4 - Experience in groundnut cultivation

X_5 - Annual Income

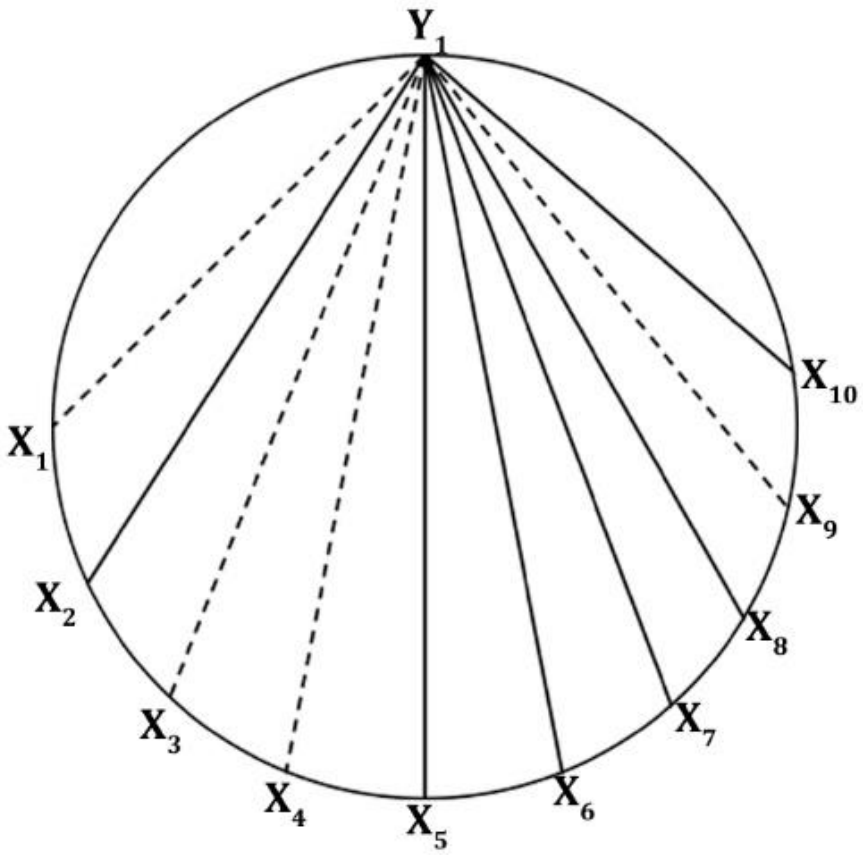
X_6 - Material possession

X_7 - Extension contact

X_8 - Training received

X_9 - Agricultural inputs acquisition pattern

X_{10} - Social participation



——— Positively significant

- - - - - - - - - Positively non-significant

Fig. 4.22. Correlation coefficients between the selected profile characteristics and the marketing behaviour of groundnut farmers

4.3.1.2 Education Vs marketing behaviour

From the Table 4.22 and Fig. 4.22, it is evident that co-efficient of correlation (r = 0.193) between education and marketing behaviour of groundnut farmers was greater than the table value of 'r' at 0.05 level of significance. Hence, null hypothesis was rejected and empirical hypothesis was accepted. Therefore, it could be inferred that there was a positive and significant relationship between education and marketing behaviour of the groundnut farmers.

The probable reason for this trend might be that education widens horizons of the individuals. Educated farmers with more information seeking habits had better access to information sources such as farm magazines, books on agriculture possess better capacity to grasp things, analyze and interpret them in proper way. Educated people have more exposure to extension agencies, scientists and research stations, which also contribute to their increased knowledge in all aspects particularly in the area of marketing which results in increased marketing behaviour. It can be concluded that education is a very crucial and important variable which contributed for better marketing behaviour. This finding was in line with the finding of Madhusekhar (2009) and Gangadhar (2009).

4.3.1.3 Area under groundnut cultivation Vs marketing behaviour

From the Table 4.22 and Fig. 4.22, it is evident that co-efficient of correlation (r = 0.136) between area under groundnut cultivation and marketing behaviour of groundnut farmers was less than the table value of 'r' at 0.05 level of significance. Hence, null hypothesis was accepted and empirical hypothesis was rejected. Therefore, it could be inferred that there was a positive and non-significant relationship between area under groundnut cultivation and marketing behaviour of the groundnut farmers.

The above results indicated that variation in marketing behaviour had no influence on the area under groundnut cultivation of the respondents .The probable reason might be that irrespective of their area under groundnut cultivation the farmers possessed knowledge about marketing aspects because of their educational level and interpersonal contacts with friends, neighbors, extension agencies and others. The finding was in tune with Gangadhar (2009).

4.3.1.4 Experience in groundnut cultivation Vs marketing behaviour

From the Table 4.22 and Fig. 4.22, it is evident that co-efficient of correlation (r = 0.096) between experience in groundnut cultivation and marketing behaviour of groundnut farmers was less than the table value of 'r' at 0.05 level of significance. Hence, null hypothesis was accepted and empirical hypothesis was rejected. Therefore, it could be inferred that there was a positive and non-significant relationship between experience in groundnut cultivation and marketing behaviour of the groundnut farmers.

The probable reason might be that irrespective of their farming experience in groundnut cultivation, farmers gain more knowledge about marketing in groundnut through their educational level and personal interest.

4.3.1.5 Annual income Vs marketing behaviour

From the Table 4.22 and Fig. 4.22, it is evident that co-efficient of correlation (r = 0.483) between annual income and marketing behaviour of groundnut farmers was greater than the table value of 'r' at 0.01 level of significance. Hence, null hypothesis was rejected and empirical hypothesis was accepted. Therefore, it could be inferred that there was a positive and significant relationship between annual income and marketing behaviour of the groundnut farmers.

The probable reason might be that high annual income makes a farmer to strive to get more information to meet his marketing requirements and the resource rich farmers who belonged to high income group might have exerted feeling to try to follow new technology towards profits as well as security maximization. Hence, farmers came to know different marketing channels. This finding of the study was in agreement with the findings of Madhusekhar (2009) and Gangadhar (2009).

4.3.1.6 Material possession Vs marketing behaviour

From the Table 4.22 and Fig. 4.22, it is evident that co-efficient of correlation (r = 0.586) between material possession and marketing behaviour of groundnut farmers was greater than the table value of 'r' at 0.01 level of significance. Hence, null hypothesis was rejected and empirical hypothesis was accepted. Therefore, it could be inferred that there was a positive and significant relationship between material possession and marketing behaviour of the groundnut farmers.

The probable reason might be that increase in annual income will increase the material possession of the farmers. Normally a farmer with high annual income, high level of material possession will look forward convenient and sophisticated transport mechanism to carry the farm produce from production center to the far off sale points to get remunerative prices. This finding of the study was in agreement with the findings of Gangadhar (2009).

4.3.1.7 Extension contact Vs Marketing behaviour

From the Table 4.22 and Fig. 4.22, it is evident that co-efficient of correlation (r = 0.809) between extension contact and marketing behaviour of groundnut farmers was greater than the table value of 'r' at 0.01 level of significance. Hence, null hypothesis was rejected and empirical hypothesis was accepted. Therefore, it could be inferred that there was a positive and significant relationship between extension contact and marketing behaviour of the groundnut farmers.

The probable reason might be that extension contact is the major channel to get market related information. The regular contacts with various extension agencies could enable the farmers to access to the valid, reliable and accurate market related information. Higher the extension contact greater the scope of getting information about marketing aspects. Therefore, extension contact would have contributed significantly for the marketing behaviour of groundnut farmers. This finding of the study was in agreement with the findings of Gangadhar (2009).

4.3.1.8 Trainings received Vs Marketing behaviour

From the Table 4.22 and Fig. 4.22, it is evident that co-efficient of correlation (r = 0.226) between trainings received and marketing behaviour of groundnut farmers was greater than the table value of 'r' at 0.05 level of significance. Hence, null hypothesis was rejected and empirical hypothesis was accepted. Therefore, it could be inferred that there was a positive and significant relationship between trainings received and marketing behaviour of the groundnut farmers.

The possible reason for this might be that the farmers who have undergone more number of trainings related to specific subjects will have more knowledge and exposure related to those particular aspects. Farmers who have undergone trainings were knowing the importance of marketing and they wanted to get more information about different markets and prices prevailing in different markets for the groundnut produce. Hence the above trend was noticed. This finding of the study was in agreement with the findings of Madhusekhar (2009).

4.3.1.9 Agricultural inputs acquisition pattern Vs Marketing behaviour

From the Table 4.22 and Fig. 4.22, it is evident that co-efficient of correlation (r=0.126) between agricultural inputs acquisition pattern and marketing behaviour of groundnut farmers was less than the table value of 'r'

at 0.05 level of significance. Hence, null hypothesis was accepted and empirical hypothesis was rejected. Therefore, it could be inferred that there was a positive and non-significant relationship between agricultural inputs acquisition pattern and marketing behaviour of the groundnut farmers.

The reason might be that most of the farmers procured agricultural and financial inputs from money lenders and intermediaries which resulted in less exposure to other financial and non-financial organizations which are helping the farmers directly or indirectly to get information about various market related aspects.

4.3.1.10 Social participation Vs Marketing behaviour

From the Table 4.22 and Fig. 4.22, it is evident that co-efficient of correlation (r = 0.246) between social participation and marketing behaviour of groundnut farmers was greater than the table value of 'r' at 0.01 level of significance. Hence, null hypothesis was rejected and empirical hypothesis was accepted. Therefore, it could be inferred that there was a positive and significant relationship between social participation and marketing behaviour of the groundnut farmers.

The possible reason might be that increased social participation of farmers provides more chances of getting exposed to different sources and ideas related to marketing. Further, it also provides better opportunity to have interpersonal interactions which will help in getting vast information about marketing. This finding was in line with the findings of Madhusekhar (2009).

4.3.2 Multiple Linear Regression Analysis of the Selected Independent Variables with the Marketing Behaviour of Groundnut Farmers

Further, in order to study the combined effect of all the independent variables in explaining variation in marketing behaviour of groundnut farmers, Multiple Linear Regression (MLR) analysis was carried out. The

computed co-efficient of determination (R^2) value and partial regression co-efficient (b) values with their corresponding values were presented in Table 4.23. The R^2 and 'b' values were tested statistically for their significance.

Table 4.23. Multiple Linear Regression analysis of the selected independent variables with the marketing behaviour of groundnut farmers

S. No.	Variable	Groundnut farmers(n=120)			
		Sta. error	'b' values	't'values	'P' values
X_1	Age	0.91	0.97	0.712	0.478
X_2	Education	0.237	0.84	1.683	0.095
X_3	Area under groundnut cultivation	0.506	-0.089	-1.667	0.098
X_4	Experience in groundnut cultivation	0.113	-0.046	-0.331	0.742
X_5	Annual income	0.012	0.202	3.594**	0.000
X_6	Material possession	0.263	0.225	3.929**	0.000
X_7	Extension contact	0.199	0.648	11.31**	0.000
X_8	Training received	0.529	0.021	0.420	0.675
X_9	Agricultural inputs acquisition pattern	0.298	-0.057	-1.133	0.260
X_{10}	Social participation	0.183	-0.005	-0.096	0.924

* : Significant at 5% level of probability $R^2 = 0.760$
** : Significant at 1% level of probability
NS : Non-significant

The 'R^2' value of 0.760 which depicted that all the selected ten independent variables put together explained about 76.00 per cent variation in the marketing behaviour of groundnut farmers.

The multiple regression coefficients presented in Table 4.23 further revealed that the independent variables viz., Annual income, Material possession and Extension contact were found positively significant as evident

from their significant ‘t’ values. This implied that Annual income, Material possession and Extension contact have contributed to most of the variation in the marketing behaviour of groundnut farmers. Normally a farmer with high annual income makes him to strive hard to get more information through various means to meet his marketing requirements. High level of material possession will look forward the convenient and sophisticated transport mechanism to carry the farm produce from production center to the far off sale points to get remunerative prices. Higher the extension contact greater the scope of getting information about marketing aspects. Therefore, Annual income, Material possession and extension contact would have contributed to most of the variation in the marketing behaviour of the groundnut farmers.

4.4 PROBLEMS FACED BY THE GROUNDNUT FARMERS IN THE MARKETING OF GROUNDNUT

Table 4.24. Problems faced by the groundnut farmers

S. No.	Problems	F	%	Rank
1	Lack of timely market information	115	95.83	I
2	Lack of remunerative price	113	94.17	II
3	Improper weighment	110	91.67	III
4	Fluctuation in market prices	107	89.17	IV
5	Involvement of middle men in marketing	99	82.50	V
6	High cost of labour during harvesting	90	75.00	VI
7	Lack of cooperative marketing system	86	71.67	VII
8	High commission charges	82	68.33	VIII
9	Long distances of the markets	75	62.50	IX
10	Delayed cash payment	73	60.83	X
11	Scarcity of labour for transportation and marketing	69	57.50	XI
12	Absence/insufficient storage facilities	27	22.5	XII
13	High cost of transportation	15	12.50	XIII

An overview of Table 4.24 indicates that the various problems faced by the groundnut farmers. Among the problems faced by the farmers lack of timely market information (95.83%) was ranked first followed by lack of remunerative price (94.17%) ,improper weighment (91.67%),fluctuation in market prices (89.17%),involvement of middle men (82.50%) , high cost of labour during harvesting (75.00%), lack of cooperative marketing system (71.67%),high commission charges (68.33%),long distances of the markets (62.50%), delayed cash payment (60.83%), scarcity of labour for transportation and marketing (57.50%),absence/insufficient storage facilities (22.50%) and high cost of transportation(12.50%).

'Lack of timely market information' was given the first rank by the respondents. The farmers were not given timely information about the prices in the market, this made the farmers to express the problem of poor market information from the extension personnel and government agencies.

'Lack of remunerative prices' was given second rank by the respondents. The agents in the market were forming into a group and lowering the prices at the time of sale and in-turn they sell the produce at higher prices to the consumers after procurement. Apart from this, high cost of critical inputs were lowering the profit margins of the farmers. Hence the farmers were also felt that the prices were uneconomic or not remunerative.

'Malpractices in weighing of the produce' was given next rank by the respondents as the commission agents were benefited instead of farmers. Commission agents and traders were using improper weights for weighing the produce and a part of the produce was also removed as spoilage losses.

'Fluctuation of prices' was given the next rank. Commission agents along with some traders were forming into a group and were lowering the prices whenever surplus quantity came into the market. This was done so that the commission agents could earn more profits than the farmers.

‘Involvement of middle men in the marketing’ was given the next rank. The farmers put across that at the time of harvest they have to depend on middle men to sell the produce quickly at the local level to get immediate payment to meet their urgent needs.

Next problem faced by the majority of the farmers was ‘high cost of labour during harvesting’. Because most of the farmers were small farmers with medium level of annual income they were unable to bear high cost of labour during harvesting time.

‘Lack of cooperative marketing system’ was given next rank by the farmers which helps in elimination of the middle men involvement and commission agents.

‘High commission charges by the commission agents’ was given next rank by the respondents. After bringing the produce to the market, the commission agents were forming into a group or syndicate and were lowering the prices but selling the same product at a higher price to the consumers. This secret understanding between the agents made the farmers to sell their produce at throw away prices many times resulting in huge losses to the producer.

‘Delayed cash payment’ was given next rank by the farmers. Because most of the farmers sought immediate payment at the time of sale which meets their immediate needs.

Next problem faced by the majority of the farmers was ‘scarcity of labour for transportation and marketing’. Due to more employment and earning opportunities in the towns and cities, more labour are migrated from villages to urban areas which lead to the scarcity of labour in the villages.

The next rank was given to ‘absence/insufficient storage facilities’. Most of the farmers were not able to store the produce due to non-availability

of storage facilities within the village. But majority of the big farmers stored their produce in storage units as they were financially sound and sold their produce when the market prices were high. Hence, the government should take necessary measures to improve the storage facilities in the villages or nearer to the villages.

'High cost of transportation' was ranked least by the groundnut farmers, due to the higher hiring charges of the transport vehicles. This situation forced the farmers to sell the produce in the vicinity in order to reduce the transport cost.

4.5 SUGGESTIONS GIVEN BY THE GROUNDNUT FARMERS TO OVERCOME THE PROBLEMS

Table 4.25. Suggestions given by the groundnut farmers to overcome the problems

S. No.	Suggestions	F	%	Rank
1	Provision of information about current marketing situations	110	91.67	I
2	Establishment of more number of cooperative and rapid expansion of regulated marketing systems	108	90.00	II
3	Provision of minimum support price for groundnut	105	87.50	III
4	Efforts to minimize the commission charges by the concerned authorities	98	81.66	IV
5	Adequate and appropriate transport facilities	85	70.83	V
6	Provision of sufficient storage facilities	50	41.66	VI
7	Establishment of procurement centers in the villages	43	35.83	VII
8	Recruitment of mandal level marketing officials by the government	37	30.83	VIII

An overview of Table 4.25 indicates that the various suggestions given by the groundnut farmers. Among the suggestions given by the farmers provision of information about current marketing situations (91.67%) followed by establishing cooperative and rapid expansion of regulated marketing systems (90.00%), provision of minimum support price for groundnut(87.50%), efforts to minimize the commission charges by the concerned authorities (81.66%), adequate and appropriate transport facilities (70.83%) and provision of sufficient storage facilities(41.66%), establishment of procurement centers in the villages (35.83%) and recruitment of mandal level marketing officers by government(30.83%).

As perceived by the respondents 'provision of information about marketing situation' was suggested by majority of the groundnut farmers which would help them to get information about current marketing situations.

The second suggestion given by the farmers was 'establishing cooperative and rapid expansion of regulated marketing systems'. Farmers opined that elimination of the large number of middlemen in the market yards of groundnut, use of standardized weights for weighing, put a check on undefined and unspecified charges in unregulated markets, provision of proper grading and standardization procedures in groundnut market yards, strengthening of the bargaining power of the farmers, etc., will be possible only through regulated markets and co-operative marketing system. Further, the government should also take initiative to provide sufficient number of market yards, sufficient credit facilities to the groundnut farmers to avoid the distress sales, to conduct more training programs to update the knowledge on marketing related aspects, to implement the insurance scheme to the farmers, to regulate the non-functioning market committees and also to provide the firefighting mechanism at the market yards.

The next suggestion given was 'minimum support price for groundnut' by the government which could eliminate the most of the problems of

groundnut farmers. As most of the respondents were medium farmers, they depend on good market price for the produce, which in turn has to spend as the initial investment on groundnut cultivation and also for family maintenance. Hence the only source of getting income was the good market price for the final produce. Most of the farmers also clearly expressed that when they took the produce to the market, the market prices were somehow made low by the commission agents, brokers etc. In such cases the market yard people were also not coming to the rescue of the farmers. Hence the groundnut farmers expressed that government should take stringent action against any defaulter in the market yard and should fix the correct and better market price well in advance by keeping in consideration of the problems of the groundnut farmers.

Farmers also expressed ‘efforts to minimize the commission charges by the concerned authorities’ as a suggestion which helps them to get better price for the produce. It is known fact that the middle men and commission agents were knocking away the profits of the farmers. Hence, farmers suggested that commission charges should be reduced by establishing the farmer’s societies by involving government agencies which help them to market their produce directly to the wholesalers or consumers to reap the maximum benefits.

The next suggestion given was ‘provision of adequate and appropriate transport facilities’. Farmers also wanted support from the government for transport of the produce to other places to get the maximum benefit.

The next suggestion given was ‘establishment of procurement centers by the government in the villages’. Establishment of such centers in the villages itself aid in avoiding the intervention of middlemen and commission agents.

‘Recruitment of mandal level marketing officials by the government’ was suggested lastly by the respondents. Farmers opined that the mandal level marketing officials will be very helpful in providing the up to date market information to the farmers.

4.5.1 Suitable strategy for better marketing of groundnut produce in Anantapuramu district of Andhra Pradesh

The strategy was designed with following interventions based on suggestions given by the farmers for better marketing of groundnut produce in Anantapuramu district of Andhra Pradesh**.**

The following interventions are drawn and presented in Fig 4.23 based on the findings of the study.

A. Interventions suggested for the marketing department for better marketing of groundnut produce by the groundnut farmers are as follows

1. Establishment of sufficient number of groundnut market yards with all the essential infrastructural facilities
2. Sufficient number of storage houses may be constructed closure to the villages to store the groundnut produce
3. Arrangements should be made in the market yards to fix the grading and standardization facilities.
4. The marketing department should bestow special attention to make all the marketing committees functional.
5. The marketing department should aim at establishing more number of regulated markets.
6. The weights and measures used for weighing the groundnut produce in the market yard should be standardized.

7. Setting up of grading and packing centers in the villages in order that, farmers can grade their produce and also pack their produce for export purpose.

B. Interventions suggested for the State Department of Agriculture for better marketing of groundnut produce by groundnut farmers

1. State Department of Agriculture can plan for conducting the demonstrations to pass on market related techniques to the groundnut farmers.

2. Organizing result oriented training programs on production and post-harvest management aspects to the farmers.

3. Arranging rural kiosks for providing scientific recommendations to the groundnut farmers and also to provide day to day market related information to the farmers.

4. State Department of Agriculture should concentrate on transmitting the information through mass media. Mass media is also considered to be the most credible source of information now-a-days and can reach the un-reached. Hence, officials should take initiative in establishing community television sets, radio sets etc., frequently and provide opportunities to the farmers to increase their mass media exposure.

5. The State Department of Agriculture can also guide the farmers the importance of grading and standardization of groundnut produce to get remunerative price.

6. State Department of Agriculture should encourage the farmers to form into associations, federations (or) cooperatives to enable them to obtain fair prices for their produce.

7. State Department of Agriculture can arrange easier and cheaper transport facilities to carry the produce from production centers to the procurement centers.

8. As most of the farmers had medium extension contact this has to be increased to high level by increased efforts from the officials and staff of different line departments related to agriculture. The extension functionaries need to make frequent contacts and motivate the farmers towards the benefits of regulated markets and cooperative societies.

C. Interventions suggested for the farmers for better marketing of groundnut produce

1. Farmers should come forward to form into groups and sale their produce through cooperative marketing system.

2. The farmers should have full-fledged knowledge on market demands, price fluctuations, import and export trends, demand and supply etc.

3. Farmers are advised to focus most of their interactions with their fellow farmers, progressive farmers and village leaders on the matters related to marketing of the produce, they also get benefited by knowing the market related information from various input agencies.

4. Farmers are encouraged to participate in more and more organizational meetings with the help of voluntary organizations to get required information about marketing aspects.

D. Interventions suggested for the research and extension systems for better marketing of groundnut produce by the groundnut farmers

1. The research system should further concentrate on development of varieties which meet the current market demands.

2. The research system has to take further efforts to standardize various agronomical practices, control measures of pest and diseases to produce the groundnut crop which can satisfy the national and international quality standards and strengthening of market led extension efforts.

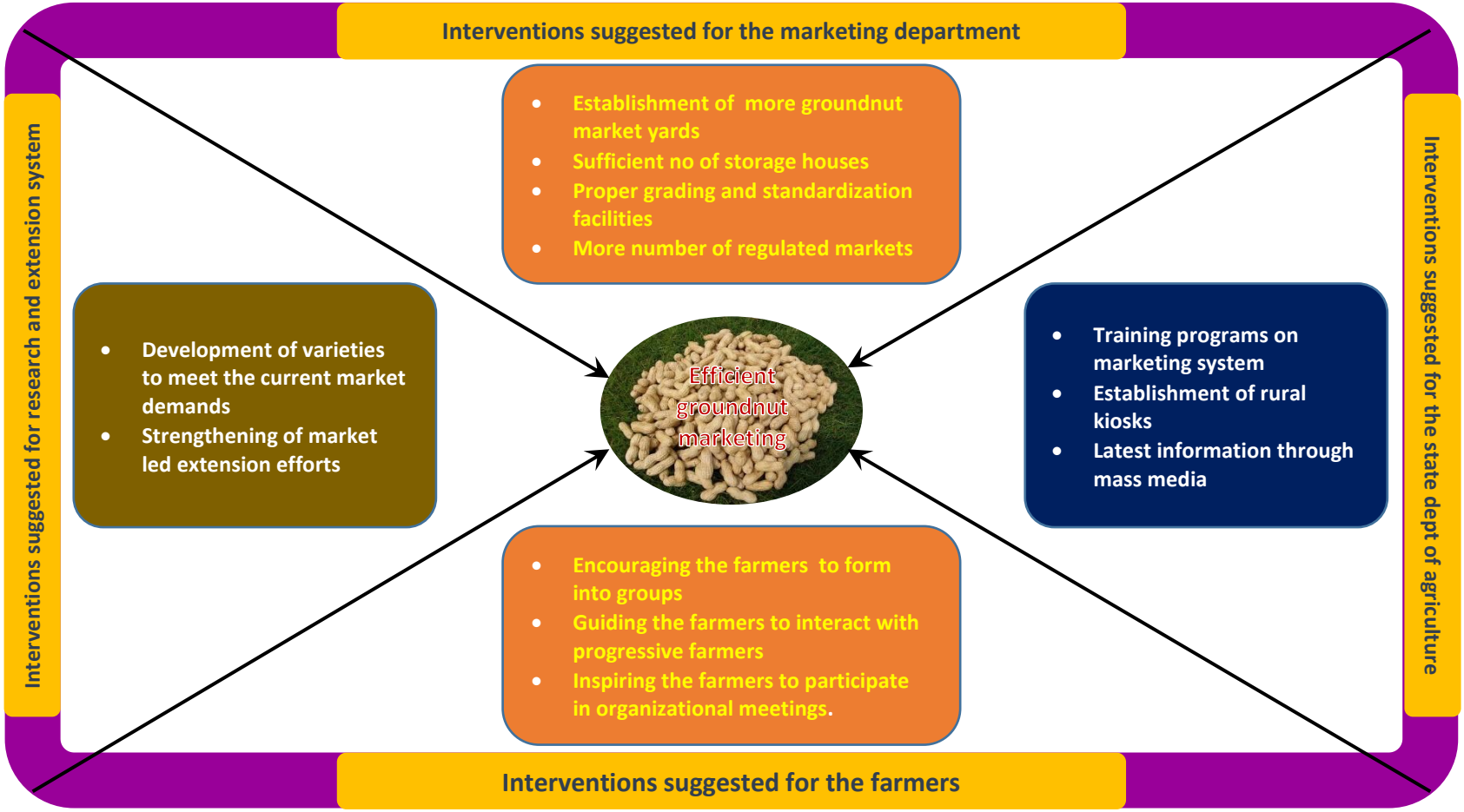


Fig. 4.23. Suitable strategy for better marketing of produce by the groundnut farmers in Anantapuramu district of Andhra Pradesh

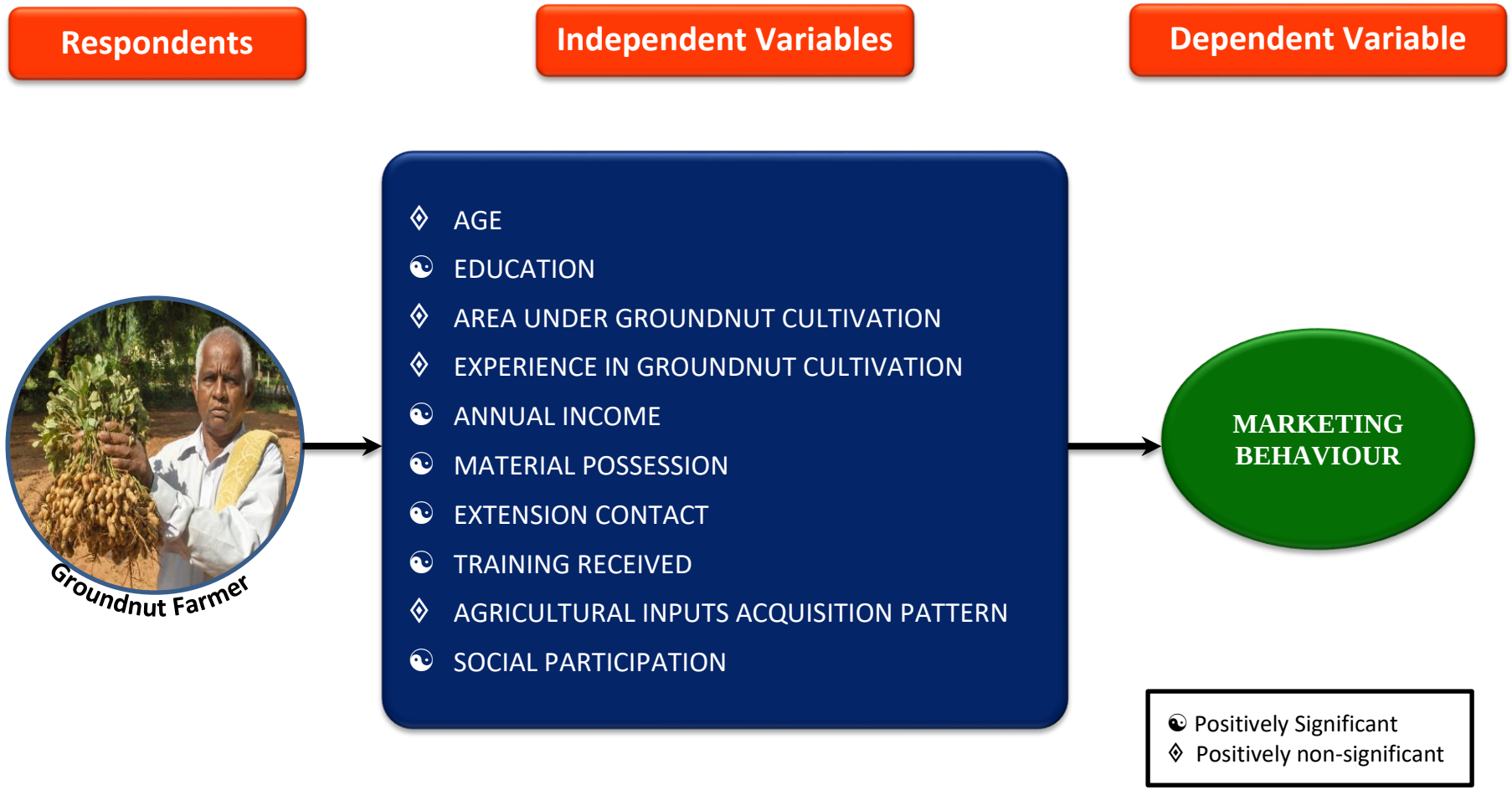


Fig 4.24. Empirical model of the study

Chapter ~ V

Summary & Conclusions

Chapter – V

SUMMARY AND CONCLUSIONS

Groundnut is a major oilseed crop that has achieved tremendous popularity in the country. It is one of the most important food and cash crop of the country. While being a valuable source of all the nutrients, it is low priced commodity. India is the world's leading producer of groundnut with 25.00 per cent share in the production. The all India production of groundnut was estimated at 6733 thousand tons with an average of 991 kg/ha. In Andhra Pradesh, groundnut crop alone covered an area of 82.39% of the total area under oilseeds. Anantapuramu is the predominant groundnut cultivated district in the state with an extent of 624000 hectares with the production of 164000 tons.

The groundnut farmers are at a disadvantage particularly in the marketing of groundnut as they lose their bargaining strength and got exploited. Monthly data on minimum prices of groundnut in Anantapuramu regulated market yard show a highly erratic behaviour. Such kind of fluctuations in the prices of groundnut reflects on the poor withholding capacity of the marginal and small farmers while marketing their final produce. Further, the groundnut farmers purchased seeds, fertilizers and pesticides from private sources, who charged more on the sale of inputs and also higher interest rates on the credit obtained by the farmers which finally lead to high cost of production.

An efficient marketing system is precondition for ensuring remunerative prices to the producers for their products and to deliver maximum satisfaction to the consumers for the price they pay. An efficient marketing system helps the farmer to increase the production and productivity on one hand, get remunerative price and generate additional income and

employment on the other. Keeping in view the above factors, an attempt was made to study the marketing behaviour of groundnut farmers in Anantapuramu District of Andhra Pradesh.

5.1 OBJECTIVES OF THE STUDY

1. To study the profile characteristics of groundnut farmers.
2. To analyze the marketing behaviour of groundnut farmers.
3. To find out the relationship between the profile characteristics of groundnut farmers and their marketing behaviour.
4. To identify the problems encountered by the groundnut farmers in marketing of the produce.
5. To elicit the suggestions from the groundnut farmers and to develop a suitable strategy based on the suggestions.

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 in the present investigation.

5.4 SAMPLING PROCEDURE

Anantapuramu district was purposively selected for the study as it had maximum area under groundnut cultivation and production in Andhra Pradesh. Three mandals namely Vajrakarur, Kanaganapalle and Ramagiri were randomly selected for the study. Four villages were selected randomly thus making a total of twelve villages. The villages include Konakandla, Vajrakarur, Pandikunta, Peddachinnapyapili, Konetirayanipalyam, Maddulacheruvu, Thagarakunta, Kanaganapalle, Ramagiri, Polepalli, Nasankota, Kuntimaddi

were selected by using simple random procedure. From each of the selected village, 10 farmers were selected randomly thus making a total sample of 120 respondents.

5.5 VARIABLES SELECTED FOR THE STUDY

5.5.1 Dependent Variable

Marketing behaviour of groundnut farmers was chosen as the dependent variable. The marketing behaviour of groundnut farmers consists of ten components such as planning orientation, production orientation, marketing orientation, market information sources utilization, decision making ability, risk taking ability, innovativeness, mode of transport, place of sale and terms and conditions for sale.

5.5.2 Independent Variables

The independent variables selected for the study were age, education, area under groundnut cultivation, experience in groundnut cultivation, annual income, material possession, extension contact, training received, agricultural inputs acquisition pattern and social participation. The same were measured with appropriate scales and schedules for the study.

5.6 COLLECTION OF DATA

The data was collected using an interview schedule developed for the study. The collected data was coded, tabulated and analyzed statistically and the results were interpreted accordingly.

5.7 RESULTS

5.7.1 Distribution of Farmers Based on their Profile Characteristics

5.7.1.1 Age

Nearly half (44.16%) of the farmers belonged to middle age, followed by old (41.166%) and young (14.16%) age categories respectively.

5.7.1.2 Education

About 32.50 per cent of the farmers educated up to middle school followed by 23.33 of the farmers educated up to high school. While 16.66 per cent of the farmers were illiterate, equal percentage (8.33%) of the farmers were functionally literate and studied intermediate and 5.00 per cent of the farmers completed graduation.

5.7.1.3 Area under groundnut cultivation

About 55.833 per cent of the farmers had possessed less than 2.5 acres of the area under groundnut cultivation followed by 35.83 per cent of the respondents had 2.5 to 5.0 acres, 5.00 per cent had 5 to 7.5 acres, 1.66 per cent had 7.5 to 10 acres and 1.66 per cent of groundnut farmers had more than 10 acres.

5.7.1.4 Experience in groundnut cultivation

Majority of the farmers (65.00%) had medium level of experience followed by high experience (20.00%) and low (15.00%) levels of experience in groundnut cultivation.

5.7.1.5 Annual income

Majority (60.00%) of the farmers were grouped under the category of medium annual income followed by 28.33 per cent of the farmers were under high annual income category and 11.66 per cent of the farmers under low annual income category

5.7.1.6 Material possession

Majority (81.66%) of the groundnut farmers had medium level of material possession, followed by equal (9.16%) percentage of the farmers had low and high level of material possession.

5.7.1.7 Extension contact

Majority of the respondents (66.66%) had medium level of extension contact, followed by high (20.83%) and low (12.50%) levels of extension contacts.

5.7.1.8 Trainings received

Nearly half of (45.00%) the respondents were received medium level of trainings followed by low (29.17%) and high (25.83%) levels of training.

5.7.1.9 Agricultural inputs acquisition pattern

Majority of the respondents (75.00%) had medium level of Agricultural inputs acquisition pattern, followed by high (17.50%) and low (7.50%) levels of agricultural inputs acquisition pattern.

5.7.1.10 Social participation

Majority (52.50%) of the respondents had medium level of social participation, followed by low (28.33%) and high (19.16%) levels of medium social participation.

5.7.2 Marketing behaviour of groundnut farmers

On the whole, 67.50 per cent of the groundnut farmers had medium marketing behaviour followed by high (18.33%) and low (14.16%) levels of marketing behavior.

5.7.2.1 Planning orientation

Majority of the respondents (79.16%) had medium level of planning orientation, followed by high (14.16%) and low (6.60%) levels of planning orientation.

5.7.2.2 Production orientation

Majority of the respondents (79.16%) had medium level of production orientation, followed by low (15.00%) and high (5.83%) levels of production orientation.

5.7.2.3 Marketing orientation

Majority of the respondents (69.166%) had medium level of marketing orientation, followed by low (15.83%) and high (15.00%) levels of marketing orientation.

5.7.2.4 Marketing information sources utilization pattern

Majority (74.17%) of the groundnut farmers had medium level of marketing information sources utilization, followed by high (14.17%) and low (11.66%) levels of marketing information sources utilization.

5.7.2.5 Decision making ability

Majority of the farmers (70.833%) had medium level of decision making ability, followed by low (16.66%) and high (12.50%) levels of decision making ability.

5.7.2.6 Risk taking ability

Majority of the respondents (68.33%) had medium level of risk taking ability, followed by low (16.66%) and high (15.00%) levels of risk taking ability.

5.7.2.7 Innovativeness

Majority of the respondents (65.00%) had medium level of innovativeness, followed by high (20.83%) and low (14.16%) levels of innovativeness.

5.7.2.8 Mode of transport

Majority (66.66%) of the respondents transported their groundnut produce to the markets by lorry followed by tractor (26.66 %) and tempo van (6.66%).

5.7.2.9 Place of sale

Nearly half (45.83%) of the groundnut farmers sold their groundnut produce in the market yards followed by 40.83 per cent through middle men, 13.33 per cent in local markets and none of them sold in the wholesale and retail markets.

5.7.2.10 Terms and conditions of sale

Majority (70.833%) of the groundnut farmers belonged to immediate payment at the time of sale category, followed by payment after sale (29.166%) category and none from prior payment category.

5.7.3 Relationship between the Selected Profile Characteristics with the Marketing Behaviour of Groundnut Farmers

The independent variables viz., Education, Annual income, Material possession, Extension contact, Trainings received and Social participation were found to be positively significant with the marketing behaviour of the groundnut farmers and age, area under groundnut cultivation, experience in groundnut cultivation and agricultural inputs acquisition pattern were found negatively significant with the marketing behaviour of the groundnut farmers.

All the selected 10 independent variables put together explained about 76.00 per cent variation in the marketing behaviour of groundnut farmers. The partial regression co-efficient values implied that annual income, material possession and extension contact were the most important variables that contributed to most of the variation in the marketing behaviour of groundnut farmers.

5.7.4 Problems Encountered by the Groundnut Farmers and Suggestions Perceived From Groundnut Farmers to Overcome the Problems

5.7.4.1 Problems encountered by the groundnut farmers

The major problems faced by the farmers were 'lack of timely market information (95.83%) was ranked first followed by 'lack of remunerative prices' (94.17%) , 'improper weighment' (91.67%), 'fluctuation in market prices'(89.17%), 'involvement of middle men'(82.50%), 'high cost of labour during harvesting'(75.00%), 'lack of cooperative marketing systems' (71.67%), 'high commission charges'(68.33%), 'long distances to the markets' (62.50%), 'delayed cash payment' (60.83%), 'scarcity of labour for transportation and marketing' (57.50%), 'absence/insufficient storage facilities' (22.50%) and 'high cost of transportation'(12.50%).

5.7.4.2 Suggestions given by the groundnut farmers

The major suggestions given by the farmers were 'provision of information about current marketing situations' (91.67%) followed by 'establishing cooperative and rapid expansion of regulated marketing systems' (90.00%), 'provision of minimum support price for groundnut' (87.50%), 'efforts to minimize the commission charges by the concerned authorities' (81.66%), 'adequate and appropriate transport facilities' (70.83%) and 'provision of sufficient storage facilities' (41.66%), 'establishment of procurement centers in the villages' (35.83%) and 'recruitment of mandal level marketing officers by government'(30.83%).

5.7.5 Suitable Strategy for better Marketing of Groundnut Produce in Anantapuramu District of Andhra Pradesh

The strategy was designed with following interventions based on suggestions given by the farmers for better marketing of groundnut produce in Anantapuramu district of Andhra Pradesh**.**

A. Interventions suggested for the marketing department for better marketing of groundnut produce by the groundnut farmers are as follows

1. Establishment of sufficient number of groundnut market yards with all the essential infrastructural facilities
2. Sufficient number of storage houses may be constructed closure to the villages to store the groundnut produce
3. Arrangements should be made in the market yards to fix the grading and standardization facilities.
4. The marketing department should bestow special attention to make all the marketing committees functional.
5. The marketing department should aim at establishing more number of regulated markets.
6. The weights and measures used for weighing the groundnut produce in the market yard should be standardized.
7. Setting up of grading and packing centers in the villages in order that, farmers can grade their produce and also pack their produce for export purpose.

B. Interventions suggested for the State Department of Agriculture for better marketing of groundnut produce by groundnut farmers

1. State Department of Agriculture can plan for conducting the demonstrations to pass on market related techniques to the groundnut farmers.

2. Organizing result oriented training programs on production and post-harvest management aspects to the farmers.

3. Arranging rural kiosks for providing scientific recommendations to the groundnut farmers and also to provide day to day market related information to the farmers.

4. State Department of Agriculture should concentrate on transmitting the information through mass media. Mass media is also considered to be the most credible source of information now-a-days and can reach the un-reached. Hence, officials should take initiative in establishing community television sets, radio sets etc., frequently and provide opportunities to the farmers to increase their mass media exposure.

5. The State Department of Agriculture can also guide the farmers the importance of grading and standardization of groundnut produce to get remunerative price.

6. State Department of Agriculture should encourage the farmers to form into associations, federations (or) cooperatives to enable them to obtain fair prices for their produce.

7. State Department of Agriculture can arrange easier and cheaper transport facilities to carry the produce from production centers to the procurement centers.

8. As most of the farmers had medium extension contact this has to be increased to high level by increased efforts from the officials and staff of different line departments related to agriculture. The extension functionaries need to make frequent contacts and motivate the farmers towards the benefits of regulated markets and cooperative societies.

C. Interventions suggested for the farmers for better marketing of groundnut produce

1. Farmers should come forward to form into groups and sale their produce through cooperative marketing system.

2. The farmers should have full-fledged knowledge on market demands, price fluctuations, import and export trends, demand and supply etc.

3. Farmers are advised to focus most of their interactions with their fellow farmers, progressive farmers and village leaders on the matters related to marketing of the produce, they also get benefited by knowing the market related information from various input agencies.

4. Farmers are encouraged to participate in more and more organizational meetings with the help of voluntary organizations to get required information about marketing aspects.

D. Interventions suggested for the research and extension systems for better marketing of groundnut produce by the groundnut farmers

1. The research system should further concentrate on development of varieties which meet the current market demands.

2. The research system has to take further efforts to standardize various agronomical practices, control measures of pest and diseases to produce the groundnut crop which can satisfy the national and international quality standards.

5.8 IMPLICATIONS OF THE STUDY

1. The study revealed that majority of farmers were middle aged. Hence more concentration should be given to this group for imparting knowledge on marketing aspects through conducting more training programs and also encourage youngsters to grow the groundnut crop according to the market demand.

2. More than half of the groundnut farmers had education up to middle school and high school, hence steps to be taken to improve their literacy level by adopting adult education programs.

3. More than half of the groundnut farmers were under medium annual income category. Government should support the groundnut farmers by providing remunerative and support prices to the farmers to enhance their economic status to higher level.

4. It is revealed from the study that most of the farmers had medium level of material possession, extension contacts. Hence there is a need to improve these characteristics from present level of medium to high level by arranging more selected training programs and also implementing concerned programs in a participative mode.

5. The study revealed that nearly half of the groundnut farmers received medium level of trainings. Hence the State Department of Agriculture should bestow special attention to develop and conduct more need based training programs to enrich the market intelligence of groundnut growing farmers.

6. It is revealed from the study that half of the groundnut farmers had medium social participation. Hence, there is a need to enhance their social participation by educating and encouraging them to become members in various social organizations and local village institutions for better interaction.

7. Majority of groundnut farmers had medium level of planning and production orientations. Hence there is a need to motivate the farmers to plan prior about the variety to be cultivated and prepare contingency plan to face any eventuality.

8. Majority of groundnut farmers had medium level of marketing orientation. Hence there is a need to improve their marketing orientation by improving their knowledge through trainings in groundnut marketing

9. It is proved from the study that majority of the respondents had medium level of marketing information sources utilization. Hence Government should take necessary steps to improve this character by establishing information centers at village levels and regular field visits by experts and agricultural department functionaries.

10. Most of the groundnut farmers had medium risk taking ability. Here the government should help the groundnut farmers by providing assurance to them that they will give a minimum amount per acre in case of loss of crops due to drought or failure of monsoons so the risk involved can be reduced to some extent.

11. The groundnut farmers had medium level of innovativeness. Hence the government should take initiative to improve the level of innovativeness by providing literature on success stories and conducting result demonstrations to build the confidence among the groundnut farmers to take up the new technologies without any element of risk.

12. The profile characteristics like education, annual income, material possession, extension contact, training received and social participation were positively and significantly correlated with the overall marketing behaviour of groundnut farmers. In this regard the groundnut farmers should encourage to procure required financial (or) non-financial agricultural inputs from various input supply agencies and they should also be encouraged to interact more with their fellow farmers, village leaders and innovators on market related aspects to improve their skills. Further, the regression analysis revealed that the selected independent variables explained 76.00 variation in the marketing behaviour of groundnut farmers.

13. The major problems expressed by the groundnut farmers were lack of timely market information, lack of remunerative prices, improper weighment, fluctuation in market prices, involvement of middle men, high cost of labour during harvesting, lack of cooperative marketing systems, high commission charges, long distances to the markets, delayed cash payment, scarcity of labour for transportation and marketing, absence/insufficient storage facilities and high cost of transportation. These problems directly hinder the marketing behaviour of groundnut farmers.

14. The major suggestions given by the farmers were provision of information about current marketing situations , establishing cooperative and rapid expansion of regulated marketing systems , provision of minimum support price for groundnut, efforts to minimize the commission charges by the concerned authorities , adequate and appropriate transport facilities, provision of sufficient storage

facilities, establishment of procurement centers in the villages and recruitment of mandal level marketing officers by government.

Accordingly strategy was worked out in the form of suggesting the interventions to be taken up by Department of Marketing, State Department of Agriculture, farmers and Research & Extension systems for betterment of marketing behaviour of groundnut farmers and strengthening of market led extension efforts.

5.9 SUGGESTIONS FOR FUTURE RESEARCH

1. The study was confined only to one district in the state therefore the results cannot be generalized. Similar studies can be taken up in other districts in order to generalize the results.

2. A study can be conducted to know the export potentials of the groundnut farmers.

3. A similar study can be conducted to know the marketing behaviour of farmers growing other crops like fruits, flowers and commercial crops.

4. Case studies relating to marketing of groundnut requires further attention by the researchers.

5. A study can be conducted to know the factors responsible for frantic selling of the produce in the markets by the farmers.

6. Similar studies can be repeated after a conclusive period of five years to assess the marketing behaviour of the respondents.

7. The study was confined to small sample of groundnut farmers. Hence, a study can be taken up with large size sample covering entire state.

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Appendix

ACHARYA N.G RANGA AGRICULTURAL UNIVERSITY
S.V. AGRICULTURAL COLLEGE, TIRUPATI
DEPARTMENT OF AGRICULTURAL EXTENSION

"MARKETING BEHAVIOUR OF GROUND NUT FARMERS IN ANANTAPURAMU DISTRICT OF ANDHRA PRADESH"

INTERVIEW SCHEDULE

Respondent No :

Name of the respondent :

Name of the Village :

Name of the Mandal :

PART-A

Selected characteristics of Groundnut farmers

1. Age (In completed years) :

2. Educational level :

S. No.	Educational level	Score	Response
1	Illiterate	1	
2	Functional literate	2	
3	Primary school	3	
4	Middle school	4	
5	High school	5	
6	Intermediate	6	
7	Graduation and above	7	

3. Area under Groundnut cultivation :
(No of Acres)

Dry land (in acres) :

Wet land (in acres) :

4. Experience in Groundnut cultivation (In completed years) :

5. Annual Income

a) Income from Groundnut cultivation : Rs.

b) Income from other than Groundnut Cultivation : Rs.

c) Income from subsidiary occupation : Rs.

Total income : Rs.

6. Material possession

Please specify the following material possessed by you with a tick mark

S. No.	House hold articles	Score
1	Radio	1
2	Gas connection	1
3	Bicycle	1
4	Electricity	1
5	Fan	1
6	Sofa/Almyrah/Cot	3
7	Television	1
8	Refrigerator	1
9	Motor cycle/Scooter	2
10	Car	1
11	Any other(Specify)	1

S. No.	Farm items	Score
1	Cattle pair	1
2	Bullock cart	1
3	Wooden plough	1
4	Guntaka	1
5	Iron plough	1
6	Sprayer/Duster	2
7	Electric motor	1
8	Power tiller	1
9	Tractor	1
10	Any other(Specify)	1

7. Extension contact

Please specify how far you are having the contacts with the following personnel, with a tick mark

S. No.	Official/Personal contact	Frequency of contact		
		Regularly	Occasionally	Never
	Score	3	2	1
1	A.E.O / V.A.O			
2	A.O			
3	A.D.A			
4	D.D.A			
5	J.D.A			
6	Agricultural university scientists			
7	Input agents			
8	NGO personnel			
9	Agricultural market committee officials			
10	Bank officials			
11	Any others(Specify)			

8. Trainings received

Did you receive any training on Groundnut crop organized by any departmental officials: Yes/No

(1) If Yes, give the following information

S. No.	No of trainings	Duration	Score
1	One training		1
2	Two trainings		2
3	Three trainings		3
4	Four trainings		4

9. Agricultural Input Acquisition pattern

Please specify the source of procuring agricultural input acquisition pattern with a tick mark against appropriate source.

S. No.	Agricultural input	Frequency of procurement		
		Often	Sometimes	Never
	Score	3	2	1
Financial input				
1	PACS and other cooperatives			
2	Commercial banks			
3	Money lenders			
Non-financial inputs				
1	SDA			
2	Private input agencies/Dealers			
3	PACS and other cooperatives			

10. Social participation

A. Please indicate whether you are an office bearer (or) member (or) nonmember of the following institutions.

S. No.	Organization	Non member (0)	Member (1)	Office bearer (2)
1	Gram panchayat			
2	Mandal Praja Parishad			
3	Zilla Praja Parishad			
4	Primary Cooperative societies			
5	Watershed association			
6	Water users association			
4	Farmers forum			
5	Youth club			
6	Religious associations			
7	Any others(Specify)			

B. How often did you attend the meetings of these institutions for last one year?

S. No.	Type	Regularly (2)	Occasionally (1)	Never (0)
1	Gram panchayat			
2	Mandal Praja Parishad			
3	Zilla Praja Parishad			
4	Primary Cooperative societies			
5	Watershed association			
6	Water users association			
7	Farmers forum			
8	Youth club			
9	Religious associations			
10	Any others(Specify)			

PART-B

MARKETING BEHAVIOUR

1. Planning orientation

A set of statements representing planning orientation towards raising the crops based on marketing demand are given below. Please state whether you strongly agree (SA), Agree (A), Undecided (UD), Disagree (SA), Strongly disagree (SDA) with each of statements pertaining to planning orientation.

S. No.	Statement	SA	A	UD	DA	SDA
1	Every year one should think about the crops to be cultivated in each type of land (+)	5	4	3	2	1
2	It is not necessary to make prior decisions about the variety of crops to be cultivated in the land (-)	1	2	3	4	5
3	The amount of seeds, fertilizers, pesticides and agricultural inputs needed for raising a crop should be assessed before cultivation (+)	5	4	3	2	1
4	It is not necessary to think ahead of the cost involved in raising a crop (-)	1	2	3	4	5
5	One need not consult agricultural experts for crop planning (-)	1	2	3	4	5
6	It is possible to increase the yield through farm production plans (+)	5	4	3	2	1
7	It is necessary to grow the crop based on the price fluctuations of the crop produce in the market (+)	5	4	3	2	1
8	It is not necessary to decide the place of sale while planning to grow the crop (-)	1	2	3	4	5
9	It is better to decide the crop based on the market demand (+)	5	4	3	2	1

2. Production orientation

A set of statements representing production orientation towards raising the crop based on market demand are given below. Please state whether you strongly agree (SA), Agree (A), Undecided (UD), Disagree (SA), Strongly disagree (SDA) with each of statements pertaining to production orientation.

S. No.	Statement	SA	A	UD	DA	SDA
1	Timely planting of crop ensures good yield (+)	5	4	3	2	1
2	One should use as much of fertilizer as one likes (-)	1	2	3	4	5
3	Determining fertilizer dose by soil testing saves money (+)	5	4	3	2	1
4	Seed rates should be adopted as recommended by the specialists (+)	5	4	3	2	1
5	Application of herbicides can't effectively control the weeds (-)	1	2	3	4	5
6	The application of biological control measures cannot arrest the population of pests and diseases (-)	1	2	3	4	5
7	Integrated pest management strategy helps to reduce the cost of investment on pesticides (+)	5	4	3	2	1
8	The crop need not be certified while in the field to meet the quality standards of the market (-)	1	2	3	4	5

3. Marketing orientation

A set of statements representing marketing orientation are given below. Please state whether you strongly Agree(SA) ,Agree(A), Undecided(UD), Disagree(DA),Strongly disagree(SDA)on each statement ,with a tick mark

S. No.	Statement	SA	A	UD	DA	SDA
1	Market news is not so useful to farmer(-)	1	2	3	4	5
2	A farmer can get good price by grading his produce at farm gate level(+)	5	4	3	2	1

S. No.	Statement	SA	A	UD	DA	SDA
3	Warehouses can help the farmer to get better price for his produce(+)	5	4	3	2	1
4	One should sell his produce to the nearest market irrespective of the produce(-)	1	2	3	4	5
5	No need to have the knowledge on international market for exporting the groundnut produce(-)	1	2	3	4	5
6	One should grow those crops which have more market demand(+)	5	4	3	2	1
7	It is not necessary to possess marketing intelligence in order to get remunerative price for the crop produce(-)	1	2	3	4	5

4. Marketing information sources utilization

Please state the frequency of contacts with different information sources regarding groundnut cultivation and other income generating activities on three point continuum i.e., often, sometimes and never with tick mark.

a)Formal sources

S. No	Item	Frequency of contacts		
		Often	Sometimes	Never
	Score	3	2	1
1	Agricultural extension officer(AEO)			
2	Agricultural officer(AO)			
3	Assistant director of Agriculture (ADA)			
4	Marketing officials			
5	Mandal development officers			
6	Sales representatives			
7	University scientists			
8	Consultants			
9	Voluntary organizations			
10	Any other(Specify)			

b) Informal sources

1	Family members			
2	Friends			

3	Relatives			
4	Neighbors			
5	Progressive farmers			
6	Village panchayat members			
7	Local leaders			
8	Any other(Specify)			

c) Mass media

1	News papers			
2	Radio			
3	Television			
4	Film shows/videos			
5	Farm literature			
6	Exhibition			
7	Campaign			
8	Internet			
9	Call centers			
10	Any other(Specify)			

5. Decision making ability

A set of statements on decision making ability of Groundnut farmers are given below. Please specify your response on each statement, with a tick mark

S. No.	**Statement**	**Considered independently**	**Considered after consultation with family members**	**Considered after consultation with other than family members**
	Score	**3**	**2**	**1**
1	Kind of activity to be taken for Groundnut cultivation			
2	Estimating the working capital required			
3	Amount of loan to be borrowed			
4	Selecting the financial sources to obtain loans			
5	Purchasing the machinery and equipment			
6	No of manpower required for groundnut cultivation			
7	Sources of obtaining technical knowledge			

8	Changing the price of the product with changing demands			
9	Selection of place of sale			
10	Mode of transport			
11	Utilizations of profits for repayment of loans			
12	Utilization of profits for personal use			
13	Utilization of profits for future investments			
14	Attending training programs on income generating activity			

6. Risk taking ability

Please state whether you strongly agree (SA), Agree (A), Undecided (UD), Disagree (DA), strongly disagree (SDA) with each of the statements pertaining to risk taking ability.

S. No.	Statement	Response				
		SA	A	UD	DA	SDA
1	A farmer should grow large number of crops to avoid risks involved in growing one or two crops(+)	5	4	3	2	1
2	A farmer should take more of changes in making a big profit than to be content with a smaller profits(+)	5	4	3	2	1
3	A farmer who is willing to take greater risks than the average farmer may not have better financial conditions(-)	1	2	3	4	5
4	It is good for a farmer not to try farming methods before other farmers have used them with success(-)	1	2	3	4	5
5	It is good for a farmer to take risks when he knows his chance of success is fairly high(+)	5	4	3	2	1
6	Trying an entirely new method in farming by a farmer involves risk and wasting of resources(-)	1	2	3	4	5

7. Innovativeness

Please state whether you strongly agree (SA), Agree (A), Undecided (UD), Disagree (DA), strongly disagree (SDA) with each of the statements pertaining to innovativeness.

S. No.	Statement	SA	A	UD	DA	SDA
1	I try to keep myself up to date with information on new farm practices, but that does not mean ,I try out all new methods on my farm(-)	1	2	3	4	5
2	I feel restless till I try out a new farm practice I have heard about(+)	5	4	3	2	1
3	Farmers talk of many farm practices these days, but who knows those are better than the old ones(-)	1	2	3	4	5
4	From time to time I have heard of several new farm practices and I have tried out most of them in the last few years(+)	5	4	3	2	1
5	I usually wait to see the results of my neighbors , before I try out the new methods or practices(+)	5	4	3	2	1
6	Somehow, I believe that the traditional ways to farming are the best(-)	1	2	3	4	5
7	I am cautious about trying a new farm practice(-)	1	2	3	4	5
8	An innovative farmer adapts new ideas earlier than other farmers(+)	5	4	3	2	1

8. Mode of transport

Please specify the conveyance used to get the groundnut produce from house to marketing place by a tick mark.

S. No.	Mode of transport	Score	Response
1	Bullock cart	1	
2	Tractor	2	
3	Bus	3	
4	Tempo van	4	
5	Lorry	5	
6	Any other(specify)	6	

9. Place of sale

Please specify the place where groundnut produce is sold out.

S. No.	Place of sale	Score	Response
1	Middle men	1	
2	Local market	2	
3	Wholesale market	3	
4	Retail market	4	
5	Market yard	5	
6	Any other(Specify)	6	

10. Terms and conditions of the sale

Please specify the terms and conditions framed between the producer and buyer while selling the groundnut produce

S. No.	Terms and conditions of sale	Score	Response
1	Prior payment before sale	1	
2	Immediate payment at the time of sale	2	
3	Payment after sale	3	

Please specify the problems encountered by the groundnut farmers during marketing of the produce

S. No.	Problems	Response
1	Lack of timely market information	
2	Lack of remunerative price	
3	Improper weighment	
4	Fluctuation in market prices	
5	Involvement of middle men in marketing	
6	High cost of labour during harvesting	
7	Lack of cooperative marketing system	
8	High commission charges	
9	Long distances of the markets	
10	Delayed cash payment	
11	Scarcity of labour for transportation and marketing	
12	Absence/insufficient storage facilities	
13	High cost of transportation	

Please specify suggestions given by the groundnut farmers to overcome the problems faced by them

S. No.	Suggestions	Response
1	Provision of information about current marketing situations	
2	Establishment of more number of cooperative and rapid expansion of regulated marketing systems	
3	Provision of minimum support price for groundnut	
4	Efforts to minimize the commission charges by the concerned authorities	
5	Adequate and appropriate transport facilities	
6	Provision of sufficient storage facilities	
7	Establishment of procurement centers in the villages	
8	Recruitment of mandal level marketing officials by the government	