

**A CRITICAL STUDY ON PRADHAN  
MANTRI FASAL BIMA YOJANA IN  
SRIKAKULAM DISTRICT OF  
ANDHRA PRADESH**

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**B.Sc. (Ag.)**

**MASTER OF SCIENCE IN AGRICULTURE  
(Agricultural Extension)**



**2019**

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FASAL BIMA YOJANA IN  
SRIKAKULAM DISTRICT OF  
ANDHRA PRADESH**

**By**  
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**THESIS SUBMITTED TO THE  
ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY  
IN PARTIAL FULFILMENT OF THE REQUIREMENTS  
FOR THE AWARD OF THE DEGREE OF**

**MASTER OF SCIENCE IN AGRICULTURE  
(Agricultural Extension)**

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**DEPARTMENT OF AGRICULTURAL EXTENSION  
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LAM, GUNTUR, ANDHRA PRADESH**

**2019**

## **DECLARATION**

I, Mr. **HANUMANTHU NAGESH**, hereby declare that the thesis entitled, “**A CRITICAL STUDY ON PRADHAN MANTRI FASAL BIMA YOJANA IN SRIKAKULAM DISTRICT OF ANDHRA PRADESH**” submitted to the **Acharya N.G. Ranga Agricultural University** for the degree of **Master of Science in Agriculture** in the major field of Agricultural Extension, 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.

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Date:

**I.D. No. BAM-17-49**

## **CERTIFICATE**

Mr. **HANUMANTHU NAGESH** has satisfactorily prosecuted the course of research and that the thesis entitled “**A CRITICAL STUDY ON PRADHAN MANTRI FASAL BIMA YOJANA IN SRIKAKULAM 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 him for a degree of any university.

Date:

**(B. MUKUNDA RAO)**  
**Chairperson**

# CERTIFICATE

This is to certify that the thesis entitled “**A CRITICAL STUDY ON PRADHAN MANTRI FASAL BIMA YOJANA IN SRIKAKULAM DISTRICT OF ANDHRA PRADESH**” submitted in partial fulfilment of the requirements for the degree of “**MASTER OF SCIENCE IN AGRICULTURE**” (**Agricultural Extension**) of the Acharya N.G. Ranga Agricultural University, Guntur, is a record of the bonafide original research work carried out by **HANUMANTHU NAGESH** under our guidance and supervision. The subject of the thesis has been approved by the students advisory committee.

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 the investigation have been duly acknowledged by the author of the thesis.

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# ACKNOWLEDGEMENT

*Firstly I owe my sincere prayers to the almighty to have completed the work successfully.*

*At the very outset, whole heartedly I wish to express my fidelity and deep sense of gratitude to the chairman of my advisory committee **Dr. B. MUKUNDA RAO Professor (polytechnics), O/o Dean of Agriculture, LAM Guntur**, for his inspiring guidance, timely advice, constant supervision, constructive criticism, boundless help, vivid encouragement & affectionate dealing through the period of investigation and during preparation of the manuscript. I feel elated to express my heartfelt thanks for his immense patience, keen interest in planning and execution of research, transcendent suggestions, affectionate encouragement and adroitness in handling the research work in all its stages.*

*I deem it a great pleasure to exhibit my inexplicable gratitude to **Dr. T.GOPI KRISHNA Principal Scientist (Extension), ANGRAU, LAM, Guntur** and member of my advisory committee, for his encouragement in conducting research, valuable comments and meticulous reasoning to refine the dissertation to reckon with set standards during the course of investigation and preparation of the thesis and expeditious co-operation during the whole course of my research work.*

*I feel inadequacy of words to express my deep sense of gratitude & profound indebtedness to **Dr. CH. PULLA RAO, Professor(Retd.), Department of Agronomy and member of my advisory committee** for her valuable advice, thought provoking and inspiring guidance, Kind help and co-operation during my course of study and my research work.*

*I humbly express my sincere thanks to **Dr. Sathya Gopal Professor & Head Department of Agricultural Extension, Agricultural college Bapatla** for his articulate criticisms, transcendent suggestions, persistent encouragement and for providing congenial atmosphere during the course of study.*

*I humbly express my sincere thanks to **Dr. M. Rama Devy professor, Dr. M. Srinivasa Rao, Associate Professor, Sri T. Prasanth Kumar Assistant Professor, Dr. V. Jyothi, Assistant professor** and for their valuable suggestions and cooperation during my research work.*

*All languages fall short of to express my undoubtfull gratitude, indebtedness, love and affection to my beloved and venerable parents **Smt. H. Chandramma and Sri. H. Chandrayya** who constantly educated, guided and moulded me into the present position and whose boundless love, unparallel affection, dedicated efforts, encouragement and moral support is a constant source of motivation for me in shaping up my career.*

*It is high time to surface out my adoration and most affectionate gratitude to Hareesha, Mansoor, Bapuji, Roshitha, Ajith, Kiran, Jaggu, and my juniors Shanmukh, Revathi and Raveena and seniors Hareesha, Venkat Reddy, Meena, Archana, Vihari, Pavan and Vyshali who helped me throughout my study.*

*It is time to surface out my genuflect love and affectionate gratitude to my brothers Vasu and Krishna all my family members whose everlasting love, encouragement and needy inspiration were my strongest assets during the course of my life with whose moral support I achieved this level of education.*

*I take pleasure in expressing my sincere thanks to all my seniors, juniors and well-wishers who supported me in all my efforts and extended their timely assistance in preparation of this thesis and my special thanks to my batchmates viz., Kishore, Uday and Prabhakaran*

*I am very much thankful to Sri. T. Shyam Kumar (Computer Operator), Sri. V. Nagendranath (Artist), Sri. Sai Babu (Office Subordinates), Sri. M. Anki Reddy (Record Assistant), & Sri. T. Venkateswaramma (Office Subordinates) for their help during my M.Sc. Programme in the department. I am thankful to our College Librarian and other staff for providing necessary facilities.*

*I am thankful to Acharya N. G. Ranga Agricultural University for giving me opportunity to pursue my graduation successfully, for providing the facilities to conduct my Research work during the course of study.*

Date:

Place:

**(H. NAGESH)**

## LIST OF TABLES

S. No.	TITLE	Page No.
2.1.	Profile characteristics versus Knowledge	31-32
2.2.	Profile characteristics versus Opinion	33
3.1.	Particulars of selected mandals, villages and respondents	44
3.2.	Variable and their empirical measurement	45
4.1.	Profile characteristics of beneficiaries at a glance	59-60
4.2.	Distribution of beneficiaries according to Age	61
4.3.	Distribution of beneficiaries according to Education	62
4.4.	Distribution of beneficiaries according to Land holding	63
4.5.	Distribution of beneficiaries according to Farming Experience	64
4.6.	Distribution of beneficiaries according to Annual income	65
4.7.	Distribution of beneficiaries according to Material Possession	66
4.8.	Distribution of beneficiaries according to Extension contact	66
4.9.	Distribution of beneficiaries of PMFBY according to their frequency of Extension Contact	68
4.10.	Distribution of beneficiaries according to Disaster occurrence pattern	68
4.11.	Item analysis of beneficiaries according to Disaster occurrence pattern.	69
4.12.	Frequency of occurrence Disaster	70
4.13.	Distribution of beneficiaries according to Mass media utilization	71
4.14.	Distribution of beneficiaries according to their frequency of Mass media utilization	72
4.15.	Distribution of beneficiaries according to Training undergone	73
4.16.	Distribution of beneficiaries according to Crop loan availed	74
4.17.	Distribution of beneficiaries according to Scientific orientation	75
4.18.	Distribution of beneficiaries according to Risk orientation	76
4.19.	Distribution of beneficiaries according to their level of knowledge on PMFBY	77

<b>S. No.</b>	<b>TITLE</b>	<b>Page No.</b>
4.20.	Item analysis of Knowledge of beneficiaries in PMFBY	78
4.21.	Distribution of beneficiaries according to their opinion of beneficiaries of PMFBY	82
4.22.	Item analysis of beneficiaries according to their Opinion	83-84
4.23.	Correlation coefficient of profile characteristics of beneficiaries with their level of Knowledge	88
4.24.	Multiple linear regression analysis of selected independent variables with knowledge towards the beneficiaries in PMFBY.	93
4.25.	Correlation coefficient of profile characteristics of beneficiaries with Opinion	94
4.26.	Multiple linear regression analysis of selected independent variables with Opinion towards the beneficiaries in PMFBY.	100
4.27.	Constraints faced by the beneficiaries in PMFBY	101
4.28.	Suggestions given by the beneficiaries to overcome the constraints in PMFBY	102

## LIST OF ILLUSTRATIONS

<b>S. No.</b>	<b>TITLE</b>	<b>Page No.</b>
2.1	Conceptual model of study	37
3.1	Map showing Srikakulam district of Andhra Pradesh	41
3.2	Map showing selected and mandals of Srikakulam district	42
3.3	Map showing selected villages of Srikakulam district	43
4.1	Distribution of beneficiaries according to Age	61
4.2	Distribution of beneficiaries according to Education	62
4.3	Distribution of beneficiaries according to Land holding	63
4.4	Distribution of beneficiaries according to Farming Experience	64
4.5	Distribution of beneficiaries according to Annual Income	65
4.6	Distribution of beneficiaries according to Material possession	66
4.7	Distribution of beneficiaries according to Extension contact	67
4.8	Distribution of beneficiaries according to Disaster occurrence pattern	69
4.9	Distribution of beneficiaries according to Mass media utilization	71
4.10	Distribution of beneficiaries according to Training undergone	73
4.11	Distribution of beneficiaries according to Scientific Orientation	75
4.12	Distribution of beneficiaries according to Risk Orientation	76
4.13	Distribution of beneficiaries according to Crop loan availed	74
4.14	Distribution of beneficiaries according to their knowledge of PMFBY	77
4.15	Distribution of beneficiaries according to their opinion of PMFBY	82
4.16	Empirical model of the study	106

## LIST OF SYMBOLS AND ABBREVIATIONS

*	:	Significant
A	:	Intercept
b	:	Regression co-efficient
i.e.	:	That is
A	:	Agree
ADA	:	Assistant Director of Agriculture
AEO	:	Agricultural Extension Officer
A.M	:	Arithmetic Mean
ANGRAU	:	Acharya N.G. Ranga Agricultural University
APAU	:	Andhra Pradesh Agricultural University
CCIS	:	Comprehensive Crop Insurance Scheme
CPIS	:	Coconut Palm Insurance Scheme
DAC&FW	:	Department of Agriculture, Cooperation & Farmers Welfare
<i>et.al,</i>	:	And Others
etc.	:	etcetera
F	:	Frequency
Fig	:	Figure
FIIS	:	Farmers Income Insurance Scheme
Ha	:	Hectare
JDA	:	Joint Director of Agriculture
KVK	:	Krishi Vignan Kendra
MOA&FW	:	Ministry of Agriculture, Cooperation & Farmers Welfare
MAO	:	Mandal Agricultural Officer
MLR	:	Multiple Linear Regression
MPEO	:	Multi-Purpose Extension Office
MNAIS	:	Modified National Agricultural Scheme
SMS	:	Subject Matter Specialist

NWDpra	:	National Watershed Development Project for Rainfed Areas
n	:	Sample size
N	:	Total number of respondents
NGO	:	Non-Government Organisation
NS	:	Non Significant
NAIS	:	National Agricultural Insurance Scheme
NCIP	:	National Crop Insurance Programme
PMFBY	:	Pradhan Mantri Fasal Bima Yojana
RWBCIS	:	Reconstructed Weather Based Crop Insurance Scheme
R	:	Pearson's product moment correlation coefficient
R <sup>2</sup>	:	Co-efficient of multiple determination
RBQ	:	Rank Based Quotient
SA	:	Strongly Agree
S.D	:	Standard Deviation
SDA	:	Strongly Disagree
SHG	:	Self Help Group
S. No	:	Serial Number
SHG's	:	Self Help Groups
TN-IAMWARM	:	Tamil Nadu Irrigated Agriculture Modernization water Bodies Restoration
TNAU	:	Tamil Nadu Agricultural University
UD	:	Undecided
WBCIS	:	Weather Based Crop Insurance Scheme
viz.	:	Namely
$\sigma$	:	Standard Deviation
$\bar{X}$	:	Arithmetic mean
%	:	Per cent

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## ABSTRACT

Name of the Author	:	<b>H.NAGESH</b>
Title of the Thesis	:	<b>A CRITICAL STUDY ON PRADHAN MANTRI FASAL BIMA YOJANA IN SRIKAKULAM DISTRICT OF ANDHRA PRADESH</b>
Degree to which it is submitted	:	Master of Science
Faculty	:	Agriculture
Department	:	Agricultural Extension
Major Advisor	:	<b>Dr. B. MUKUNDA RAO</b>
University	:	Acharya N.G Ranga Agricultural University
Year of submission	:	2019

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Research study entitled “A Critical Study on Pradhan Mantri Fasal Bima Yojana in Srikakulam District of Andhra Pradesh” was under taken to study the profile characteristics of beneficiaries of PMFBY, knowledge, opinion levels of beneficiaries about Pradhan Mantri Fasal Bima Yojana, relationship between profile with knowledge and opinion levels of beneficiaries under Pradhan Mantri Fasal Bima Yojana and aims to elucidate the constraints faced by the farmers and suggestions given by them to overcome the constraints and finally to formulate the strategies for effective implementation of Pradhan Mantri Fasal Bima Yojana.

The study was taken up in three mandals of Srikakulam district with a sample size of 120 members. Thirteen independent variables with knowledge and opinion as dependent variable were studied. The farmers interviewed personally by a well structured interview schedule. The data was coded, tabulated and analyzed using suitable statistical tools.

The profile of the beneficiaries of PMFBY revealed that majority of the farmers were middle aged, educated up to middle school, had less than 2 hectares of land holdings, 21 to 30 years of farming experience, medium annual income, untrained, medium level of mass media utilization, material possession, extension contact. Bank officers and Mandal agricultural officers were consulted by the majority of beneficiaries to seek the information about PMFBY. The study also revealed that majority of beneficiaries had frequently faced disasters like floods, heat waves, droughts and the disaster occurrence pattern is high. Regarding to psychological variables, majority of respondents were under medium level of scientific orientation and risk orientation. Most of the beneficiaries had took the loan from co-operative societies.

Majority of the farmers had medium level of the knowledge regarding PMFBY. Majority of the beneficiaries had knowledge about the premium rates, crops covered under kharif, rabi and horticultural crops, intimation of losses about the crops within the particular period of time, reason for failure PMFBY, source of premium for crop insurance. Majority of the farmers had low level of knowledge on aspects like

indemnity of crop damage excluded during losses of war and nuclear risks, companies provide insurance to beneficiaries in srikakulam under this scheme, PMFBY is optional for non-farmers etc., Basis for implementation of PMFBY

Majority of the beneficiaries had medium level of opinion about PMFBY. Majority of beneficiaries had favorable opinion on items like PMFBY providing financial support to farmers suffering crop damage arising out of unforeseen events. Usage of smart phones and drone for assessment of crop damage is a ideal measure. More involvement of insurance companies for settlement of claims, lower premium rates than usage of IT in settlement of claims, Premium should be payed by the government.

Out of thirteen independent variables farming experience, annual income, education showed positive and non-significant association with the knowledge. Disaster occurrence pattern, extension contact, land holdings, mass media utilization, training undergone, scientific orientation, risk orientation showed positive and significant association with the knowledge at one per cent level of significance. Crop loan availed, material possession, showed positive and significant relationship with the knowledge at five per cent level of significance. The variable age showed negative and non-significant relationship towards the knowledge of PMFBY beneficiaries. The farming experience, annual income, material possession showed positive and non-significant relationship. The variables like landholdings, extension contact, disaster occurrence pattern, mass media utilization, training undergone, crop loan availed, scientific orientation, risk orientation, showed positive and significant relationship at one per cent level of significance towards the beneficiaries of PMFBY. The variables like age, education showed negative and non- significant relationship with the opinion of beneficiaries of PMFBY.

Multiple linear regression analysis gave the “R<sup>2</sup>” value of 0.564 indicated that all the selected fourteen profile characteristics put together, explained about 56.40 per cent variation in the level of knowledge in beneficiaries of PMFBY. Remaining 43.60 per cent is due to the extraneous effects of the variables. The “R<sup>2</sup>” value of 0.456 indicated that all the selected thirteen profile characteristics put together, explained about 45.60 per cent variation in the level of opinion in beneficiaries of PMFBY. Remaining 54.40 per cent is due to the extraneous effects of the variables.

The problems faced by the beneficiaries in PMFBY were Lack of knowledge regarding to PMFBY, lack of awareness of benefits of PMFBY, less compensation offered in crop insurance scheme, delay in payment of compensation, Rate of premium is not universal for all crops, on-line registration and assessment of risk complexity in PMFBY, unavailability of experts for assessment of loss at visit time, lack of coordination between banks and farmers and high rate of premium.

Suggestion made by the beneficiaries to overcome the constraints in PMFBY were procedure of the scheme should be simplified, organization of awareness programmes for farmers regarding PMFBY, organization of training programmes on e-filling of insurance and benefit of the farmers, payment of premium by the government for farmers below the poverty regarding pmfby, premium rate may be decreased, avoid delay in payment of compensation, increase the number of extension agents, maintain universal premium for all crops, improve linkage between banks and farmers, unit area may be of individual or a village level, improve socio-economic conditions of the farmers and increase the insurance agents in rural areas.

## Chapter – I

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# Introduction

## CHAPTER 1

# INTRODUCTION

Agriculture is the back bone of the Indian Economy. The share of agriculture in employment was 48.90 per cent of the workforce and its share in the Gross Domestic Product (GDP) was 17.4 per cent in 2015-16 (Directorate of Economics and Statistics 2015), as of Indian GDP is 7.2 per cent for the year 2017-18. Nearly two- third of the agriculture land in the country is rain-fed and almost 20 per cent of the India`s total land area is perennially drought prone. Agriculture sector faces several risks viz. financial, personal, production related risks. Farmers highly dependence on monsoon rainfalls. Agriculture in India is proverbially called a “**Gamble on the Monsoon**”. As agriculture is highly dependent on weather, even if small changes occur in any stage of the crop it could affect crop growth and consequence changes occur in the livelihood farmers. Not only environmental effect, but also pests and diseases it effect the crop growth and yield.

The **Arjun Sengupta** Committee puts the average monthly income of a farm family at Rs. 2,115 which includes Rs.900 from non-farm activities. Similarly, the Commission for Agricultural Costs and Prices (CACP) analysis has shown the return for many crops to be actually in the negative side/zone. In fact, the **Socio-Economic and Caste Census 2011** have confirmed that 75 per cent of all rural households make less than Rs 5,000 per month.

Agricultural production and farm incomes in India are frequently affected by natural disasters, susceptibility of agriculture to these disasters is compounded by the outbreak of epidemics and manmade disasters such as fire, sale of spurious seeds, fertilizers and pesticides, price crashes. Agricultural insurance is considered as one of the important mechanism to effectively address the risks to farm production and income resulting from various natural and manmade events.

Different forms of experiments on agricultural insurance were started from 1985 onwards. The details are as follows

- Comprehensive Crop Insurance Scheme (CCIS): 1985 to summer 1999
- Pilot Farmers Income Insurance Scheme (FIIS) :Summer 2003 to Winter 2003-04

- Pilot Weather Based Crop Insurance Scheme (WBCIS): Summer 2007 to Summer 2013
- Pilot Coconut Palm Insurance Scheme (CPIS): 2009-10 to Summer 2013
- Pilot Modified NAIS (MNAIS): Winter 2010-11 to Summer 2013
- National Crop Insurance Programme (NCIP) with component schemes of MNAIS, WBCIS and CPIS: Winter 2013-14 to Winter 2015-16
- National Agricultural Insurance Scheme (NAIS) : Winter 2019 to Winter 2015-16
- Pradhan Mantri Fasal Bima Yojana (PMFBY) and restructured WBCIS: April 2016 to the Present

One of the populist game changer insurance schemes brought out by government of India is Pradhan Mantri Fasal Bima Yojana (PMFBY) which not only provides insurance coverage to farmers against natural calamities and pests, but also encourages them to adopt innovative modern agricultural practices. It was rolled out from June 2016. The premium to be paid by farmers is just 2 per cent of the insured value for the Kharif crop, 1.5 per cent for the Rabi season and 5 per cent for Horticultural crops. The government's focus will be to bring in more farmers without loans (which comprise merely 5 per cent of total farmers at present) under the scheme. The aim of new scheme is to cover 50 per cent of total crop area i.e. 19.40 million hectare and use of digital technology to improve yield data and automate claims (Goel, 2016). This scheme will help in decreasing the burden of premiums on farmers who take loans for their cultivation and will also safeguard them against the inclement weather.

The PMFBY is a replacement scheme of National Agricultural Insurance Scheme as well as the Modified NAIS. As the new PMFBY is replacement scheme of NAIS / MNAIS, there will be exemption from Service Tax liability of all the services involved in the implementation of the scheme. Farmers will also get rid of the web of complex rules of the earlier insurance schemes. The new scheme includes successful aspects of the existing schemes and "effectively addresses" whatever was lacking in earlier schemes. As many as 5.70 crore farmers purchased the crop insurance policy PMFBY during 2016-17. The Scheme shall be implemented through a multi-agency framework by selected insurance companies under the overall guidance & control of

the Department of Agriculture, Cooperation & Farmers Welfare (DAC & FW), Ministry of Agriculture & Farmers Welfare (MOA & FW), Government of India (GOI) and the concerned State in co-ordination with various other agencies viz. financial institutions like commercial banks, cooperative banks, regional rural banks and their regulatory bodies of govt. department Agriculture, co-operatives, horticulture, statistics, revenue, information science and technology.

Private General Insurance Company HDFC ERGO general insurance has set up remote sensing lab for crop insurance. It will work on accurately assessing the risks by the scientific manner of the insurances and will also be able to give early warnings to the government and farmers about the losses.

### **OBJECTIVES OF PMFBY**

- a. To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests & diseases.
- b. To stabilize the income of farmers to ensure their continuance in farming.
- c. To encourage farmers to adopt innovative and modern agricultural practices.
- d. To ensure flow of credit to the agriculture sector.

Government modifies operational guidelines for Pradhan Mantri Fasal Bima Yojana. The Union Government on September 18, 2018 released the new operational guidelines for implementation of the Pradhan Mantri Fasal Bima Yojana (PMFBY).

The new modified provisions include the provision of penalties for states and insurance companies for the delay in settlement of insurance claims under the Pradhan Mantri Fasal Bima Yojana. The new operational guidelines address the current challenges faced while implementing The scheme by putting forth effective solutions.

### **New Operational Guidelines For Pradhan Mantri Fasal Bima Yojana**

- The farmers will be paid 12 per cent interest by insurance companies for the delay in settlement claims beyond two months of prescribed cut-off date.
- The State Governments will have to pay 12 per cent interest for the delay in release of State share of subsidy beyond three months of prescribed cut-off date submission by insurance companies.

- The guidelines detail a Standard Operating Procedure for evaluation of insurance companies and removes them from the scheme, if found ineffective in providing services.
- It includes Perennial horticultural crops on pilot basis under the ambit of PMFBY.
- It includes cloud burst and natural fire in localized calamities in addition to unseasonal and cyclonic rainfalls, hailstorm, landslide, and inundation in post harvest losses.
- It provides add on coverage for crop loss due to attack of wild animals on pilot basis with the additional financial liabilities to be borne by concerned state government.
- It incorporates definition of major crops, unseasonal rainfall and inundation for clarity and proper coverage.
- Aadhaar number will be mandatorily captured to avoid duplication of beneficiaries.
- To ensure that more non-loanee farmers are insured under the scheme, apart from various awareness activities being scheduled, the insurance companies are given a target of enrolling 10 percent more non-loanee farmers than the previous corresponding season.
- The insurance companies will have to mandatorily spend 0.5 percent of gross premium per company per season for publicity and awareness of the scheme.
- Release of upfront premium subsidy will be made at the beginning of the season based on 50 percent of 80 percent total share of subsidy of corresponding season of previous year as subsidy.

But the revised operational guide lines have made the scheme more farmer friendly the aim of the PMFBY is to provide coverage to all farmers However, this is a tall task only about 35 per cent of the farmers are covered under PMFBY and the intention of the government is to increase to 50 per cent by 2020.

Department of Agriculture, Cooperation & Farmers Welfare (DAC & FW) has designed/empanelled as agriculture insurance companies of India and some private insurance companies presently to participate in the PMFBY based on their financial strength, infrastructure, manpower and expenditure etc.

Agricultural Insurance Company of India and Some Private insurance companies are working in the PMFBY based on their financial strength, infrastructure manpower and expertise. The following are the insurance companies operated in PMFBY.

1. Agriculture Insurance Company of India Ltd.,
2. ICICI Lombard General Insurance Company Ltd.,
3. HDFC ERGO General Insurance Company Ltd.,
4. IFFCO-TOKIO General Insurance Company Ltd.,
5. Cholamandalam MS General Insurance Company Ltd.
6. Bajaj Allianz General Insurance Company Ltd.
7. Reliance General Insurance Company Ltd.
8. Future General India Insurance Company Ltd.
9. Tata-AIG General India Insurance Company Ltd.
10. SBI General India Insurance Company Ltd.
11. Universal Sompo General India Insurance Company Ltd.

The empanelled insurance companies at present in Andhra Pradesh are listed below.

1. Agriculture Insurance Company of India Ltd. is working in Ananthapur, Chittoor, East Godavari, Guntur, Nellore, Srikakulam, Prakasam districts of Andhra pardesh
2. ICICI Lombard General Insurance Company Ltd is working in West Godavari, Kadapa, Krishna, Kurnool, Vishakapatnam, Vizianagaram districts of Andhra pardesh.

In Maharashtra, it was accounted that the highest 2.21 crore insured farmers under PMFBY during 2016-18 followed by Rajasthan (1.52 crore farmers), Madhya Pradesh (1.41 crore farmers), Utter Pradesh (1.21 crore farmers), West Bengal (0.80 crore farmers) and Andhra Pradesh (0.36 crore farmers). Under PMFBY (2017-18), highest insured under non-lonee farmers are Jharkhand (85.00 %) and lowest in Gujarat (0%). In Andhra Pradesh, only 4.12 per cent of the total farmers insured under PMFBY

and Reconstructed Weather Base Crop Insurance Scheme (RWBCIS) during Kharif 2016. In the fiscal year 2018-19 the highest insured districts in Andhra Pradesh are Ananthapur, Kadapa and Srikakulam districts. In Srikakulam district the total farmers insured under PMFBY were only 54677. This might be due to lack of awareness and knowledge regarding benefits of Pradhan Mantri Fasal Bima Yojana (PMFBY). So there is a need to know the existing socio-economic profile and knowledge of the beneficiaries of PMFBY. With this back ground, the present study has been formulated with the following objectives.

## **OBJECTIVES**

- 1) To study the profile of the beneficiaries of Pradhan Mantri Fasal Bima Yojana (PMFBY).
- 2) To measure the knowledge level of beneficiaries about Pradhan Mantri Fasal Bima Yojana (PMFBY).
- 3) To know the opinion of beneficiaries about Pradhan Mantri Fasal Bima Yojana (PMFBY).
- 4) To find out the relationship between profile with knowledge and opinion of beneficiaries under Pradhan Mantri Fasal Bima Yojana (PMFBY).
- 5) To elicit the constraints and suggestions of PMFBY beneficiaries and to formulate the strategies for effective implementation of PMFBY.

## **NEED OF THE STUDY**

While international and national attention has been focused on crop insurance and risk management in agriculture, most of the farmers are unaware of the benefits of crop insurance schemes. Interestingly, even as the government laid an immense focus on Prime Minister Narendra Modi's 'Pradhan Mantri Fasal Bima Yojana' scheme, non-awareness of farmers to insure for risk management has been found as a major factor in poor response to crop insurance schemes. As far as the farmers are concerned cent per cent of them were provided loans for farming practices. But the field reality is that there are no proper facilities to explain the details of the scheme. Hence, farmers are either unaware or confused to opt for insurance schemes. Mere introduction of schemes do not produce desired result. It also comprises intense propagation & extensive help centers for education to farmers and proper maintenance of data and records which

affect largely. Of course, several national level surveys have been conducted on the status of crop insurance schemes introduced at various time points like NAIS, MNAIS and WBCIS etc., yet, few studies have been conducted on the role of insurance companies and banks in the successful implementation and running of insurance schemes in villages. Moreover, scant studies have been conducted on the role of government in promoting CIS custom information service and response of farmer at individual level. On these grounds, the present study has a special significance for the policy makers, educationists and researchers to get details of the crop insurance scheme facilities available and their implementation by the government through agriculture officers.

### **SCOPE OF THE STUDY**

The present study is under taken to measure extent of knowledge levels of farmers about Pradhan Mantri Fasal Bima Yojana (PMFBY) and opinion by the farmers. Besides this, the study would depict the relationship between profile with knowledge and opinion of insured farmers and last but not least an attempt has been made to elicit the constraints of PMFBY as well as suggestions for reforming of PMFBY which suitable for present farming situation

This study will highlights gaps in knowledge and positive or negative opinion about PMFBY. It is possible to brainstorm the strategies to overcome constraints faced by beneficiaries about PMFBY. It has wider scope to study the specific crop and location specific solutions. The outcomes of this will be gainful and useful for administrates, policymakers, scientists, extension workers, NGOs, etc. The results of the study can be effectively used in other crop insurance schemes which needs reforms.

### **LIMITATIONS OF THE STUDY**

The study has the usual limitations of a single student research project, although every attempt has been made to have a thorough investigation into several aspects of the problem.

- i. Being a post graduate research, the investigator has limitation of time, money and other resources.
- ii. Since the study was designed as *ex-post facto* type, the memory bias on the part of the respondents cannot be ruled out.

- iii. The study was restricted to only three mandals with a sample of 120 farmers of srikakulam district therefore, the implications made in the study may not be generalized for larger areas.

### **PRESENTATION OF THE THESIS**

The thesis is presented under five chapters. The first chapter viz., introduction deals with the objectives, need of the study, scope and limitations of the study. The second chapter, viz., review of literature deals with the review of important studies related to the field of present study. In the third chapter, the methodology used in the research work including operationalization of the concepts, measurement procedure of the variables and the statistical tools used are presented. The fourth chapter deals with the results and discussions. Summary, conclusions, implications and suggestions for future study are furnished in the fifth chapter. The references and appendices are furnished at the end.

## Chapter – II

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# Review of Literature

## **CHAPTER-II**

# **REVIEW OF LITERATURE**

A literature review is a body of text that aims to review the critical points of current knowledge and or methodological approaches on a particular topic. Literature reviews are secondary sources, and as such, do not report any new or original experimental work. A well-structured literature review is characterized by a logical flow of ideas; current and relevant references with consistent, appropriate referencing style; proper use of terminology and an unbiased and comprehensive view of the previous research on the topic. Hence, earnest efforts were made to review the related literature, which was found to be meaningful and having direct and indirect bearing on this study and furnished under the following headings

- 2.1 Profile of the beneficiaries of Pradhan Mantri Fasal Bima Yojana PMFBY.
- 2.2 Knowledge level of the beneficiaries about Pradhan Mantri Fasal Bima Yojana PMFBY.
- 2.3 Opinion of beneficiaries about Pradhan Mantri Fasal Bima Yojana (PMFBY).
- 2.4 Relationship between profile with knowledge and opinion of beneficiaries under PMFBY.
- 2.5 Constraints faced by the beneficiaries and suggestions to obviate the constraints and to formulate the strategies for effective implementation of PMFBY.
- 2.6 Conceptual model of the study.

### **2.1 PROFILE CHARACTERISTICS OF THE FARMERS:-**

#### **2.1.1 Age**

Manisha (2009) from her study on “Knowledge, attitude and loan repayment behaviour of borrowers in Kisan Credit Card scheme in Akola district Maharashtra” reported that more than two-fifths (43.00 %) borrowers of Kisan Credit Card scheme belonged to ‘middle’ age group of 36 to 50 years.

Sadati *et al.* (2010) in their research article on “survey of effective factors on adoption of crop insurance among farmers: A case study of Behbahan County” reported that majority were middle-aged farmers.

Kumar *et al.* (2011) in their research article on “Analysis of farmer`s perception and awareness towards crop insurance as a tool for risk management in Tamil Nadu” reported that most (82.00%) of them were in the age of above 40 years and one-third (30.00%) of respondents were in the age group of more than 60 years.

Fallah *et al.* (2012) in their research paper on “attitudes and determinant factors in insurance development for strategic agricultural products” study concluded that the farmers insured under the age of 46.19 were average followed by the youngest were 29 years and the oldest were 76. The largest frequency was for the range was 41 to 50.

Goudappa *et al.* (2012) in their research article on “Farmers perception and awareness about crop insurance in Karnataka” revealed that average age group of the farmers was 47 years.

Kumar *et al.* (2012) in their research paper on “Perception and attitude of farmers and agri firms towards commodity finance” indicated that more than one third (34.00 %) of the respondents were in the age group of 28-37 followed by 24.00 per cent were in the age group of 18-27, 22.00 per cent were in the age group of 38-47, 12.00 per cent were in the age group of 48-57 and 8.00 per cent were in the age group of 58 years and above.

Jayathilaka and Abeynayake.(2013) in their research article on “assessing farmers’ perception, awareness and influential factors to purchase a crop insurance as a tool for risk management” study found that the more than half of insured farmers (51.70 %) were of 41-50 age group and 48.30 per cent belonged to the age group of 51-60 years.

Khan *et al.* (2013) in their research paper on “Willingness to pay for cattle and buffalo insurance: An analysis of dairy farmers in central India” concluded that the highest proportion (79.50%) of farmers belonged to middle age group and the mean age was 42 years.

Lalitha and Sundar (2013) in their research article on “A Study on farmer’s awareness, perception and willing to join and pay for crop insurance” revealed that more than half of the (58.50 %) of farmers were above the age of 45 years and the remaining (41.50%) were below 45 years of age.

Akinola (2014) in his research article on “Determinants of farmers’ adoption of agricultural insurance: The case of poultry farmers in Abeokuta Metropolis of Ogun State, Nigeria” concluded that most (90.00%) of them are belonged to the age group of 40-50 followed by those belonged to the age group of above 50 years (6.25%) and only few (3.75%) belonged to age group of 30-40 years.

Uvaneswaran and Mohanapriya (2014) in their research paper on “Farmers perception and awareness about crop insurance in Tamilnadu” found that more than one third (34.00 %) were 20-40 years age followed by 28.00 percent of the farmers were of 40-50 years age, below 23.00 per cent of farmer were of below 20 years of age and only 15.00 per cent were of above 60 years of age.

Govinda *et al.* (2015) in their research paper on “Socio Economic profiling of tumkur district farmers in Karnataka” found that majority (46.99%) of the members were ‘middle’ aged group followed by 36.01 per cent of the members coming under ‘young’ age group and 17.00 per cent of the members undre ‘old’ age category.

Adah *et al.* (2016) in their research article on “Assessment of rural farmers’ attitudes toward agricultural insurance scheme as a risk management strategy in Kogi State, North central Nigeria” study concluded that one-third of farmers (33.30%) were of 41-50 years age group followed by 30.00 per cent were of 31-40 years age, and only 15.00 per cent were of 51-60 years age only 10.00 per cent were of above 60 years age.

Chikaire *et al.* (2016) in their research article on “Perception of rural farmers of agricultural insurance as a way of mitigation against climate change variability in Imo State Nigeria” revealed that nearly half (46.70 %) of the respondents were within the age group of 51-60 years followed by 26.70 per cent were of 41-50 age group and 18.70 per cent were of 31-40 age group and 5.70 per cent were of above 60 years.

Mohapatra *et al.* (2016) in their research paper on “Farmers knowledge about the agricultural insurance scheme in Punjab” revealed that little more than two-fifths (42.74 %) of the respondents were in the middle age group followed by young age group (30.64 %) and old age group (26.00 %).

Further they concluded that majority (56.00 %) respondents insured under livestock insurance were in the middle age group followed by young (28.00 %) and old age group (16.00 %).

Nayak (2016) in his research article on “Socio-economic profile and perception of farmers on crop insurance in Odisha: A case study of selected villages of Keonjhar district” the majority (60.00 %) of the farmers were between the age group of 30-40 years, while 14.00 per cent of the farmers were between the age group of 21-30 years, a very few (6.00 %) of the farmers were from the age group of below 21 years, and the 20.00 per cent of the farmers were from the age group of above 40 years.

Osarenren *et al.* (2016) in his research article on “Socio-Economic Characteristics of Registered Cocoa Farmers in Edo State, Nigeria” found that the majority (66.70%) of the cocoa farmers were within the age range of 41 – 50 years with a mean age of 46 years. This shows that respondents were in their middle age.

Yayati (2016) in their research article on “Socio-economic profile and perception of Farmers on crop insurance in Odisha: A case study of selected villages of Keonjhar district Shrinkhla” found that the majority (60.00 %) of the farmers were between the age group of 30-40 years followed by those who were above 40 years age (20.00 %) and below 20 years of age (6.00 %).

Duhan and Singh (2017) in their research article on “Factors affecting awareness level of farmers about crop Insurance: a case study of Haryana” concluded that highest number of the farmers belonged to the age group of 45-55 years (26.50 %), followed by those belonging to age group of 35-35 were (25.90 %), the age group of 25-35 years (24.50 %), the age group of 18-25 (6.50 %) and the rest ie.,16.60 per cent farmers belonged to the age group of 55 and above.

Sindhu and Ariff (2017) in their research article on “Farmers preference towards crop insurance” found that 44.00 per cent of the respondents belonged to the age group of 26 to 50.

Thirumoorthy and Geetha, (2017) in their research article on “A study on awareness of farmers towards crop insurance in Erode and Namakkal District” revealed that majority (57.00 %) of the farmers were of 26-50 age followed by 29.00 per cent were above 50 years age and only 14.00 per cent of the farmers were of below 25 years age.

## 2.1.2 Education

Sadati *et al.* (2010) in their research article on “Survey of effective factors on adoption of crop insurance among farmers: A case study of Behbahan country” concluded that more than one-fifths (22.70 %) of the respondents were unable to read and write, while 30.70 per cent of their primary education and 18.00 per cent with higher education.

Kumar *et al.* (2011) in their research article on “Analysis of farmer`s perception and awareness towards crop insurance as a tool for risk management in Tamil Nadu” reported that majority (14.30%) were illiterate followed by 34.80 per cent who had studied up to primary level and 36.70 per cent who had attended school up to secondary level.

Fallah *et al.* (2012) in their research paper on “Attitudes and determinant factors in insurance development for strategic agricultural products” revealed that almost half (43.00%) the respondents were illiterate followed by 36.00 per cent had elementary education, (16.00%) intermediate education and 5.00 per cent high school education.

Goudappa (2012) in his research paper on “Farmers perception and awareness about crop insurance in Karnataka” with concluded that the more than two fifths of the (44.00 %) were illiterate people followed by those primary education (24.00 %) and secondary education (16.00 %).

Ghalavand *et al.* (2012) in their research article on “Agriculture insurance as a risk management strategy in climate change scenario: a study in islamic republic of iran” found that the education condition of 24.00 per cent of wheat producers was primary level, followed by those had secondary level (24.50 %) and remaining 20.00 percent of respondents with high school level of education.

Jayathilaka and Abeynayake (2013) in their research article on “Assessing farmer`s perception, awareness and influential factors to purchase crop insurance as a tool for risk management” concluded that most of the farmers had primary or secondary level education.

Khan *et al.* (2013) in their research article on “Willingness to pay for cattle and buffalo insurance: an analysis of dairy farmers in central India” revealed that an equal number of dairy respondents each were illiterate, had primary school and middle school level of education.

Akinola (2014) in his research article on “Determinants of farmers adoption of agricultural insurance: the case of poultry farmers in Abeokuta Metropolis of Ogun State, Nigeria” found that majority 63.80 % the territory education followed by those had secondary level were (32.70%) and primary education level of farmers were (3.75 %).

Uvaneswaran and Mohanapriya (2014) their research article on “Farmers’ perception and awareness about crop insurance in Tamil Nadu – A descriptive analysis” found that less than two-fifths (39.00%) of the farmers were illiterate followed by those had primary level (25.00%), secondary level (21.00%) and graduate/above level of education (14.00%).

Swain (2015) in his research study on “Performance of crop yield and rainfall insurance schemes in Odisha” Some empirical findings found that majority (87.00%) of the respondents under NAIS scheme the primary and above level of education, whereas 13.00 per cent had below primary level of education.

Further, they found that majority (74.00%) of the respondents under WBCIS scheme had primary and above level of education and followed by those had below primary level (26.00 %).

Adah *et al.* (2016) in his their research article on “Assessment of rural farmers attitudes toward agricultural insurance scheme as a risk management strategy in Kogi State, North Central Nigeria” found that more than one third (35.80 %) had primary school level followed by 34.20 per cent had secondary education level, 40.00 per cent of the farmers who had completed +2 courses and 16.70 per cent farmers had no schooling.

Chikaire *et al.* (2016) in their research article on “Perception of rural farmers of agricultural insurance as a way of mitigation against climate change variability in Imo State, Nigeria” revealed that majority (61.70 %) had secondary education followed by those had primary education (21.70 %) and tertiary education (12.30%).

Mohapatra *et al.* (2016) in their study on “Farmers knowledge about the Agricultural Insurance Scheme in Punjab” found that the majority (53.22%) respondents were covered under weather insurance respectively fell in the middle category whereas 41.93 per cent of the respondents were educated up to primary level followed by illiterate (3.22%) and under matric level (1.61%).

Further, they revealed that majority (55.00 %) of the respondents covered under livestock insurance fell in the middle category Whereas, 36.00 per cent of the respondents were educated up to primary level followed by illiterate (5.00 %) and under matric level (4.00 %) categories.

Yayati (2016) in his research article on “Socio-economic profile and perception of farmers on crop insurance in Odisha: A case study of selected villages of Keonjhar district” concluded that more than two-fifths (42.00 %) of the farmers had no formal education followed by those had primary level (38.00 %) and degree/diploma (6.00%) level of education.

Osarenren *et al.* (2016) in their research article on “Socio-economic characteristics of registered cocoa farmers in Edo State, Nigeria” found that majority (88.80%) of the respondents had formal education while 11.10 per cent of them had no formal education.

Dhande and Jambavanth (2017) in their research paper on ‘Knowledge and attitude of farmers towards crop insurance scheme in Lathur district of Maharashtra’ reported that those had education up to secondary school level (35.83 %).

Duhan and Singh (2017) in their research article on “Factors affecting awareness level of farmers about crop insurance: a case study of Haryana” revealed that one third were under metric (35.00 %), followed by those had education up to below metric (29.70 %) and senior secondary (19.40 %) among the total farmers The minimum numbers of farmers had the post graduate (4.30%) and graduate (11.60 %) education.

Sindhu and Ariff (2017) in their research paper on “A study on farmers preference towards crop insurance” found that nearly half (46.00%) of the farmers educated up to SSCL.

Thirumoorthy and Geetha (2017) in their research paper on “Awareness of farmers towards crop insurance in Erode and Namakkal district” concluded that majority (68.00%) were education up to school level followed by those have completed graduation (21.00%) and post graduation (11.00%).

### **2.1.3 Land Holding**

Kumar *et al.* (2011) in their research article on “An analysis of farmers perception and awareness towards crop insurance as a tool for risk management in Tamil Nadu” found that small and marginal farmers (up to 2 ha) accounted for around 42.00 per cent of the total holdings, which is a positive aspect as the same at all-India level is more than 80.00 per cent and about 50.00 per cent farmers had land holdings of 2-6 ha and about 8.00 per cent had more than 6 ha land holdings.

Goudappa *et al.* (2012) in their research paper on “Farmers perception and awareness about crop insurance in Karnataka” revealed that the average land hold level of the farmer was 4.72 acres.

Fallah *et al.* (2012) in their research article on “Attitudes and determinant factors in insurance development for strategic agricultural products” depicted that less than one third (29.00%) of farmers had less than 10 ha of land whereas 28.00 per cent farmers had less than 25 ha of land, and only 7 per cent had 40 ha of land.

Varadan and Kumar (2012) in their research article on “Impact of crop insurance on rice farming in Tamil Nadu” reported that more than one-third (37.22 %) of respondents belonged to small farmers category followed by those belonged to marginal farmer (29.44 %) and large farmers (26.11 %) categories.

Khan *et al.* (2013) in their research article on “Willingness to pay for cattle and buffalo insurance: an analysis of dairy farmers in central India” found that farmers with small land holding were 40.80 per cent and marginal land holding among the dairy farmers were 50.80 per cent, large land holding were 5.00 per cent and only 3.30 per cent to landless category.

Bharati *et al.* (2014) in their research paper on “Factors affecting adoption of crop insurance in Bihar found that majority (61.00%) were large farmers followed by medium (14.00 %), sub marginal (15.00 %), marginal (9.00 %) farmers.

Olila (2014) in his research paper on “Determinants of farmer’s awareness about crop insurance: evidence from Trans-Nzoia Country, Kenya” concluded that 64.00 per cent small scale farmers and 36.00 per cent were large scale farmers. This implies that majority of the respondents were small scale farmers.

Uvaneswaram and Mohanapriya (2014) in their research paper on “Farmers perception and awareness about crop insurance in Tamil Nadu – A descriptive analysis” concluded that majority of the farmers (26.00 %) had 2-4 acres followed by farmers had 4-6 acres were (23.00 %), the farmers had more than 7 acres were (17.00 %), farmers below 1 acre were (21.00 %) and 13.00 per cent of the farmers were 1-2 acre.

Swain (2015) in his research paper on “Performance of crop yield and rainfall insurance schemes in Odisha” some empirical findings” found that majority (64.00 %) of the respondents under NAIS were medium and large farmers followed by those coming under small and marginal (36.00%).

Further, they found that majority (75.00%) are under WBCIS are marginal and small farmer were followed by medium and large farmer (25.00%).

Adah *et al.* (2016) in their research paper on “Assessment of rural farmers attitudes towards agricultural insurance scheme as a risk management strategy in Kogi State North Central Nigeria” found that half (50.00%) of the farmers had land holdings of below 1.0 ha followed by those had 1-2 ha (28.30 %) and above 3 ha (10.80 %) of land.

Chikaire *et al.* (2016) in their research paper on “Perception of rural farmers of agricultural insurance as a way of mitigation against climate change variability in Imo State Nigeria” revealed that nearly half (47.70 %) of them had 0.5-2 hectares of land for farming.

Mohapatra *et al.* (2016) from their research paper on “Farmers knowledge about the agricultural insurance scheme in Punjab” found that majority of the farmers (65.32 %) under weather insurance had semi-medium (5-10 acres), followed by those coming under medium (10.0-25.0 acres) farmers (16.12 %), marginal (< 2.5 acres) farmers (13.70 %) and farmers had small land holding (2.5-5 acres) farmers were (4.83%).

Further they informed revealed that majority (51.00%) of farmers in the live stock insurance had semi-medium (5-10 acres) land holdings followed by 46.00 per cent with medium (10.0-25 acres) land holding, 13.00 per cent with small holdings (2.5-5.0 acres) and 1.00 per cent with marginal land holdings (< 2.5 acres).

Osarenren *et al.* (2016) in his research paper on “Socio-economic characteristics of registered cocoa farmers in Edo State, Nigeria” found that majority (90.00%) of the respondents did not have more than 10 hectares of cocoa farm while only 10.00 per cent had more than 10 hectares.

Yayati (2016) in his research article on “Socio-economic profile and perception of farmers on crop insurance in Odisha: A study of selected villages of keonjhar district” revealed that all the farmers belongs to small and marginal category having land holdings of 1-2 acres.

Afroz *et al.* (2017) in their research article on “willingness to pay for crop insurance to adapt flood risk by malaysian farmers: an empirical Investigation of Kedah” concluded that the respondents with <1.0 ha of the land area were 34.10 per cent while the respondents between 1.0 and 4.0 ha of agricultural land were 58.40 per cent and 2.10 per cent had above 6 ha of agricultural land.

Dhande and Jambavanth (2017) in their research article on “Knowledge and attitude of farmers towards crop insurance scheme in Lathur district of Maharashtra” reported that majority (53.67%) of the farmers were with medium size land holdings.

Sindhu and Ariff (2017) in their research article on “Farmer’s preference towards crop insurance found that majority (66.00 %) of farmers had below 5 acres of land holdings.

Thirumoorthy and Geetha (2017) in their research article on “Awareness of farmers towards crop insurance in Erodes and Namakkal district” concluded that majority of the farmers (54.00 %) had up to 10 acres, followed by 27.00 per cent had up to 5 acres and 19.00 per cent had below 5 acres.

#### **2.1.4 Annual Income**

Sadati *et al.* (2010) in their research article on “Survey of effective factors on adoption of crop insurance among farmers: A case study of Behbahan Country” found that average income was about US\$ 3,200 per year.

Kumar *et al.* (2011) in their research article on “Analysis of farmers’ perception and awareness towards crop insurance as a tool for risk management in Tamil Nadu” revealed that annual agricultural income among the respondents showed that about 50.00 per cent each of the farmers were in the income categories of Rs 1 lakh or less and (Rs 50,000 or less).

Goudappa *et. al.* (2012) in their research article on “Farmers perception and awareness about crop insurance in Karnataka” revealed that the average annual income of the farmer was Rs.1,703.

Jayathilaka and Abeynayake (2013) in their research article on “Assessing farmers’ perception, awareness and influential factors to purchase a crop insurance as a tool for risk management” found that majority (57.00 %) of insured farmers earned between (Rs.10,000 to Rs 30,000) whereas, more than two-fifths (43.00%) of the non-insured farmers had earned below Rs.10,000 as their monthly income.

Uvaneswaran and Mohanapriya (2014) in their research article on “Farmers’ perception and awareness about crop insurance in Tamil Nadu – A descriptive analysis” found that majority (94.00%) of the farmers had income below Rs.25,000 and only 6.00 per cent of the farmers had income between Rs. 75000-1,00,000.

Swain (2015) in his research article on “Performance of crop yield and rainfall insurance schemes in Odisha:” revealed that majority of the respondents annual income under NAIS was Rs.1,02,236.

Further, he also found that majority of the respondents under WBCIS had the annual income of Rs.56942.

Adah *et al.* (2016) in his research article on “Assessment of rural farmer`s attitudes toward agricultural insurance scheme as a risk management strategy in Kogi State, North central Nigeria” found that majority (43.00 %) of the farmer’s income level below Rs.50, 000 were 43.30 per cent and 36.70 per cent of the farmers income is above Rs.50, 000 and only 4.20 per cent of farmers income was above Rs. 200,000 were.

Nayak (2016) in his study on “Socio-economic profile and perception of farmers on crop insurance in Odisha: A case study of selected villages of Keonjhar district” found that majority (60.00 %) of the farmers had income of less than Rs.20,000 per annum.

Afroz *et al.* (2017) in his research article on “Willingness to pay for crop insurance to adapt flood risk by Malaysian farmers” reported that the majority (36.00%) of farmers had net income between Rs.2000 and Rs.4000, while the farmers who had net income between Rs.4000 and Rs.6000 were 27.00 per cent and 13.00 per cent of the farmers had less than Rs.2000 of net income.

Dhande and Jambavanth (2017) from their research article on “Knowledge and attitude of farmers towards crop insurance scheme in Lathur district of Maharashtra” reported that majority (66.67%) of the farmers were having medium annual income.

Kumari *et al.* (2017) in their research article on “Role of socio-economic variables in adoption of crop insurance: A discriminant function approach” found that the mean income level of adopter and non-adopter groups of farmers was estimated as Rs. 3,400 and Rs. 3,200, respectively.

Sindhu and Ariff (2017) in their research article on “Farmers preference towards crop insurance found that the majority (58.00 %) of farmers had monthly income of alone Rs.10,000.

Thirumoorthy and Geeetha (2017) in their research article on “A “study on awareness of farmers towards crop insurance in Erode and Namakkal District” revealed that the annual income of more than two-fifths (42.00 %) of farmers had above Rs.2,50,000, followed by 34.00 per cent farmers had income between Rs.1,00,000-2,50,000 and only 24.00 per cent of farmers had up to Rs.1,00,000.

### **2.1.5 Farming Experience**

Sadati *et al.* (2010) in their research paper on “Survey of effective factors on adoption of crop insurance among farmers: A case study of Behbahan Country” revealed that entire farmers’ household heads interviewed had 18 years of agricultural experience.

Goudappa *et. al* (2012) in their research article on “Farmers perception and awareness about crop insurance in Karnataka” concluded that the average farming experience of farmers was 22.20 years.

Vaardan and Kumar (2012) in their research paper on “Impact of crop insurance on rice farming in Tamil Nadu” depicted that the insured farmers were having more farming experience (33 years) than non- insured farmers (30 years).

Jayathilaka and Abeynayake (2013) in their research paper on “Assessing farmers’ perception, awareness and influential factors to purchase a crop insurance as a tool for risk management” found that majority (63.00%) of the insured farmers were well experienced having an average farming experience of 28 years.

Khan *et al.* (2013) in their research paper on “Willingness to pay for cattle and buffalo insurance: An analysis of dairy farmers in central India” highlighted that average dairy farming experience was 12 years.

Akinola (2014) in their research paper on “Determinants of farmers’ adoption of agricultural insurance: the case of poultry farmers in Abeokuta Metropolis of Ogun State, Nigeria” depicted that experience majority (52.50%) of the farmers had farming experience of 5-10 years followed those had above 10 years of farming experience (37.50%) and below 5 years (10.00 %) of farming experience .

Adah *et al.* (2016) in their research article on “Assessment of rural farmers’ attitudes toward agricultural insurance scheme as a risk management strategy in Kogi State, North Central Nigeria” found that majority (37.60 %) of the farmers had above 10 years farming experience followed by 30.80 per cent of the farmers had below 10 years farming experience and 10.80 per cent of the farmers had above 30 years of farming experience.

Chikaire *et al.* (2016) in their research paper on the “Perception of rural farmers of agricultural insurance as a way of mitigation against climate change variability in Imo State, Nigeria” found that more than two-fifths (46.00 %) had 41 years farming experience whereas, 41.30 % had 31-40 years in farming experience.

Osarenren *et al.* (2016) in their research paper on “Socio-economic characteristics of registered cocoa farmers in Edo State, Nigeria” found that majority (61.10 %) of the cocoa farmers in the study area had farming experience ranging between 11– 20 years.

Afroz *et al.* (2017) in their research paper highlighted that the 42.00 per cent of the farmers had farming experience between 20-30 years followed by 33.00 per cent had 10- 20 years, 17.00 per cent had 30-40 years and only 8.00 per cent farming experience of the farmers had more than 40 years of farming experience.

Dhande and Jambavanth (2017) in their research paper on “Knowledge and attitude of farmers towards crop insurance scheme in Lathur district of Maharashtra” reported that 68.33 per cent farmers had medium farming experience.

Thirumoorthy and Geetha (2017) in their research paper on “Awareness of farmers towards crop insurance in Erode and Namakkal district” and their study revealed that more than half (52.00%) of the respondents have above 10 years of farming experience.

### **2.1.6 Extension Contact**

Sadati *et al.* (2010) in their research article on “Survey of effective factors on adoption of crop insurance among farmers: A case study of Behbahan County” found that majority (66.00 %) of the farmers had not participated in any of the extension courses.

Chikaire *et al.* (2016) in their research article on the “perception of rural farmers of agricultural insurance as a way of mitigation against climate change variability in Imo State, Nigeria” found that most (84.30 %) of them never contact any extension agent.

Mohapatra *et al.* (2016) in their research article on “Farmers knowledge about the agricultural insurance scheme in Punjab” showed that more than half (51.61 %) of the respondents insured under weather insurance had high extension contacts followed by 46.77 per cent of the farmers coming under medium extension contact category and only 16.11 per cent of farmers were coming under low extension contact category. Further they found that more than half of the farmers under livestock insurance (55.00 %) had medium extension contacts followed by the 42.00 per cent of the farmers had high extension contact and the only 3.00 per cent had low extension contact.

Afroz *et al.* (2017) indicated that 83.40 per cent of the respondents had access to extensive agricultural services.

### **2.1.7 Crop Loan Availed**

Kumar *et al.* (2011) in his research article on “An analysis of farmers’ perception and awareness towards crop insurance as a tool for risk management in Tamil Nadu” revealed that mostly of the short-term credits were disbursed by the cooperative banks, especially to the small and marginal farmers.

Goudappa *et al.* (2012) in his research article on “Farmers perception and awareness about crop insurance in Karnataka” concluded that 26,754 farmers, got financial support commercial banks and from 21,567 farmers got financial support from co-operative societies.

Jayathilaka and Abeynayake (2013) in their research article on “Assessing farmers’ perception, awareness and influential factors to purchase a crop insurance as a tool for risk management” highlighted that the two-fifths (40.00 %) of farmers got financial support borrowing from the friends and relatives followed by 20.00 per cent jewelry, few respondents got financial support against in the form of loan from co-operative society and lease of land.

Uvaneswaran and Mohanapriya (2014) their research article on “Farmers’ perception and awareness about crop insurance in Tamilnadu – A descriptive analysis farmers” revealed that self-supporting relief measures like sale of assets, hypothecation of assets, jewels, borrowing from friends and relatives as short term loans were the highly preferred risk relief measures.

Duhan & Dhingra (2018) in their research article on “Association between the factors affecting awareness level of farmers about agriculture insurance in Haryana” highlighted that less than two-fifths (30.90 %) of farmers availed crop insurance in the past but, 90.00 per cent of the sample farmers were availing at present.

### **2.1.8 Disaster Occurrence Pattern**

Ghalavand *et al.* (2012) in their research article on “Agriculture insurance as a risk management strategy in climate change scenario: A study in Islamic Republic of Iran” revealed that drought is the most globally serious natural hazards in terms of loss

of life accounting for 44.00 per cent of reported deaths worldwide in the period between 1974-2003 and almost 31 of 40 types of distinguished natural disasters which had been distinguished in the world occur in Iran.

### **2.1.9 Mass Media Exposure**

Kumar *et al.* (2011) in their research article on “Analysis of farmers’ perception and awareness towards crop insurance as a tool for risk management in Tamil Nadu” revealed that mass media instruments like news papers, televisions, etc. play an important role in disseminating information about various insurance products or schemes implemented by the public sector and the private insurance companies.

Jayathilaka and Abeynayake (2013) in their research article on “Assessing farmers’ perception, awareness and influential factors to purchase of crop insurance as a tool for risk management” found that two fifth (40.00%) of banks played an important role in disseminating information about insurance products when they were granting crop loans.

Uvaneswaran and Mohanapriya (2014) in their research article on “Farmers’ perception and awareness about crop insurance in Tamil Nadu – A descriptive analysis” found that the more than two fifth (42.00 %) of the farmers use media like Newspaper, Radio, Television to become aware of the crop insurance.

Nayak (2016) in his their research article on “Socio-economic profile and perception of farmers on crop insurance in Odisha: a case study of selected villages of Keonjhar district” found that majority (34.00 %) of the farmers got information about crop insurance schemes from Banks followed by 26.00 per cent of the farmers from Newspaper and other electronic Media, where as, 22.00 per cent of the farmers from the government departments and rest (18.00 %) of the farmers from friends and relatives were getting the information.

### **2.1.10 Risk Orientation**

Kotwal (2009) in his study on “Knowledge, attitude and loan repayment behavior of borrower in kisan credit card scheme in Akola district of Maharashtra State” reported that the risk performance for more than half (53.00 %) of the borrowers of kisan credit card scheme was observed to be of ‘medium’ level.

Mallikarjun *et al.* (2010) in their research article on “Entrepreneurial characteristics of organic vegetable growers” observed that the ‘high’ risk orientation was noticed among 45.00 per cent of respondents and they adopt new innovations more quickly than respondents in the ‘medium’ (27.86 %) and ‘low’ (27.14 %) risk orientation.

Kumar *et al.* (2011) in their research article on “An analysis of farmers’ perception and awareness towards crop insurance as a tool for risk management in Tamil Nadu” the survey had revealed that most of the farmers (65.00 %) of the farmers were aware of risk mitigation measures of the government.

Kale and Kadam (2012) in their study on “Knowledge of farmer about national agricultural insurance scheme in Parbhani district of Marathwada region of Maharashtra State” revealed that the majority (64.16 %) of the respondents found in ‘medium’ risk preference category followed by those had high (25.00 %) and low (10.84 %) were risk preference category.

Akinola (2014) in his study on “Determinants of farmers’ adoption of agricultural insurance: the case of poultry farmers in Abeokuta Metropolis of Ogun state, Nigeria” depicted that 28.70 per cent had experienced mild risk orientation and 71.30 per cent had experienced severe risk orientation.

Dhande and Jambavanth (2017) in their research article on “knowledge and attitude of farmers towards crop insurance scheme in Lathur district of Maharashtra” reported that almost three-fourths farmers (72.50 %) had medium risk orientation.

### **2.1.11 Material Possession**

Venkattakumar and Nanjaiyan (1999) in their research article on “Profile characteristics of commercial coconut growers” reported that majority (53.98 %) of the respondents had low level of material possession followed by 38.52 per cent of the respondents had medium level of material possession and 7.50 per cent of the respondents had high level of material possession.

Rajaratnam (2000) in his research article on “Impact of sunflower on-farm extension demonstrations in kunool district of Andhra Pradesh” revealed that majority (73.68 %) of the respondents were fell under medium category of material possession followed by those had high (15.79 %) and remaining (10.53 %) had low material possession.

Rameshbabu and Venkataramaiah (2004) in their research article on “profile of the beneficiaries of Indo-Duch net work operational research project on drainage and water management for salinity control” reported that majority (71.76 %) of operational project beneficiaries had medium level of material possession followed by the high (17.65 %) and remaining had low (17.65 %) level of material possession.

### **2.1.12 Scientific Orientation**

Kumar *et al.* (2011) in his research article on “Analysis of farmer’s perception and awareness towards crop insurance as a tool for risk management in Tamil Nadu” reported that several innovations including Weather Index Based Crop Insurance Scheme (WBCIS), area approach continues to rule the insurance schemes.

Palanisamy (2011) in their research article on “Impact of TN-IAMWARM project on the farm and home of precision farming beneficiaries. – An analysis” revealed that less than half (46.00 %) of “TN-IAMWARM” project beneficiaries had high level of scientific orientation, while 37.00 per cent of the beneficiaries had medium level of scientific orientation and remaining 17.00 per cent of the beneficiaries had low level of scientific orientation.

Abirami (2012) in her research article on “Socio-economic impact of Irrigated Agriculture Modernization and Water Bodies Restoration and Management (IAMWARM) project in Pudukkottai district of Tamil Nadu” stated that majority (42.50 %) of beneficiary farmers had medium level of scientific orientation followed by those had high (34.16 %) and low (23.34 %) level of scientific orientation In case of non-beneficiary farmers 50.00 per cent had low level of scientific orientation followed by those had medium (30.00 %) and high (20.00 %) level of scientific orientation.

Rao *et al.* (2012) in their research article on “Impact of farmer field school in KVK adopted villages on level of knowledge and extent of adoption of improved practices of paddy” observed that two-fifths (40.00 %) of the paddy farmers had medium (45.00 %) scientific orientation followed by those who had high and low (15.00 %) scientific orientation.

### 2.1.13 Training Undergone

Lalitha and Prasad (2011) in their research article on “Impact of women empowerment and role of SHG's in value based emancipation” women from SHG mainly have improved their economic status but no training was provided for 82.30 per cent of the respondents only, a few respondents have attended training programmes like packaging of groceries (7.00 %), preparation of food items (4.70 %), preparation of facilities (3.30 %) and all other works (0.30 %).

Abirami (2012) in her research article on “Socio-economic impact of Irrigated Agriculture Modernization and Water Bodies Restoration and Management (IAMWARM) project in Pudukkottai district of Tamil Nadu” stated that majority (42.50 %) of the beneficiary farmers belonged to medium level of training received, followed by those coming under low (33.33 %) and high (24.17 %) level of training received category.

Rao *et al.* (2012) in their research article on “Impact of farmer field school in KVK adopted villages on level of knowledge and extent of adoption of improved practices of paddy” observed that majority (50.00 %) of the paddy farmers had received two trainings followed by those one (30.00 %) and three trainings (20.00 %) who participated in farmer field school in KVK adopted villages.

Meti (2013) in their research article on “Social and economic empowerment of farm women in agro based entrepreneurship for sustainable income” found that out of eight training programmes, majority (91.67 %) of farm women actively participated in trainings / demonstrations on vermiculture, followed by those participated in use of agricultural waste as organic matter (90.83 %), vermi wash production (70.84 %), dairy trainings (81.66 %) and preparation of milk byproducts (71.66 %).

Narain *et al.* (2014) in their research article on “Impact of National Food Security Mission – Pulse on Chickpea Productivity in Hamirpur District of Uttar Pradesh” stated that majority (46.67 %) of participating farmers attended all the four training, 33.33 per cent farmers participated 2 to 3 training, and 20.00 per cent had participated in only one training.

Babu (2015) in his study on Village Adoption Programme (VAP) stated that two third (60.00%) of the respondents of adopted village had 1 to 2 trainings followed by those with no training (28.33%) and remaining 11.67 per cent with more than 2

trainings. In case of non-adopted village, more than half (53.33%) of the respondents had no training followed by those with 1 to 2 trainings (46.67%) and no one had more than 2 trainings.

Singh and Grover (2015) in their research article “Impact of national food security mission pulses on legumes production performance in Punjab” stated that majority (58.00%) of the large and medium farmers (42.00 %) were receiving trainings under NFSM-Pulse programme

Afroz *et al.* (2017) in his research article on “Willingness to pay for crop insurance to adapt flood risk by Malaysian farmers: An empirical investigation of Kedah” revealed that training course significantly affects the WTP of the farmers, so it is suggested that the government can arrange more training courses for the farmers to increase their consciousness level about the crop insurance.

## **2.2 KNOWLEDGE**

Argade (2010) in their research article on “A study on National Rural Employment Guarantee Scheme (NREGS) in Thane district of Maharashtra” in his study on reported that more than two-third (67.78 %) of national rural employment guarantee scheme beneficiaries fell under ‘medium’ awareness category whereas, the rest coming under ‘high’ awareness (21.11 %) and ‘low’ awareness (11.11 %) categories.

Nimoh *et al.* (2011) in their research article on “Interest of farmers and insurance companies in farm insurance: the case of cocoa farmers in Sekyere West Municipal of Ghana” revealed that 32.00 per cent of the respondents had ‘knowledge’ of farm insurance policies and 68.00 per cent of respondents were not aware of farm insurance policies.

Gebrehiwot (2015) in his study on “Assessing farmer’s understanding to weather index insurance in Tigray region” revealed that majority (83.72%) of respondents had very well understanding on how to purchase it and 43.61 per cent of the respondent having knowledge on insurance could cover part of their loss while 20.30 per cent of them reported that insurance fully covers loses of crop as a result of rain fall problem.

Mohapatra *et al.* (2016) in their research article on “Farmers Knowledge about the Agricultural Insurance Scheme in Punjab” revealed that nearly one-fifth (38.00 %) of the respondents were under the second category i.e medium level of knowledge whereas 31.00 per cent of respondents had low as well as high level of knowledge. Further the research found that that majority of the respondents have low level of knowledge (65.32 %) about the Weather Insurance Scheme whereas 19.35 per cent of respondents had high level of knowledge and only 15.32 per cent of the respondents had medium level of knowledge about the weather insurance scheme.

Yayati (2016) in his research paper on “Socio-economic profile and perception of farmers on crop insurance in Odisha: A case study of selected villages of Keonjhar district” concluded that among the farmers 46.00 per cent have knowledge about crop insurance.

Dhande and Jambavanth (2017) in their research article on “Knowledge and attitude of farmers towards crop insurance scheme in Lathur district of Maharashtra” reported that the majority (81.66 %) of beneficiaries had medium knowledge regarding crop insurance scheme, 74.16 per cent of them had moderately favorable attitude towards crop insurance scheme.

Sindhu and Ariff (2017) in their research article on “Farmers preference towards crop insurance found that 22.00 per cent farmers came to know about this crop insurance through friends followed by 34.00 per cent through relatives, 20.00 per cent through media and 24.00 per cent through others.

Thirumoorthy *et al.* (2017) in their research article on a “Study on awareness of farmers towards crop insurance in Erode and Namakkal district” concluded that majority (61.00%) of the respondents came to know about the Crop insurance through Friends/Relatives.

Duhan & Dhingra (2018) in their research article on “Association between the factors affecting awareness level of farmers about agriculture insurance in Haryana” found that only 15.30 per cent respondents know about the implementation of crop insurance schemes in Haryana.

### **2.3 OPINION**

AL-Kouri *et al.* (2009) in their research article on “Attitudes of producers towards livestock insurance broiler industry in Jordan” revealed that producers had a positive attitude towards livestock insurance.

Basak and Pandit (2011) in their research article on “Farmers’ attitude towards the use of USG in rice cultivation in three selected villages of Netrakona district On-Farm Research Division, Regional Agricultural Research Station, BARI, Jamalpur” reported that more than half (57.14 %) of the respondents had ‘favourable’ attitude followed by those had ‘highly favourable’ (40.48 %) attitude towards the use of USG in rice cultivation However only a few (2.38%) of them had ‘unfavourable’ attitude.

Gulkari (2013) in their research article on “Attitude of beneficiaries towards national horticulture mission” revealed that less than half (46.66 %) of the farmers had ‘neutral attitude’ towards National Horticulture Mission.

Mankar *et al.* (2013) in their research article on “Impact of national horticultural mission on its beneficiaries” observed that nearly half (49.17 %) of the National Horticulture Mission farmers had ‘moderately favourable’ attitude towards National Horticulture Mission.

Daninga and Zhang Qiol (2014) in their research article on “Factors affecting attitude of farmers towards drought insurance in Tanzania” found that farmers’ attitudes toward the program were ‘negative’ and farmers’ attitudes and perception should be incorporated in developing effective drought insurance in Tanzania.

Adah *et al.* (2016) in their research article on “Assessment of rural farmers’ attitudes toward agricultural insurance scheme as a risk management strategy in Kogi state, North Central Nigeria” concluded that rural farmers in the state had negative attitude towards agricultural insurance scheme.

Sivaraj *et.al* (2016) in his study on “Attitude about Crop Insurance in paddy farmers of Erode and Tiruchirappalli districts of Tamil Nadu” revealed that more than one half (63.00%) of them had ‘moderate’ to ‘less favorable’ attitude level of the farmers for ensuring better penetration of crop insurance in both districts.

Dhande and Jambavanth (2017) from their research article on “Knowledge and attitude of farmers towards crop insurance scheme in Lathur district of Maharashtra” reported that nearly three-fourths (74.16 %) of them had moderately favourable attitude towards crop insurance scheme.

## 2.4 RELATIONSHIP BETWEEN SELECTED PROFILE CHARACTERISTICS AND KNOWLEDGE AND OPINION OF BENEFICIARIES IN PMFBY

### 2.4.1 Relationship Between Selected Profile Characteristics and Knowledge

Table 2.1. Profile Characteristics Vs Knowledge

Relationship	Significant/non-significant	Reference	Year	Respondents
<b>Age Vs Knowledge</b>				
Positive	Non- significant	Mohapatra <i>et. al</i>	2016	Potato Farmers
Positive	Non-significant	Mohapatra <i>et. al</i>	2016	Livestock farmers
Positive	Significant	Dhande and Jambavanth	2017	Farmers
<b>Education Vs Knowledge</b>				
Positive	Non- significant	Mohapatra <i>et. al</i>	2016	Potato Farmers
Positive	Non- significant	Mohapatra <i>et. al</i>	2016	Livestock farmers
Positive	Significant	Dhande and Jambavanth	2017	Farmers
<b>Land holdings Vs Knowledge</b>				
Positive	Non- significant	Mohapatra <i>et. al</i>	2016	Potato Farmers
Positive	Non- significant	Mohapatra <i>et. al</i>	2016	Livestock farmers
Positive	Significant	Dhande and Jambavanth	2017	Farmers
<b>Extension contact Vs Knowledge</b>				
Positive	Non- significant	Mohapatra <i>et. al</i>	2016	Potato Farmers
Positive	Non- significant	Mohapatra <i>et. al</i>	2016	Livestock farmers
<b>Mass media Vs Knowledge</b>				
Positive	Non- significant	Mohapatra <i>et. al</i>	2016	Potato Farmrs
Positive	Non- significant	Mohapatra <i>et. al</i>	2016	Livestock Farmers
Positive	Significant	Dhande and Jambavanth	2017	Farmers

Relationship	Significant/non-significant	Reference	Year	Respondents
<b>Farming experience Vs Knowledge</b>				
Positive	Significant	Dhande and Jambavanth	2017	Farmers
<b>Annual income Vs Knowledge</b>				
Positive	Significant	Dhande and Jambavanth	2017	Farmers
<b>Risk orientation Vs Knowledge</b>				
Positive	Significant	Dhande and Jambavanth	2017	Farmers
<b>Material possession Vs knowledge</b>				
Positive	Significant	Praveen and Shenoy	2008	Cotton Farmers
Positive	Significant	Sing <i>et. al.</i> ,	1999	Cotton Farmers
Positive	Significant	Balasubramani <i>et. al.</i> ,	2000	Cotton farmers
<b>Training undergone Vs Knowledge</b>				
Positive	Significant	Israel	2003	NWDPRA beneficiaries
Negative	Non-Significant	Thiyagarajan	2011	Sri Farmers
<b>Scientific orientation Vs Knowledge</b>				
Positive	Significant	Thiyagarajan	2011	Sri Farmers
Positive	Significant	Patel and Sanwal	2015	Cotton Farmers

## 2.4.1 Relationship between Profile Characteristics PMFBY Beneficiaries and Opinion

Table 2.1 Profile characteristics Vs Opinion

Relationship	Significant/non-significant	Reference	Year	Respondents
<b>Age Vs Opinion</b>				
Positive	Significant	Dhande and Jambavanth	2017	Farmers
<b>Education Vs Opinion</b>				
Positive	Significant	Dhande and Jambavanth	2017	Farmers
<b>Land holdings Vs Opinion</b>				
Positive	Significant	Dhande and Jambavanth	2017	Farmers
<b>Farming Experience Vs Opinion</b>				
Positive	Significant	Dhande and Jambavanth	2017	Farmers
<b>Annual Income Vs Opinion</b>				
Positive	Significant	Dhande and Jambavanth	2017	Farmers
<b>Material possession Vs Opinion</b>				
Positive	Significant	Meti and sundaraswamy	1998	Cotton farmers
Positive	Significant	Sing <i>et.al</i>	1999	Cotton farmers
<b>Risk orientation Vs Opinion</b>				
Positive	Significant	Dhande and jambavanth	2017	Farmers

## 2.5 CONSTRAINTS OF BENEFICIARIES ON PMFBY

Vaardan and Kumar (2012) their research article on “Impact of crop insurance on rice farming in Tamil Nadu” he revealed that farmers face constraints like tedious and time consuming procedure, non-availability of crop loan, lack of motivation and information from officials, etc.

Mani *et al.* (2012) in their research article on “Adaptability of crop insurance schemes in Tamil Nadu” observed that, maximum number of farmers did not insure because of lack of awareness (56.00 %), followed by lack of interest to insure (33.00 %) and inability to pay premium (02.00 %). Thus, lack of awareness and interest to insure constitute a large percentage (about 90.00%) of the population.

Khan *et al.* (2013) in their study on “Willingness to pay for cattle and buffalo insurance: an analysis of dairy farmers in Central India” found that The constraints elicited by the highest proportion of respondents was “no need of insurance” (36.00 %), followed by “desire to shift from risky dairy production system to less risky non agricultural small and medium enterprises” (28.00 %), “don’t have enough money” (20.00 %), and “the insurance scheme being too costly” Eight percent of dairy farmers did not specify any reason for their unwillingness.

Khedkar and Dhakad (2014) in their research article on “Impact of swarnajayanti gram swarozgar yojana with reference to credit utilization for agriculture among the beneficiaries of Rewa district” indicated that most (75.83 %) of the beneficiaries reported the problem of complicated process in getting credit followed by short duration of repayment of loan (73.33 %), non-availability of water level in bore well (70.83 %), non-availability of good breed of animals (63.33 %), delay in getting loan (61.67 %), problems in selling milk (58.33 %), partiality between illiterate and educated member to include in the programme (56.67 %), high cost of feeding material (55.00 %), non-availability of information regarding to SGSY programme in time (53.33 %), problems faced in obtaining record from Patwari (51.67 %), non-issuance of certificate of under poverty line to proper persons by Panchayat (40.00 %) and problems faced in filling the bank application form (38.33 %).

Dhande and Jambavanth (2017) in their research article on “Knowledge and attitude of farmers towards crop insurance scheme in Lathur district of Maharashtra” reported that (69.16 %) beneficiaries felt that of Crop insurance is a complicated process (65.83 %) alone to non-availability of crop insurance scheme information.

Dayal *et.al.* (2017) in their research article on “Perception of farmers towards Pradhan Mantri Crop Insurance Scheme” revealed that illiteracy of farmers was most severe constraints faced by majority of the insured famers.

### **Suggestions of PMFBY Beneficiaries for effective implementation of PMFBY**

Ali (2013) in his study on farmers’ “Willingness to pay for index based crop insurance in Pakistan: A case study on food and cash crops of rain-fed area” has suggested that to make agricultural insurance scheme more successful, the government should provide subsidy which will help in increasing the area under food and cash crops and shall ensure food security in the region.

Uvaneswaran and Mohanapriya (2014) in their research paper study on “perception and awareness about crop insurance in Tamilnadu – A descriptive analysis” Suggested that awareness for the crop insurance can be created by service providers through SMS, hoardings, television and radios .

Nayak (2016) in his study on “Socio-economic profile and perception of farmers on crop insurance in Odisha: A case study of selected villages of Keonjhar district” suggested that the claim settlement procedure should be faster as far as practicable.

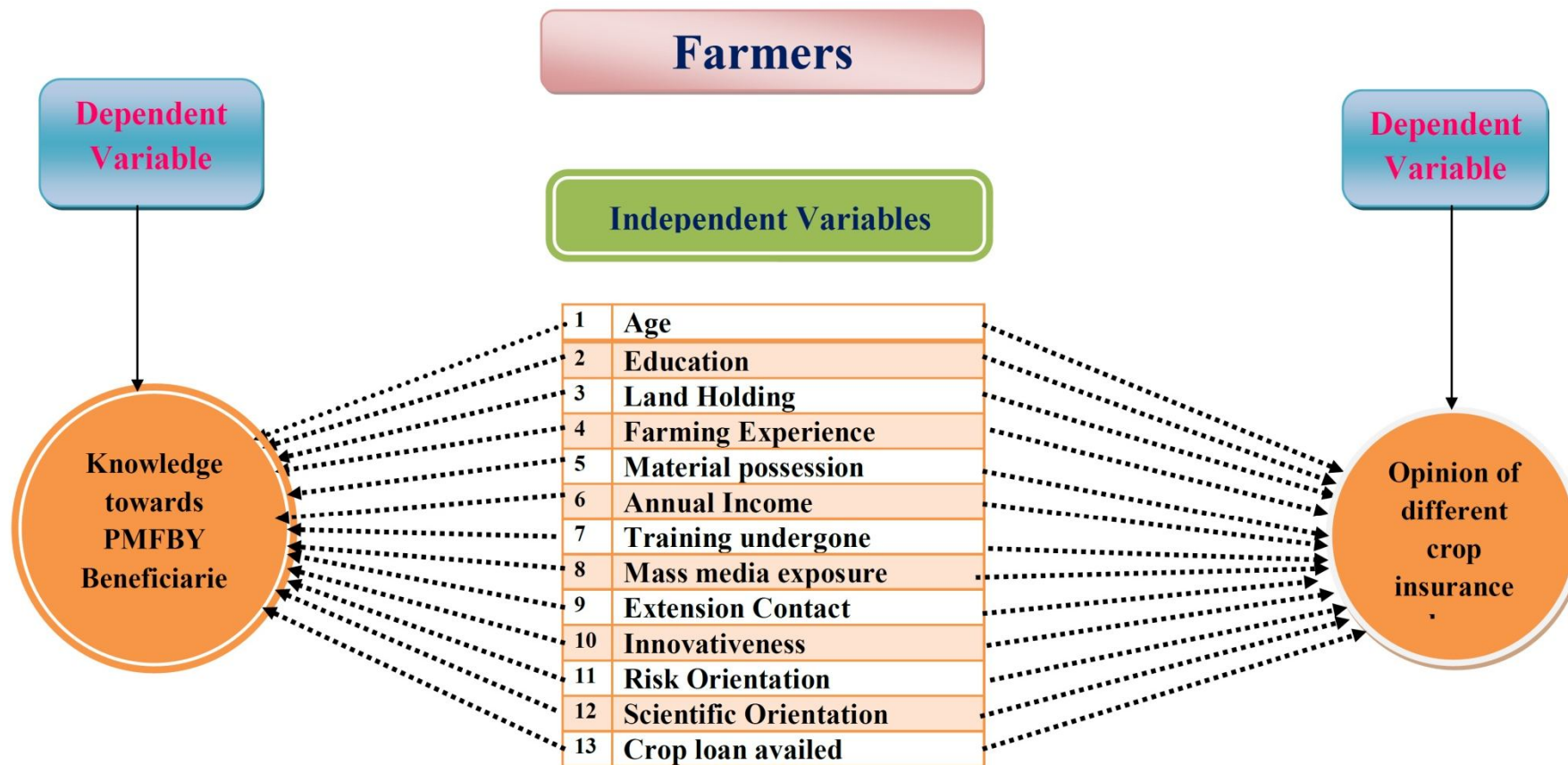
Sindhu and Ariff (2017) in their research paper indicated that the government should arrange for some meetings to popularize their crop insurance among the farmers, organize special periodical meeting and seminars for farmers, enhance the advertisement about crop insurance through local channels, news papers and magazines and like, placing the flex boards containing features of crop insurance policies offered at prominent areas, the terms and conditions of the crop insurance policies should be completely transparent to the farmers and agents and officers may frequently contact the policy holders and educate the features of the policies offered in crop insurance.

## **Conceptual model of the study**

The conceptual framework or a systematic model is a diagrammatic representation outlining the dominant elements of a system and their relationship with respect to criterion variables. The conceptual model in Figure 2.1 contains three major divisions.

1. Profile characteristics of the beneficiaries
2. Knowledge of beneficiaries towards PMFBY
3. Opinion of beneficiaries towards PMFBY

The profile characteristics of the beneficiaries influence their knowledge towards beneficiaries of PMFBY and opinion of different crop insurance schemes. The relationship between selected profile characteristics i.e., age, education, land holding, farming experience, annual income, material possession, extension contact, training undergone, mass media utilization, disaster occurrence pattern, risk orientation, scientific orientation, crop loan availed and dependent variables i.e., knowledge and opinion of beneficiaries are indicated by arrows.



**Fig. 2.1 Conceptual model of study**

## Chapter – III

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# Material and Methods

# CHAPTER III

## MATERIAL AND METHODS

This chapter deals with the research design, tools and techniques of a scientific investigation. It entails the methods and procedures used for measuring dependent and independent variables. It also concerns with the selection of proper sampling techniques for investigation as well as devices used for analysis of data. The methodology adopted for the study is discussed under the following heads:

The chapter is described under the following sub headings.

### 3.1 Research design

### 3.2 Sampling procedure

#### 3.2.1 Locale of study

#### 3.2.2 Selection of district

#### 3.2.3 Selection of division

#### 3.2.4 Selection of mandals

#### 3.2.5 Selection of villages

#### 3.2.6 Selection of respondents

### 3.3 Operationalization of variables and their empirical measurement

### 3.4 Eliciting constraints and suggestions

### 3.5 Devices and methods used for collection of data

### 3.6 Statistical tools used for analysis of data

### 3.7 Hypothesis

## **3.1 RESEARCH DESIGN**

*Ex post facto* research design was used in the present investigation. *Ex post facto* research design is systematic empirical enquiry in which the researcher does not have direct control on independent variables because their manifestation have already occurred or they are inherently not manipulable. Inferences about relations among variable are made without direct intervention from concomitant variation of independent variables. *Ex post facto* studies can be devised to identify behavioural phenomenon and to explore conditions under which a phenomenon occurs (Kerlinger, 1983). Keeping in view the objectives of the study, type of variables, size of respondents and phenomenon to be studied, the *Ex-post facto* design was selected as an appropriate design to investigate the variables in the beneficiaries present in PMFBY.

## **3.2 SAMPLING PROCEDURE**

### **3.2.1 Locale of Study**

The state of Andhra Pradesh was selected purposively as the researcher belongs to this state and is familiar with the local language which would help in building up better rapport with the respondent farmers.

### **3.2.2 Selection of District**

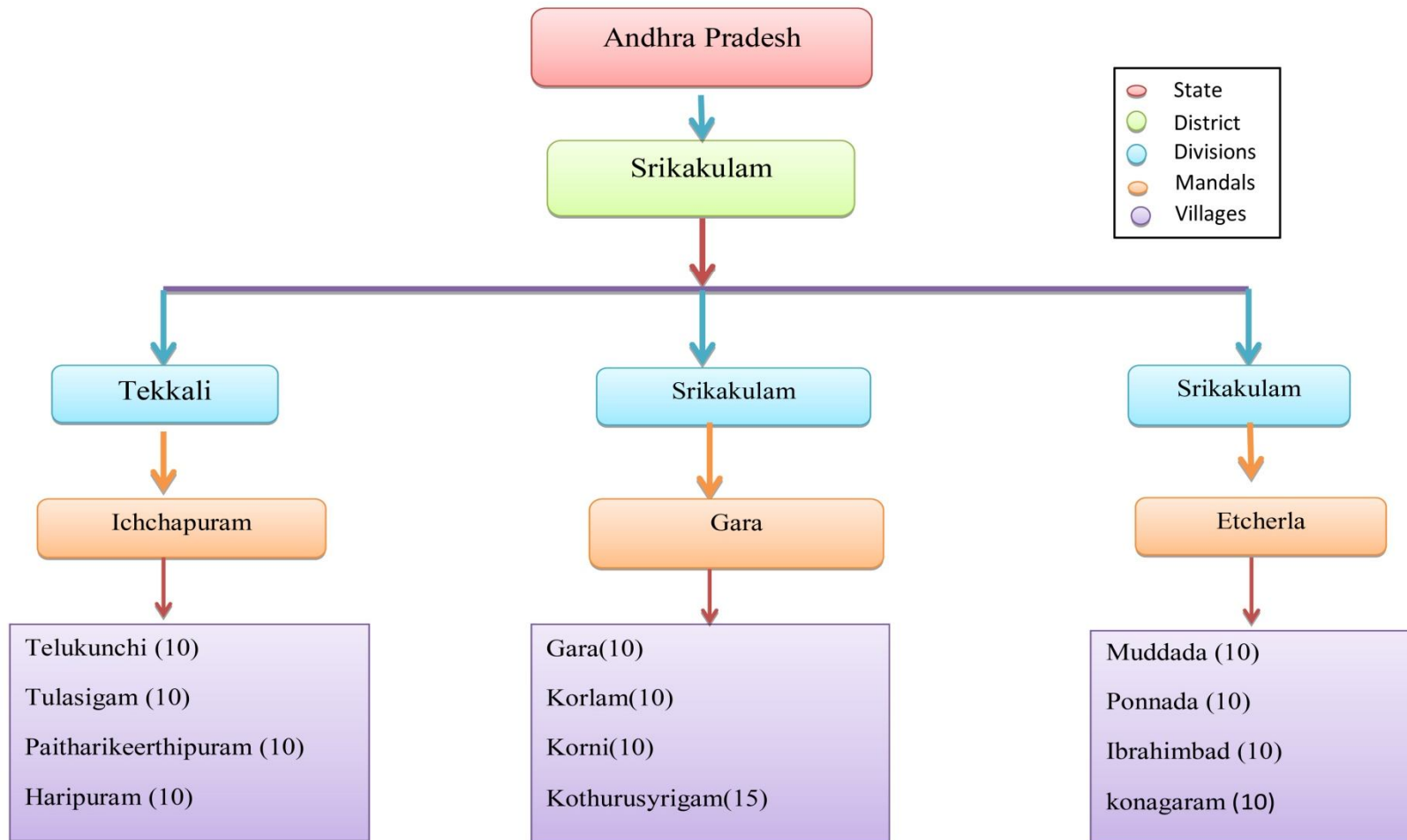
Srikakulam district was purposively selected for the study as the district is highly prone to natural calamities with an area of 5,83,700 ha.

### **3.2.3 Selection of Mandal**

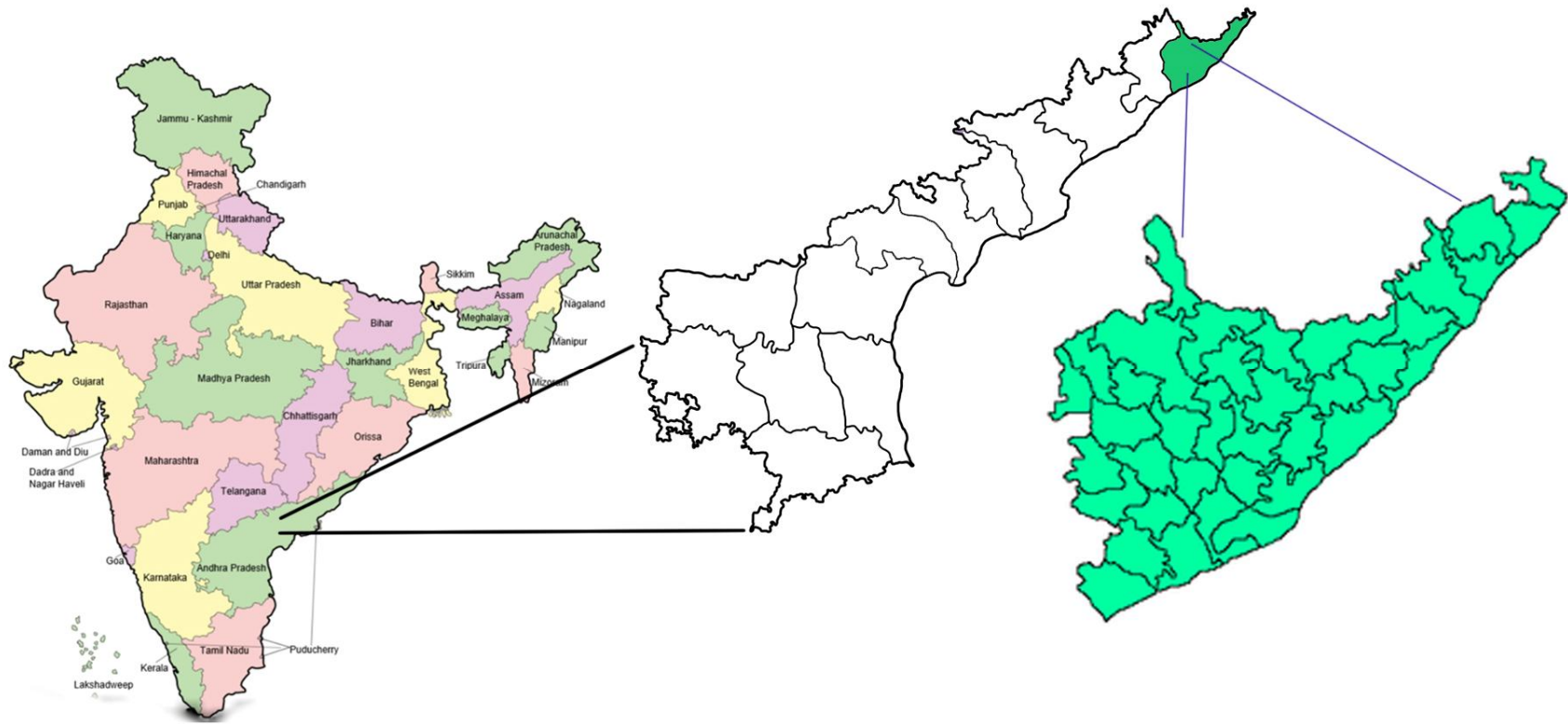
Ichchapuram mandal from Tekkali division, Gara mandal from Srikakulam division and Etcherla mandal were selected by using random sampling technique. Thus, a total of three mandals were selected.

### **3.2.4 Selection of Villages**

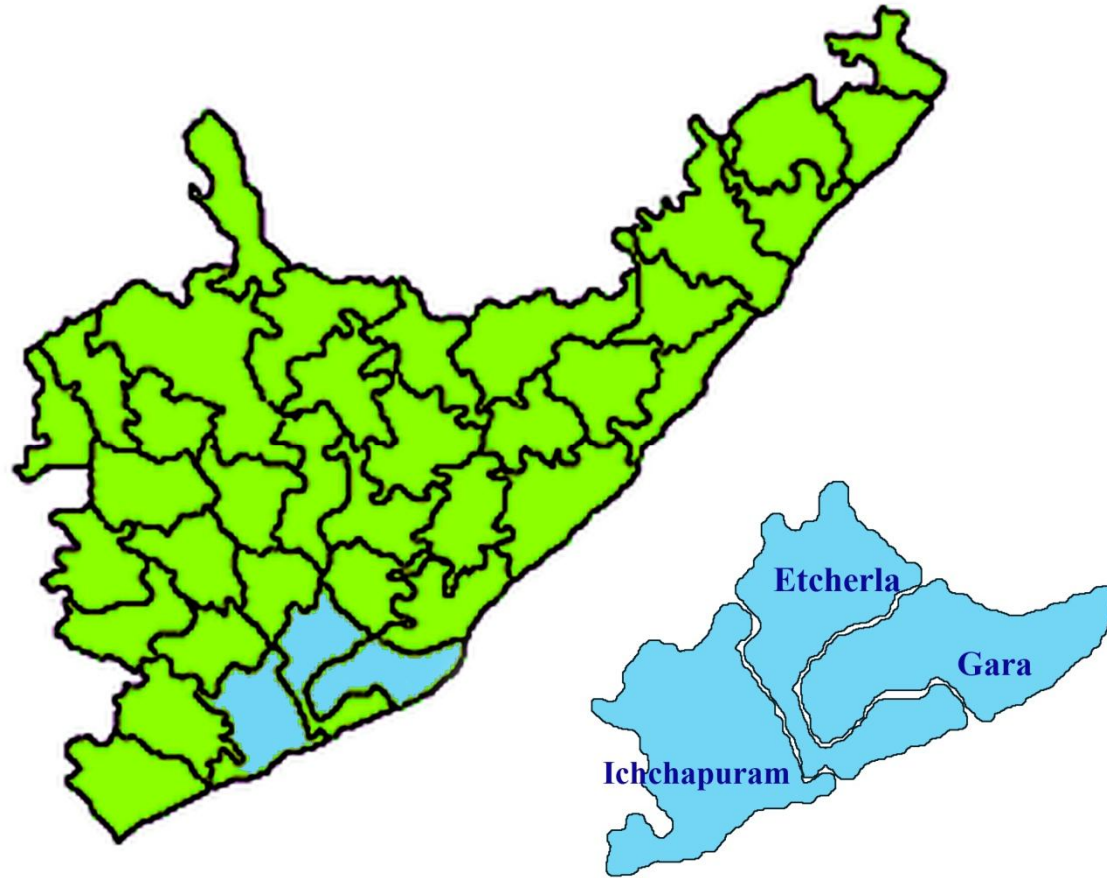
From each of the selected mandal, four villages were selected following random sampling procedure. Muddada, Ponnada, Ibrahimbad, Konagaram from Etcherla mandal; Gara, Korlam, Korn, Kothurusyrigam from Gara mandal; Telukunchi, Tulasigam, Paitharikerthipuram, Haripuram from Ichchpuram mandal were selected for the study. Thus a total of twelve (12) villages were selected for the study.



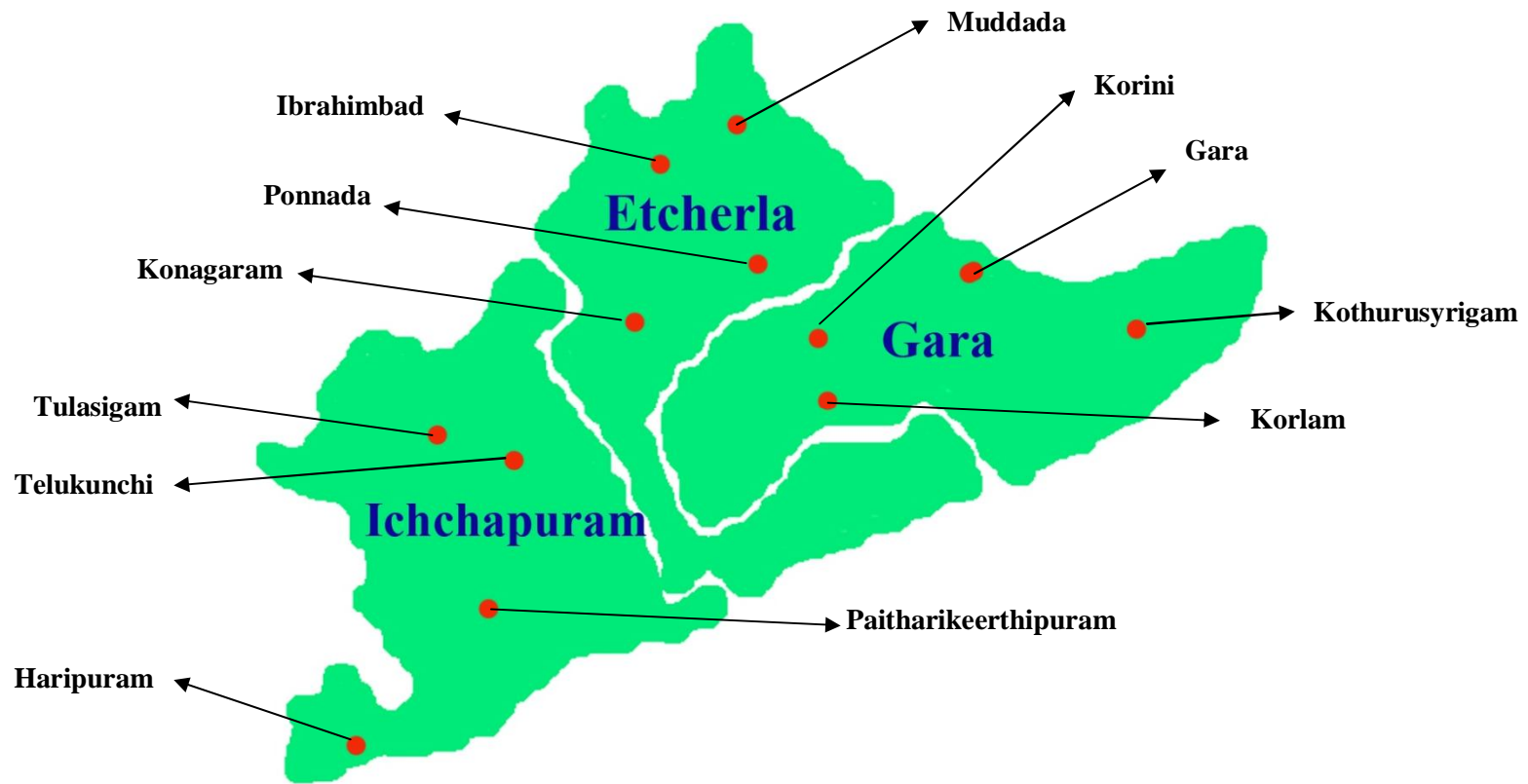
**Sampling procedure selected for the study**



**Fig. 3.1. Map showing Srikakulam district of Andhra Pradesh.**



**Fig. 3.2. Map showing selected mandals of Srikakulam district.**



**Fig. 3.3.** Map showing selected villages of Srikakulam district.

**Table 3.1 Particulars of selected mandals, villages and respondents**

<b>S. No.</b>	<b>Name of the Mandal</b>	<b>Name of the Villages</b>	<b>No. of Respondents selected</b>
1	Gara	Gara	10
		Korlam	10
		Korni	10
		Kothurusyrigam	10
2	Etcherla	Muddada	10
		Ponnada	10
		Ibrahimbad	10
		Konagaram	10
3	Ichchapuram	Telukunchi	10
		Tulasigam	10
		Paitharikeerthipuram	10
		Haripuram	10
<b>Total:</b>			<b>120</b>

Source:- Hand book of Statistics – Chief Planning Officer, Srikakulam District

### **3.2.5 Selection of the Respondents**

From each selected village, 10 respondents who got insurance under PMFBY were selected by using random procedure, thus making a total of 120 respondents

### **3.3 OPERATIONALIZATION OF VARIABLES AND THEIR EMPIRICAL MEASUREMENT**

The variables for the study were selected based on the review of literature, consultation with experts and from previous studies taken up in the related subjects. The variables, which were found to have relevance to the present investigation, were thus included in the present study. The instruments used to measure the variables together with the detailed procedure followed, has been described in detail in the following pages. The list of variables selected and their empirical measurement followed is given in Table 3.2

**Table 3.2. Variables and their empirical measurement**

<b>S. No.</b>	<b>Variables</b>	<b>Instruments used for the study</b>
<b>Dependent variables</b>		
1	Knowledge	Schedule developed for the study
2	Opinion	Schedule developed for the study
<b>Independent variables</b>		
1	Age	Chronological age of the respondents in completed years
2	Education	Scale developed by Venkataramaiah (1983) revised (1990) with suitable modifications.
3	Land holding	Andhra Pradesh Land Reforms Act:1973
4	Farming experience	Total number of years practiced in farming.
5	Annual income	Scale developed by Ramamurthy (1983) with suitable modifications.
6	Material possession	Structured schedule developed for the study.
7	Extension contact	Scale developed by Ponnappan (1982) with required modifications.
8	Disaster occurrence pattern	Structured schedule developed for the study.
9	Mass media utilization	Scale developed by Desai (1977) with suitable modifications.
10	Training undergone	Structured schedule developed for the study
11	Risk orientation	Scale developed by Supe (1969) with suitable modifications
12	Scientific orientation	Scale developed by Supe (1969) with suitable modifications
13	Crop loan availed	Structured schedule developed for the study

### 3.3.1 Independent Variables

#### 3.3.1.1 Age

The age of the respondent was operationalized as number of years completed by the respondent at the time of enquiry. Age of the respondent was measured as revealed by the farmers themselves in completed years. Weightage of one score was given to one year of chronological age. The respondents were divided into three groups based on responses viz. young, middle and old as shown below.

S. No.	Category	score
1.	Young	Up to 35 years
2.	Middle	36 – 58 years
3.	Old	Above 58 years

#### 3.3.1.2 Education

It is the formal schooling, an individual has undergone. It was measured in number of years of schooling completed by a respondent in accordance with the scale developed by Venkataramaiah (1990). The maximum and minimum obtainable score was 8 and 1, respectively. The categorization and scoring adopted was given below.

S. No.	Category	Score
1	Illiterate	1
2	Functionally Literate	2
3	Primary School (1 <sup>st</sup> – 5 <sup>th</sup> )	3
4	Middle School (6 <sup>th</sup> –7 <sup>th</sup> )	4
5	High School (8 <sup>th</sup> –10 <sup>th</sup> )	5
6	Intermediate	6
7	Graduation	7
8	Post-Graduation	8

### 3.3.1.3 Land holding

Land holding was operationalized as the number of acres of land possessed by the respondent at the time of enquiry. As per the Andhra Pradesh Land Reforms Act-1973 the respondents were grouped into five categories viz., marginal land holding (Below 1 ha), small land holding (1 – 2 ha), semi medium land holding (2 – 4ha), medium land holding (4 – 10 ha) and large land holding (Above 10 ha). Frequency and percentage were calculated.

S.No.	Category	Range
1	Marginal	< 1 ha
2	Small	1ha - 2 ha
3	Semi medium	2ha - 4ha
4	Medium	4ha - 10ha
5	Large	> 10ha

### 3.3.1.4. Farming Experience

The variable farming experience was operationalized as the number of completed years a respondent had practiced farming. The variable was measured using scale developed by Venkataramaiah (1983) with suitable modifications. The scale consists of four categories viz., a farming experience of up to 10 years, 11-20 years, 21-30 years, 31-40 years and above 40 years. A score of 5 was given to a farming experience of above 40 years, a score of 4 for the farming experience of 31-40 years, a score of 3 for 21-30 years, a score of 2 for 11-20 years and 1 was given to a farming experience of upto 10 years. The possible maximum and minimum scores of each respondent were 5 and 1, respectively.

S. No.	Farming Experience	Score
1	Up to 10 years	1
2	11 – 20 years	2
3	21 – 30 years	3
4	31 – 40 years	4
5	above 40 years	5

### 3.3.1.5 Material Possession

It refers to the farm animals like bullocks, buffaloes or cow, television, cycle, two wheelers, tractor, sprayers, and farm implements possessed by the respondent's farmers at the time of investigation. This variable was operationalized as the number of farm material possession by the respondent at the time of enquiry. The following weightages were given to each item of the material possessed by the respondents. The possible maximum and minimum score of each respondent were 0 to 5 respectively.

<b>Score</b>	<b>category</b>
0	None
1	One farm animal/ bicycle
2	Two farm animals /bullock cart /gorru and guntaka /TV /cell phone
3	Three farm animals /improved farm implements/power sprayer
4	Five to ten animals /pumpset /motor bike
5	More than ten farm animals /tractor /automobile

<b>S.No.</b>	<b>Category</b>	<b>Score range</b>
1.	Low assests possession	< (Mean-SD)
2.	Medium assests possession	Mean $\pm$ SD
3.	High assests possession	> (Mean+SD)

### 3.3.1.6 Annual Income

Annual income was operationalized as the total income earned by the respondent farmer from different sources of agricultural and allied occupations like farming, dairy and poultry *etc.* It was categorized as up to Rs.20,000 – 53,000 (1), Rs.53,001-86,000/- (2), Rs.86,001-1,19,000/- (3). The maximum and minimum scores obtained were 3 and 1 respectively. After obtaining scores, the respondents were categorized into three groups based on mean and standard deviation. After obtaining the scores, the respondents were categorized into three categories based on class interval.

S. No.	Category	Score
1	Low (Rs.20,000 – Rs.53,000)	< Mean –S.D
2	Medium (Rs.53,001 – Rs.86,000)	Mean ± S.D
3	High (Rs.86,001 – Rs.1,19,000)	> Mean + S.D

### 3.3.1.7 Extension Contact

Extension contact was operationalized as the degree to which an individual contacted extension agencies for getting information on agriculture or non-agriculture or both. The variable was measured using the procedure followed by Ponnappan (1982) with suitable modifications. The respondents were asked to indicate their responses on a three point continuum of frequently (3), occasionally (2) and rarely (1) which indicate their participation in various organizations. The maximum and minimum scores obtained were 3 and 1 respectively. Based on the total score obtained by the respondents on the extension contact, they were grouped into three categories on the basis of mean and standard deviation.

Category	Score
Low	< Mean –S.D
Medium	Mean ± S.D
High	> Mean + S.D

### 3.3.1.8 Disaster Occurrence Pattern

Disaster occurrence pattern was the circumstances of an events of nature that leads to sudden disruption of normal life of a society, causing damage to life, crop and property to such an extent that normal social and economic values available are inadequate to restore normalcy after a disaster i.e., drought, cyclones, floods, earthquake and heat waves. The respondents were asked to indicate their responses on a three point continuum of frequently (3), occasionally (2), and rarely (1) which indicate the various levels of disaster occurrence. The maximum and minimum scores obtained were 3 and 1 respectively.

Category	Score
Low	$< \text{Mean} - \text{S.D}$
Medium	$\text{Mean} \pm \text{S.D}$
High	$> \text{Mean} + \text{S.D}$

### 3.3.1.9 Mass media utilization

It was operationalized as the extent of exposure of crop insurance of Pradhan Mantri Fasal Bima Yojana to the mass media such as radio, television, news papers, agricultural books, information material, farm magazines etc. The schedule developed by Desai (1977) with suitable modifications was used for quantifying of this variable. The frequency of exposure was measured as regular, occasional, never with scores of 3, 2 and 1, respectively.

Categorization of beneficiaries in PMFBY according to their mass media exposure

S. No.	Mass Media Exposure	Score range
1.	Low	$< \text{Mean} - \text{S.D}$
2.	Medium	$\text{Mean} \pm \text{S.D}$
3.	High	$> \text{Mean} + \text{S.D}$

### 3.3.1.10 Training undergone

It was operationalized as the number of trainings received by a farmer in the last 5 years. A score of zero was given to the farmer who didn't received trainings, a score of one was given to the farmer who received 1-2 trainings and score 2 is given to the farmer who received 3-4 trainings and score 3 is given to the farmer who received more than 4 trainings. Based on the mean and standard deviation, they were categorized as follows.

S. No.	Category	Score
1	No trainings	0
2	1-2 trainings	1
3	3-4 trainings	2
4	More than 4 trainings	3

### 3.3.1.11 Scientific orientation

This referred to degree to which a respondent is oriented to use the scientific methods in decision making. This was measured with the help of risk preference scale developed by Supe (1969) with suitable modifications. This scientific orientation scale has six statements out of which one statement is negative and other five are positive.

The responses for each statement were rated on a five-point continuum which were Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA) and Strongly Disagree (SDA).

The maximum score an individual could obtain on this scale was 30 and the minimum score could be 6.

Based on summing up of the scores, the respondents were categorized into three groups based on mean and standard deviation.

S. No.	Category	Score
1.	Low	$< \text{Mean} - \text{S.D}$
2.	Medium	$\text{Mean} \pm \text{S.D}$
3.	High	$> \text{Mean} + \text{S.D}$

### 3.3.1.12 Risk orientation

The degree to which the farmer was oriented towards encountering risk and uncertainty in adopting any new ideas or innovations. This was measured with the help of risk orientation scale developed by Supe (1969) with suitable modifications. The scale consisted of five statements in which fifth statement was negative and remaining four were positive statements. The responses of respondent were obtained against each statement in terms of agreement and disagreement. The positive statements were scored with 3, 2, and 1 for agree (A), undecided (UD) and disagree (DA), respectively. Whereas, the scoring pattern was reversed in case of negative statements. The score obtained on each statement was summed up to get individual respondents risk orientation score.

The maximum and minimum possible scores were '15' and '5', respectively and then they were grouped into three categories based on mean and standard deviation.

S. No	Category	Score
1.	Low	$< \text{Mean} - \text{S.D}$
2.	Medium	$\text{Mean} \pm \text{S.D}$
3.	High	$> \text{Mean} + \text{S.D}$

### 3.3.1.13 Crop Loan Availed

The agricultural crop loan has to help farmers for purchase of high yielding inputs. The importance of farm credit as a critical input to agriculture is reinforced by the unique role of Indian agriculture in the macroeconomic framework and its role in poverty alleviation. Recognizing the importance of agricultural sector in India's development, the Government and the Reserve Bank of India (RBI) have played a vital role in creating a broad-based institutional framework for catering to the increasing credit requirements of the sector. The lower interest on crop loan facility has played an equally significant role in enhancing the country's food grains production. The source of loan to the farmers by Commercial Banks (1), Co-operative Banks (2), and Regional Rural Banks (3). The maximum and minimum scores obtained were 3 and 1 respectively.

Category	Score
Low	< Mean –S.D
Medium	Mean ± S.D
High	> Mean + S.D

## DEPENDENT VARIABLES

### Knowledge level of beneficiaries about PMFBY

Knowledge was operationally defined as those behaviors and test situations which emphasised the remembering either by recognition or by the recall of ideas and material on some phenomenon (Bloom et al., 1956).

To measure the knowledge of beneficiaries about the PMFBY 23 Questions were used. The questions framed were objective type i.e., multiple choice, fill in the blanks, true or false, yes or no statements with a score of one for correct response and zero for incorrect response. The total knowledge score for each respondent was calculated by summing up the number of items correctly answered by an individual respondent and the maximum score one could obtain was 23 and minimum score was 0. By adding the scores of all the items, the individual total score was worked out. The beneficiaries were categorized into three groups based on the mean and standard deviation.

S. No	Category	Scores
1	Low level of knowledge	< Mean –S.D
2	Medium level knowledge	Mean ± S.D
3	High level knowledge	> Mean + S.D

### Opinion of beneficiaries about PMFBY

Beneficiaries of PMFBY opinion here operationally defined as the part of dispersion /expressed views of farmer beneficiaries on Pradhan Mantri Fasal Bima Yojana. To measure the opinion of beneficiaries about the PMFBY 16 statements were used. The response of each statement were rated on a two continuum which were

favourable and unfavourable with a score of one for favourable opinion and zero for unfavourable opinion. The total opinion score for each respondent was calculated by summing up the number of items favorably opined by an individual respondent and the maximum score one could obtain was 16 and minimum score was 0. By adding the scores of all the items, the individual total score was worked out. The beneficiaries were categorized into three groups based on the mean and standard deviation.

S. No.	Category	Scores
1	Low level of opinion	< Mean –S.D
2	Medium level opinion	Mean ± S.D
3	High level opinion	> Mean + S.D

### **3.5 Devices and methods used for data collection**

The study required data on several variables from farmers. So, an interview schedule was considered most appropriate tool for data collection. The schedule was prepared keeping in view the objectives of the study.

#### **Pre-testing of Interview Schedule**

Before giving a final shape to the interview schedule, the schedule was pretested with 25 per cent of the respondents in an identified village situations, other than sample area. Based on experience gained in pretesting, the interview schedule was suitably modified.

#### **Method of Data Collection**

Good rapport was established with the farmers by convincing them the purpose and importance of the study. The data were collected by administering the pretested interview schedule to the farmers.

#### **Preparation of Report**

The collected data was coded, tabulated, classified and analysed in order to make the findings meaningful. The findings were suitably interpreted and necessary conclusions and inferences were drawn accordingly.

### 3.6 STATISTICAL TOOLS USED FOR ANALYSIS OF DATA

To convert the data into meaningful findings the following statistical tools were used;

1. Arithmetic Mean ( $\bar{X}$ )
2. Standard Deviation ( $\sigma$ )
3. Frequency
4. Percentage
5. Pearson's correlation coefficient ( $r$ )
6. Multiple Linear Regression (MLR)

#### Arithmetic Mean (AM):

It is defined as the sum of all values of the observations divided by the total number of observations. Symbolically it is represented as  $\bar{X}$ .

$$\text{Arithmetic mean } (\bar{X}) = \frac{\sum xi}{n} = \frac{x_1 + x_2 + \dots + x_n}{n}$$

Where,  $\bar{X}$  = Arithmetic mean

$x_i$  = Value of  $i^{\text{th}}$  item of  $x$

$i = 1, 2, \dots, n$

$n$  = Total number of observations.

#### Standard deviation (S.D.)

It is positive square root of the mean of the squared deviations taken from arithmetic mean. It is represented by symbol  $\sigma$

$$\text{SD } (\sigma) = \sqrt{\frac{1}{n} \left[ \sum x^2 - \frac{(\sum x)^2}{n} \right]}$$

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

$(\sum x)^2$  = Square of sum of 'x' values

$n$  = number of observations

## Frequency

Frequency was used to know the distribution pattern of the respondents according to the objectives under study.

## Percentage:

Percentages were used for standardization of sample size by calculating the number of individual that would be under the given category if the total number of individuals were 120.

## Pearson's Correlation Coefficient ( r )

This test was used to study the relationship between the scores of independent variable and the scores of dependent variable. It measures the degree of relationship between the two sets of variables.

$$r = \frac{\Sigma xy - \frac{\Sigma x \Sigma y}{n}}{\sqrt{\left[ \Sigma x^2 - \frac{(\Sigma x)^2}{n} \right] \left[ \Sigma y^2 - \frac{(\Sigma y)^2}{n} \right]}}$$

r = Correlation coefficient

$\Sigma x$  = Sum of scores of independent variables

$\Sigma y$  = Sum of scores of dependent variables

$\Sigma x^2$  = sum of the squares of scores of an independent variable

$\Sigma y^2$  = Sum of the squares of scores of a dependent variable

$\Sigma xy$  = The sum of productivity of x and y

n = size of the sample

The calculated 'r' value was verified for its by using 'r' table value for 5 per cent and 1 per cent level of significance at n –2 degrees of freedom.

## Multiple Linear Regression (MLR)

Multiple linear regression analysis was used to study the effect of independent variables on dependent variables. The following multiple linear regression equation was fitted to the data having 8 parameters.

$$y = a + b_1X_1 + b_2X_2 + \dots + b_8X_8$$

Where 'a' was the intercept or constant and  $b_i$ 's are partial regression coefficients.

$$b_i = b_1, b_2, \dots, b_8$$

The regression coefficient  $b_i$ 's were tested for their significance with the following formula.

$$t_{(n-k-1)} = \frac{|b_i|}{S.E(b_i)}$$

Where

n = Number of respondents

k = Number of independent variables

S.E (  $b_i$  ) = standard error of  $i^{\text{th}}$  partial regression coefficient

$b_i = i^{\text{th}}$  Partial regression coefficient

t = Test for significance

df = Degree of freedom

Coefficient of multiple determination ( $R^2$ ) was given by

$$R^2 = \frac{\text{Regression sum of squares (RSS)}}{\text{Total sum of squares (TSS)}}$$

Where  $RSS = b_1 \sum x_1 y + b_2 \sum x_2 y + \dots + b_8 \sum x_8 y$

And  $TSS = \sum y^2$   $R^2$  value is less than unity where it was expressed in percentage. It measures the extent of variation in dependent variable (y), which can be explained by the independent variables ( $x_i$ ) together.

## Chapter –IV

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# Results and Discussions

## **Chapter IV**

# **RESULTS AND DISCUSSION**

The results of the investigation and the findings thus arrived at are presented and discussed in this chapter duly considering the theoretical and available research in the areas of investigation. The presentation of this chapter is grouped under the following sections for the purpose of clarity follow as in review of literature.

- 4.1 Profile of the beneficiaries of Pradhan Mantri Fasal Bima Yojana PMFBY.
- 4.2 Knowledge level of the beneficiaries about Pradhan Mantri Fasal Bima Yojana PMFBY.
- 4.3 Opinion of beneficiaries about Pradhan Mantri Fasal Bima Yojana (PMFBY).
- 4.4 Relationship between profile with knowledge and opinion of beneficiaries under PMFBY.
- 4.5 Constraints faced by the beneficiaries and suggestions to obviate the constraints and to formulate the strategies for effective implementation of PMFBY.

### **4.1 PROFILE OF BENEFICIARIES OF PMFBY**

To facilitate the detailed view to the reader, an attempt has been made to present the detailed distribution of beneficiaries in separate tables with frequency and percentages for interpretation as given below.

**Table 4.1. Profile of beneficiaries of PMFBY at a glance (n=120)**

S. No	Independent variables	Category	Respondents	
			F	%
1	Age	Young (< 35 years)	11	9.17
		Middle (36 to 58 years)	89	74.13
		Old age (> 59 years)	20	16.70
2	Education	Illiterate	23	19.16
		Functionally Literate	12	10.00
		Primary School (1 <sup>st</sup> - 5 <sup>th</sup> )	23	19.16
		Middle School (6 <sup>th</sup> - 7 <sup>th</sup> )	28	23.37
		High School ( 8 <sup>th</sup> - 10 <sup>th</sup> )	26	21.66
		Intermediate	5	4.15
		Graduation	3	2.50
		Post-Graduation	0	0.00
3	Land holding	Marginal (< 1 ha )	37	30.85
		Small (1 – 2 ha )	62	51.66
		Semi Medium (2 – 4 ha )	17	14.16
		Medium (4 – 10 ha )	3	2.50
		Large (> 10 ha )	1	0.83
4	Experience in farming	Upto10 years	20	16.66
		11- 20 years	24	20.18
		21-30 years	43	35.67
		31-40 years	20	16.66
		41 years above	13	10.83
5	Annual Income	Low (Rs.20,000 – Rs.53,000)	20	10.84
		Medium (Rs.53,001 – Rs.86,000)	87	72.50
		High (Rs.86,001 – Rs.1,19,000)	13	16.66
6	Mass media utilization	(< 8.79)	38	31.66
		(8.78-10.80)	62	51.64
		(> 10.81)	20	16.70

S. No	Independent variables	Category	Respondents	
			F	%
7	Extension contact	(< 12.67)	17	14.16
		(medium 12.68-15.12)	90	75.00
		(> 15.13)	13	10.84
8	Material possession	(< 5.01)	18	15.00
		Medium (5.02-20.05)	89	74.17
		(> 20.06)	13	10.83
9	Disaster occurrence pattern	(< 7.93)	12	10.00
		Medium (7.94-9.61)	49	48.33
		(> 9.62)	59	49.17
10	Training undergone	Un trained	88	73.36
		1 to 2 trainings	17	14.16
		3 – 4 trainings	10	8.37
		More than 4 trainings	05	4.11
11	Scientific Orientation	(< 19.22)	24	20.00
		Medium (19.23-24.31)	81	67.50
		(> 24.32)	15	12.50
12	Risk orientation	(< 12.47)	24	17.50
		Medium (12.48-16.25)	82	70.83
		(> 16.26)	14	11.67
13	Crop loan availed	Commercial banks	32	26.67
		Co-operative societies	49	40.00
		Regional banks	39	33.34

### 4.1.1 Age

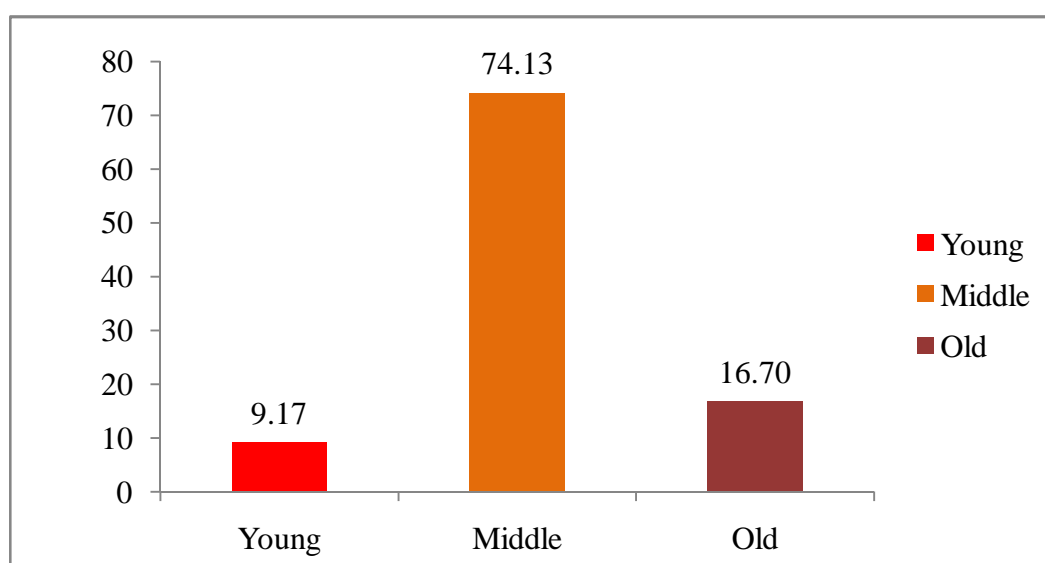
**Table 4.2. Distribution of beneficiaries according to their age (n=120)**

S. No.	Category	Frequency	Percentage
1	Young age (< 35 years)	11	9.17
2	Middle age (36-58 years)	89	74.13
3	Old age (> 58 years)	20	16.70
Total		120	100.00

A perusal of Table 4.2 and Figure 4.1 revealed that, nearly three-fourths of the beneficiaries belonged to middle age (74.13 %) category, followed by those belonged to old age (16.70 %) category and young age (9.17 %) categories. The age of the beneficiaries of PMFBY ranged from 36 to 58.

From the above data, it could be inferred that beneficiaries of PMFBY were mostly from middle aged followed by old aged group individuals. Because of their education, the younger generation more attracted to employment opportunities in nearby cities. The beneficiaries of middle aged group had more working efficiency compared to older and younger ones.

The above findings were in line with the findings of Osarenren *et al.* (2016) and Thrimoorthy and Geetha (2017).



**Fig.4.1. Distribution of beneficiaries according to their age.**

#### 4.1.2 Education

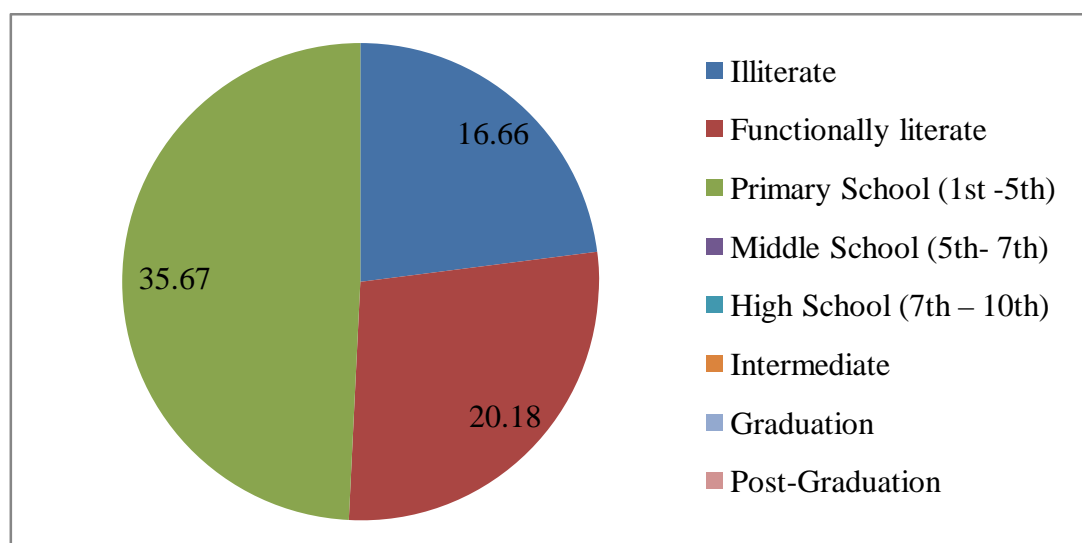
**Table 4.3. Distribution of beneficiaries according to their education (n=120)**

S. No.	Category	Frequency	Percentage
1	Illiterate	23	19.16
2	Functionally Literate	12	10.00
3	Primary School (1 <sup>st</sup> -5 <sup>th</sup> )	23	19.16
4	Middle School (6 <sup>th</sup> - 7 <sup>th</sup> )	28	23.37
5	High School (8 <sup>th</sup> – 10 <sup>th</sup> )	26	21.66
6	Intermediate	5	4.15
7	Graduation	3	2.50
8	Post-Graduation	0	0.00
Total		120	100.00

It was observed from Table 4.3 and Figure 4.2 it indicates that less than one-fourth (23.17 %) of the beneficiaries had middle school, followed by those belonged to high school (21.66 %), illiterate and primary school (19.16 %), functionally literate (10.00 %), intermediate (4.15 %), and graduation (2.50 %).

The reason for this could be that the majority (80.84 %) of the beneficiaries are educated because of the availability of schools and colleges in nearby areas. Remaining 19.16 per cent of the beneficiaries fell under illiterate level of education.

The above findings were in line with the findings of Swain (2015) and Thrimoerthy and Geetha (2017)



**Fig. 4.2. Distribution of beneficiaries according to their education.**

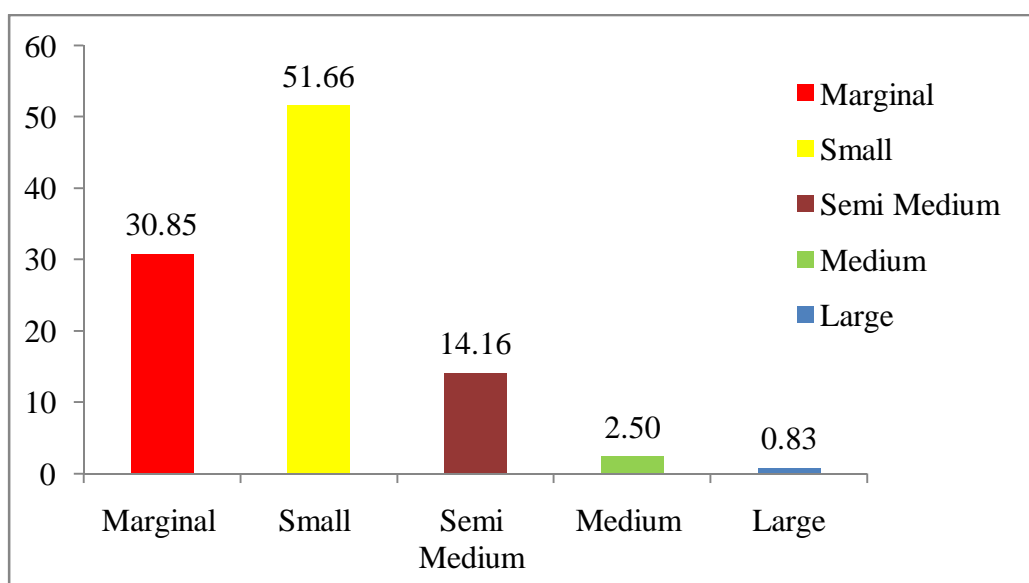
### 4.1.3 Land Holding

**Table 4.4. Distribution of beneficiaries according to their land holding (n=120)**

S. No.	Category	Frequency	Percentage
1	Marginal (< 1 ha)	37	30.85
2	Small (1-2 ha)	62	51.66
3	Semi Medium (2-4 ha)	17	14.16
4	Medium (4-10 ha)	3	2.50
5	Large (> 10 ha)	1	0.83
Total		120	100.00

It was observed from Table 4.4. and Figure 4.3 inferred that more than half (51.66 %) of the beneficiaries had small land holdings, followed by those had marginal (30.85 %), semi medium (14.16 %), medium (2.50 %) and large (0.83 %) land holdings.

The reason for small and marginal farmers are being more might be the land fragmentation due to separation of families. Therefore there is a need to focus more on small and marginal famers for create awareness regarding PMFBY. The above findings were in line with the findings of Olila (2014).



**Fig. 4.3. Distribution of beneficiaries according to their land holding.**

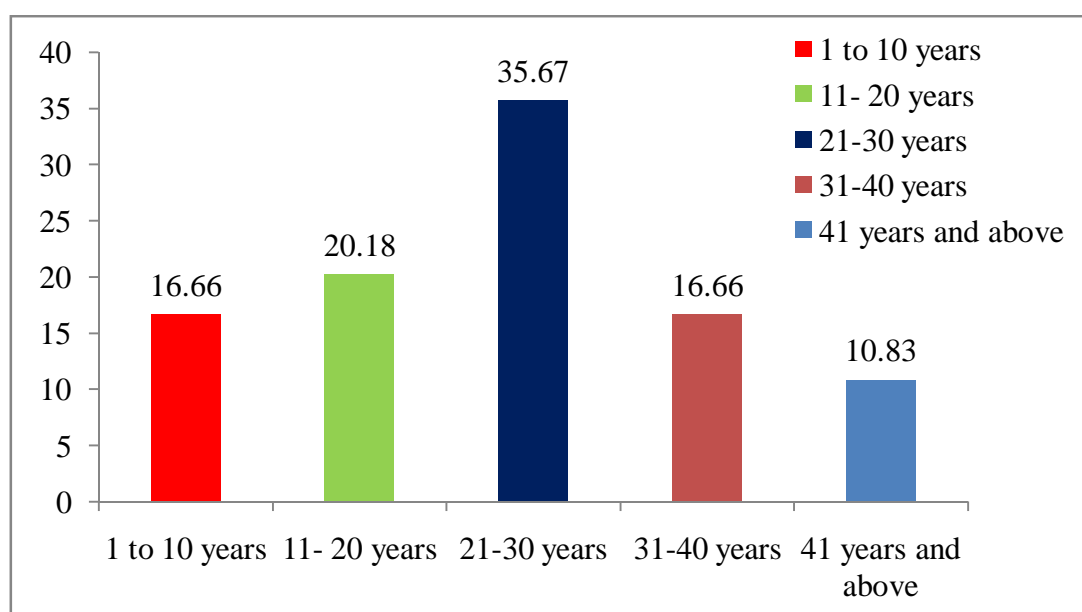
#### 4.1.4 Farming Experience

**Table 4.5. Distribution of beneficiaries according to their farming experience (n=120)**

S. No.	Category	Frequency	Percentage
1	1 to 10 years	20	16.66
2	11- 20 years	24	20.18
3	21-30 years	43	35.67
4	31-40 years	20	16.66
5	41 years and above	13	10.83
Total		120	100.00

It is evident from Table 4.5 and Figure 4.4 that more than one third (35.67 %) of the beneficiaries had 21-30 years of farming experience in growing of crops followed by those had 11-20 years (20.18 %), 1 to 10 years (16.66 %), 31-40 years (16.66 %) and more than 41 years (10.83 %). The reason might be due to fact that majority of beneficiaries had more interested in farming and carry out their livelihood with their farming.

The above findings were in line with the findings of Dhande and Jambavanth (2017)



**Fig. 4.4. Distribution of beneficiaries according to their farming experience.**

#### 4.1.5 Annual Income

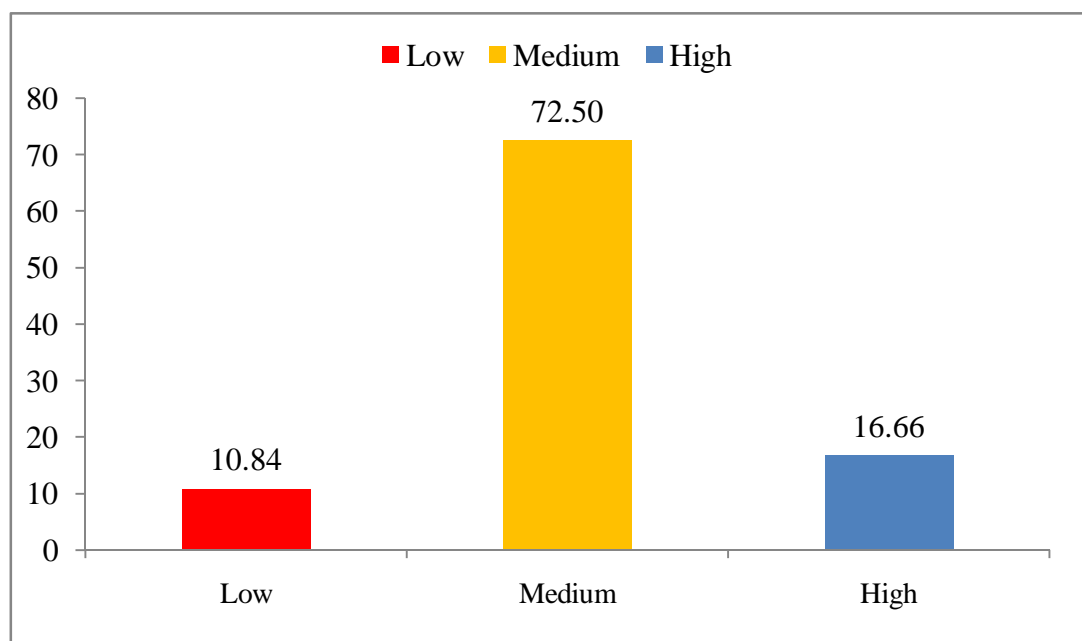
**Table 4.6. Distribution of beneficiaries according to their annual income**

(n=120)

S. No.	Category	Frequency	Percentage
1	Low (Rs.20,000 to Rs.53,000)	20	16.66
2	Medium (Rs.53,001 to Rs.86,000)	87	72.50
3	High (Rs.86,001 to Rs.1,19,000)	13	10.84
Total		120	100.00
Mean=73633.33		SD=28765.04	

From the Table 4.6 and Figure 4.5 that more than two-third (72.50 %) of the beneficiaries belonged to medium level of Annual Income followed by those belonged to low (16.66 %) and high (10.84 %) of annual Income.

The reasons might be they getting low returns in farming and non-farm occupation like dairy to support their income as majority being small (51.66%) and marginal (30.85%) that too without any other source of income and also due to existence of more numbers of earning member in different occupation other than agriculture. The result was in accordance with Uvaneswaran and Mohanapriya (2014).



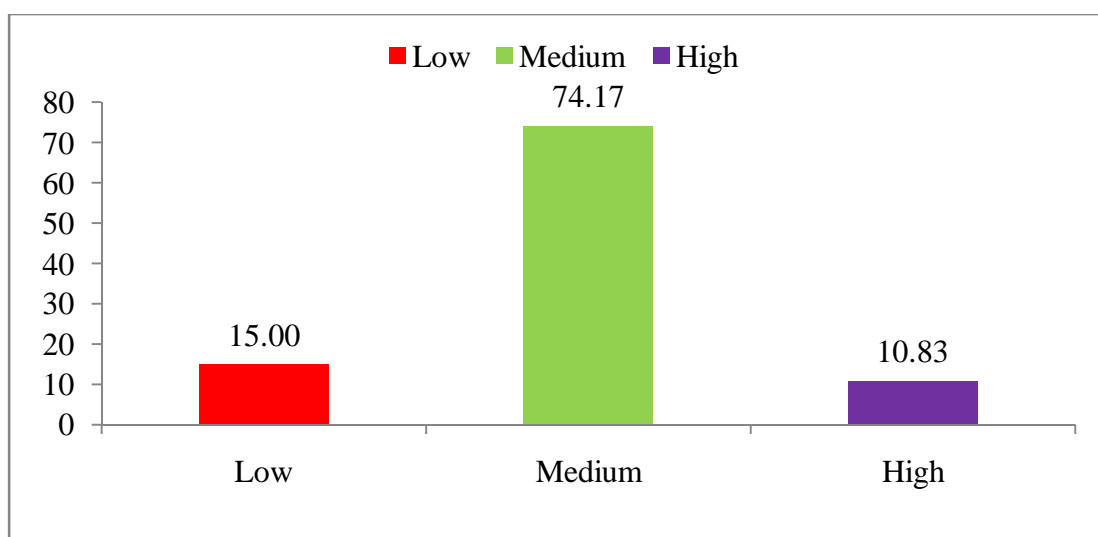
**Fig. 4.5. Distribution of beneficiaries according to their annual income.**

#### 4.1.6 Material Possession

**Table 4.7. Distribution of beneficiaries according to their material possession (n=120)**

S. No	Category	Frequency	Percentage
1	Low (< 5.01)	18	15.00
2	Medium (5.01-20.05)	89	74.17
3	High (> 20.06)	13	10.83
Total		120	100.00
Mean=12.53			SD=7.52

An over view of Table 4.7 and Figure 4.6 indicated that nearly three-fourth (74.17 %) of the farmers had medium level of material possession followed by those with low (15.00 %) material possession whereas, high (10.83 %) material possession.



**Fig. 4.6. Distribution of beneficiaries according to their material possession.**

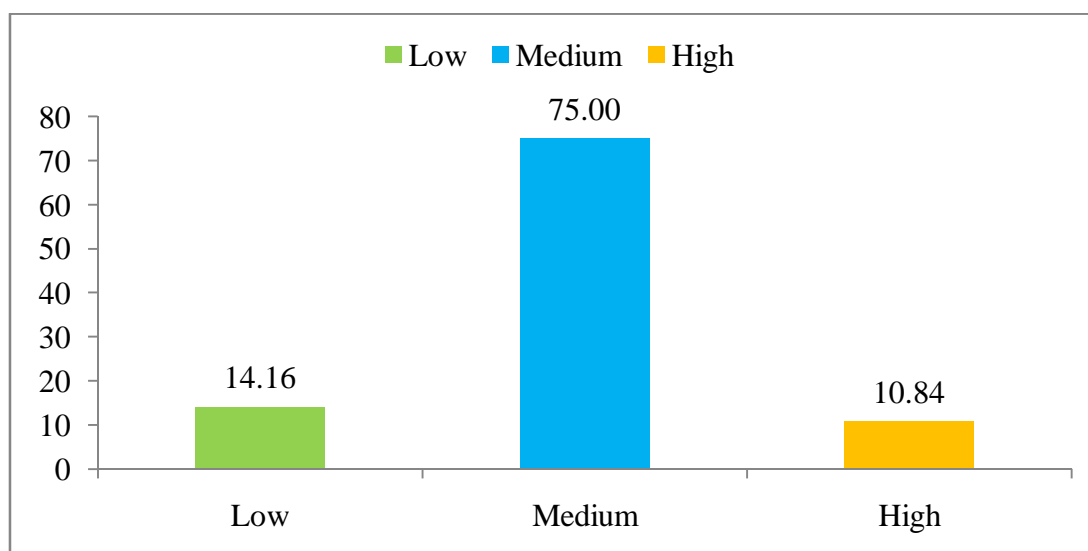
#### 4.1.7 Extension Contact

**Table 4.8. Distribution of beneficiaries according to their Extension Contact (n=120)**

S. No	Category	Frequency	Percentage
1	Low (< 12.67)	17	14.16
2	Medium (12.68-15.12)	90	75.00
3	High (> 15.12)	13	10.84
Total		120	100.00
Mean=13.9			SD=1.225

An over view of Table 4.8 and Figure 4.7 indicated that three-fourth (75.00 %) of the beneficiaries had medium level of extension contact followed by those with low (14.16 %) extension contact whereas, only 10.84 per cent of the beneficiaries had high level of extension contact for technical information related to PMFBY.

The result was in accordance with Afroz *et al.* (2017).



**Fig. 4.7. Distribution of beneficiaries according to their extension contact.**

From the Table 4.14, it is clearly evident that majority (77.50 %) of the beneficiaries had frequent contact with Bank Officers followed by Agricultural Extension Officer (46.67 %), Mandal Agricultural Officer, Input Dealers (28.33 %) and Village Panchayat Secretary (27.50 %)

More than half (51.60 %) of the beneficiaries had occasional contact with Village Panchayat Secretary followed by Mandal Agricultural Officer (31.60 %), Agricultural Extension Officer (25.83 %), Bank Officers (22.50 %) and Input dealers (14.16 %).

About cent percent of the beneficiaries rarely contacted with Assistant Director of Agriculture and Joint Director of Agriculture followed by Input Dealers (57.51), Mandal Agricultural Officer (40.00%), Agricultural Extension Officer (27.50%) and Village Panchayat Secretary (20.84).

The reason could be ascribed for this is that they have utilized the accessible source of information. Dissemination of information regarding to insurance programmes with specific reference to PMFBY may be concentrated in order to obtain more information regarding modified PMFBY.

**Table 4.9. Distribution of beneficiaries of PMFBY according to their frequency of extension contact (n=120)**

S. No.	Particulars	Mass media exposure					
		Frequently		Occasionally		Rarely	
		F	%	F	%	F	%
1	Village Panchayat Secretary	33	27.50	62	51.60	25	20.84
2	Multi Purpose Extension Officer (MPEO)	–	–	–	–	–	–
3	Agricultural Extension Officer (AEO)	56	46.67	31	25.83	33	27.50
4	Mandal Agricultural Officer (MAO)	34	28.33	38	31.60	48	40.00
5	Assistant Director of Agriculture (ADA)	–	–	–	–	120	100.00
6	Joint Director of Agriculture (JDA)	–	–	–	–	120	100.00
7	Scientists of ANGRAU	–	–	–	–	–	–
8	Insurance Company Officers	–	–	–	–	–	–
9	Input Dealers	34	28.33	17	14.16	69	57.51
10	Bank Officers	93	77.50	27	22.50	–	–
11	NGO`S	–	–	–	–	–	–

The study has clearly brought out the bank officers and Mandal Agriculture officers were consulted by majority of the beneficiaries to seek information about PMFBY.

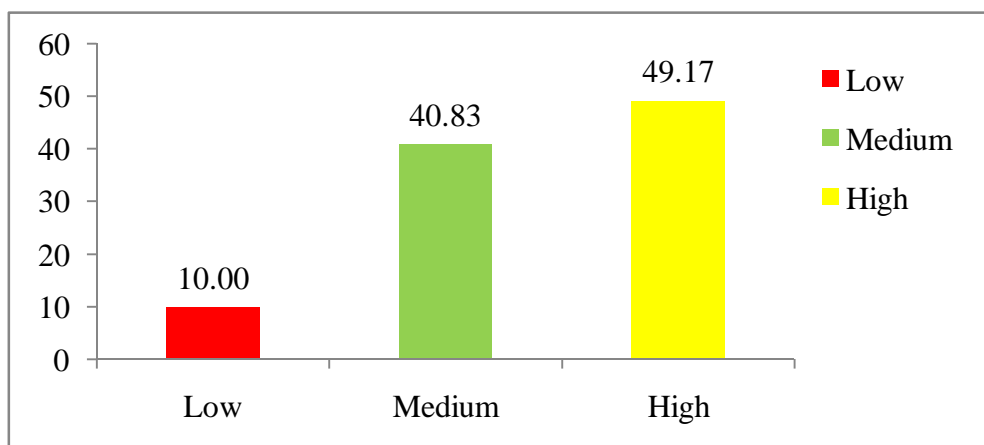
This implies that these sources need to be used frequently for dissemination of information on insurance programme by the extension agencies for its proper impact.

#### **4.1.8 Disaster Occurrence Pattern**

**Table 4.10. Distribution of beneficiaries according to the Disaster Occurrence Pattern (n=120)**

S. No	Category	Frequency	Percentage
1	Low (< 7.93)	12	10.00
2	Medium (7.94-9.61)	49	40.83
3	High (> 9.62)	59	49.17
Total		120	100.00
Mean=8.775		SD = 0.844	

An over view of Table 4.10 and Figure 4.8 indicated that nearly half (49.17 %) of the beneficiaries had high disaster occurrence pattern, followed by those with medium (40.83 %) and low (10.00 %) disaster occurrence pattern. The reason might be due to the areas nearby the sea coastal areas are more prone the disasters compared to other areas, leading to damage the crops and disturb the livelihood of beneficiaries.



**Fig. 4.8 Distribution of beneficiaries according to their disaster occurrence pattern.**

**Table 4.11. Item analysis of disaster occurrence pattern for the beneficiaries under PMFBY (n=120)**

S. No.	Name of the disaster	Frequently		Occasionally		Rarely	
		F	%	F	%	F	%
1	Drought	10	8.33	95	79.17	15	12.50
2	Cyclone	103	85.90	7	5.90	10	8.20
3	Floods	98	81.70	14	11.70	8	6.60
4	Earth quake	–	–	–	–	120	100.00
5	Heat waves	34	28.33	17	14.16	69	57.51

From the above Table 4.11 it is clearly evident that majority (85.09 %) of the beneficiaries had frequently faced Cyclones followed by Floods (81.70 %), Heat waves (28.33 %) and Drought (8.33 %).

Majority (79.17 %) of the beneficiaries had occasional drought conditions followed by Heat Waves (14.16%), Floods (11.17 %), and Cyclones (5.90 %).

About cent percent of the beneficiaries rarely faced with earth quakes followed by Heat Waves (57.51%), Drought (12.50%), cyclones (8.20%) and Floods (6.60%).

**Table 4.12. Item analysis in Frequency of occurrence of disaster**

S. No.	Name of the disaster	More than two times in a year		Twice in a year		Once in a year		Once in a five years		Once in a ten years		Never	
		F	%	F	%	F	%	F	%	F	%	F	%
1	Drought	39	32.50	31	25.90	36	30.00	9	7.50	5	4.10	–	–
2	Cyclone	47	39.16	39	32.50	27	22.50	5	4.17	2	1.67	–	–
3	Floods	39	32.50	47	39.17	31	25.83	2	1.66	1	0.83	–	–
4	Earth quake	–	–	–	–	–	–	–	–	–	–	120	100.00
5	Heat waves	21	17.50	22	18.33	29	24.16	33	27.50	10	8.33	5	4.16

From the above Table 4.12 it is clearly evident that less than two-fifths (39.16 %) of the beneficiaries had faced Cyclones more than two times in a year followed by Floods and Drought (32.50 %) and Heat waves (17.50 %).

Less than two-fifths (39.17 %) beneficiaries had faced floods twice in a year followed by cyclones (32.50 %), Drought (25.90 %) and Heat Waves (18.33 %).

Less than one –third (30.00 %) beneficiaries had faced Drought once in a year followed by floods (25.83 %), Heat Waves (24.16 %), Cyclones (22.50 %).

More than one-fourth (27.50 %) beneficiaries had faced Heat Waves once in five years followed by Drought (7.50 %), Cyclones (4.17 %), Floods (1.66 %).

8.33 per cent of the beneficiaries had faced Heat Waves once in ten years followed by those faced Drought (4.10 %), Cyclones (1.67 %), Floods (0.83 %).

About cent percent of the beneficiaries never faced earth quakes followed by Heat Waves (4.166%).

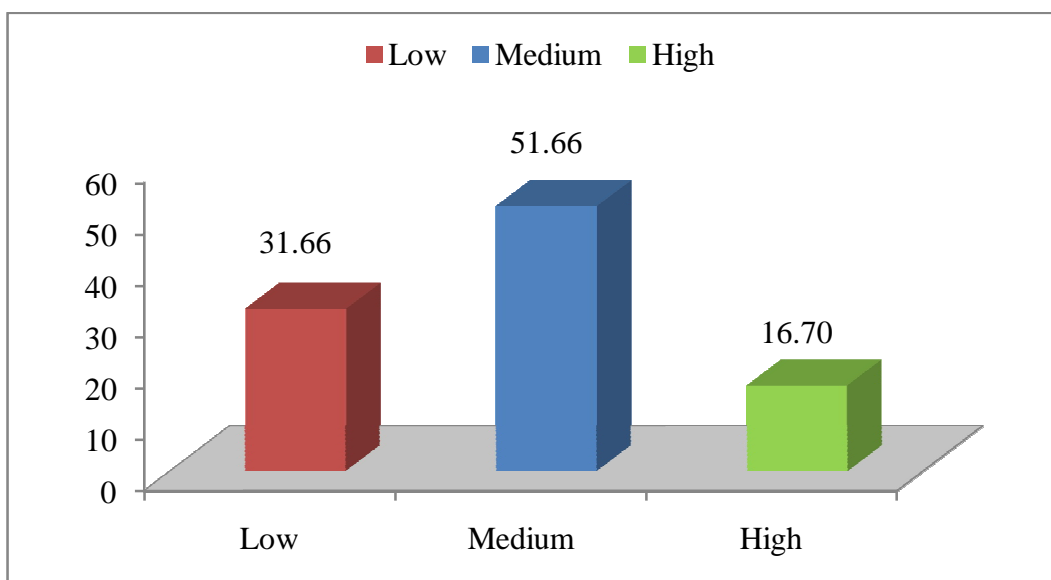
#### 4.1.9 Mass Media Utilization

**Table 4.13. Distribution of beneficiaries according to the Mass Media Exposure (n=120)**

S. No	Category	Frequency	Percentage
1	Low (<8.79)	38	31.66
2	Medium (8.80-10.80)	62	51.66
3	High (>10.81)	20	16.70
Total		120	100.00
Mean=9.8		SD=1	

An over view of Table 4.13 and Figure 4.9 indicated that more than half are (51.66 %) of the beneficiaries had medium level of mass media exposure, followed by those with low (31.66 %) mass media exposure whereas, only 16.70 per cent of the farmers had high level of mass media exposure. The reason for medium to low mass media utilization due to middle school education, small and marginal land holdings leading to slow diffusion of crop insurance about the PMFBY.

The result was in accordance with Jayathilaka and Abeynayake (2013)



**Fig. 4.9. Distribution of beneficiaries according to their mass media utilization.**

**Table 4.14. Item analysis of beneficiaries according to their frequency of mass media utilization of beneficiaries in PMFBY (n=120)**

S. No.	Particulars	Mass media exposure					
		Frequently		Occasionally		Rarely	
		F	%	F	%	F	%
1	News papers	33	27.50	62	51.66	25	20.84
2	Books on Agriculture	–	–	19	15.83	101	84.17
3	Radio Programmes	–	–	–	–	–	–
4	Television Programmes	34	28.33	38	31.66	48	40.00
5	Exhibitions and Kissan Melas	12	10.00	28	23.33	90	75.00
6	Any other (specify)	–	–	–	–	–	–

From the above Table 4.14 it is clearly evident that more than one-fourth of beneficiaries (28.33 %) of the beneficiaries had frequently exposes the TV programmes followed by news papers (27.50 %), Exhibitions and Kissan Melas (10.00 %).

More than half (51.66 %) of the beneficiaries had occasional by exposed to news papers followed by TV programmes (31.66 %), Exhibitions and Kissan Melas (23.33 %), books on agriculture (15.83 %).

Most (84.17 %) beneficiaries are rarely exposes the books on agriculture followed by Exhibitions and Kissan Melas (75.00 %), TV programmes (40.00 %), news papers (20.84 %) and Floods (6.60 %).

For persuading the farmers for adoption of insurance programmes they should be motivated to watch informative TV programmes. The design, content and presentation of agricultural programmes in rural areas calls for innovative approach on the part of rural mass media, be it newspaper, radio or television in order to increase the mass media utilization.

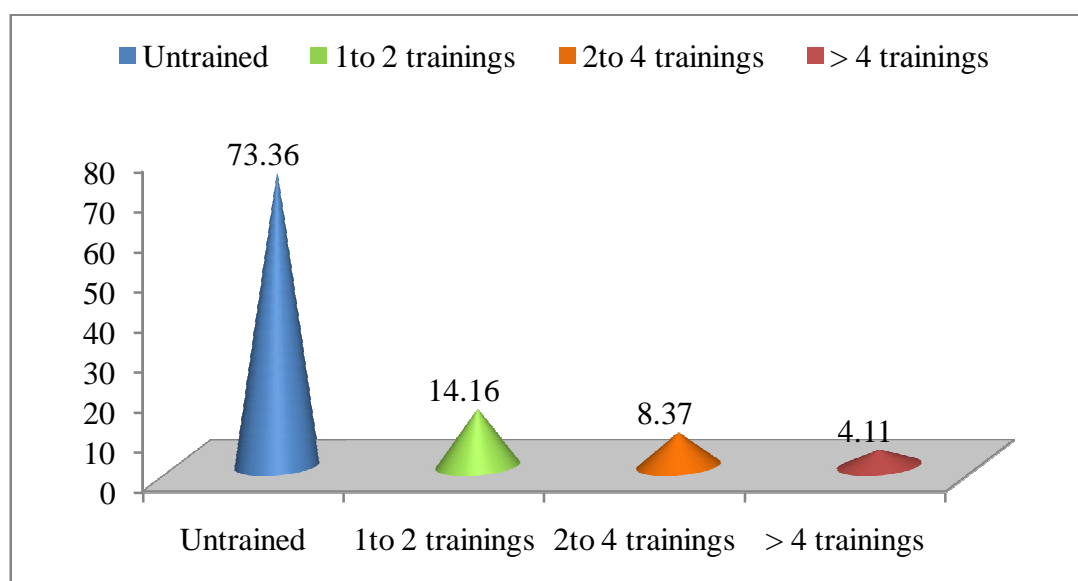
In order to increase the mass media utilization it would be advisable to increase the duration of farm programmes on TV and radio and to repeat them frequently.

#### 4.1.10 Training Undergone

**Table 4.15. Distribution of beneficiaries according to the training undergone (n=120)**

S. No.	Training received	F	%
1	Untrained farmers	88	73.36
2	Trained farmers		
a)	1to 2 trainings	17	14.16
b)	2to 4 trainings	10	8.37
c)	> 4 trainings	5	4.11

From Table 4.15 and Fig.4.10 it could be seen that more than two-thirds (73.36 %) of the beneficiaries had not undergone trainings followed by those undergone one to two trainings (14.16 %), two to four trainings (8.37 %) and four and above (4.11 %) trainings. This may be due to agriculture department in ability to attract trainees but they was though it is conducting trainings. More over the extension agencies and other officials didn't focus on the trainings needs of beneficiaries in crop insurance. So it is essential to organize need based training programmes on PMFBY by the officials of banks, insurance programmes. These findings were not in support of earlier findings.



**Fig. 4.10. Distribution of beneficiaries according to training undergone.**

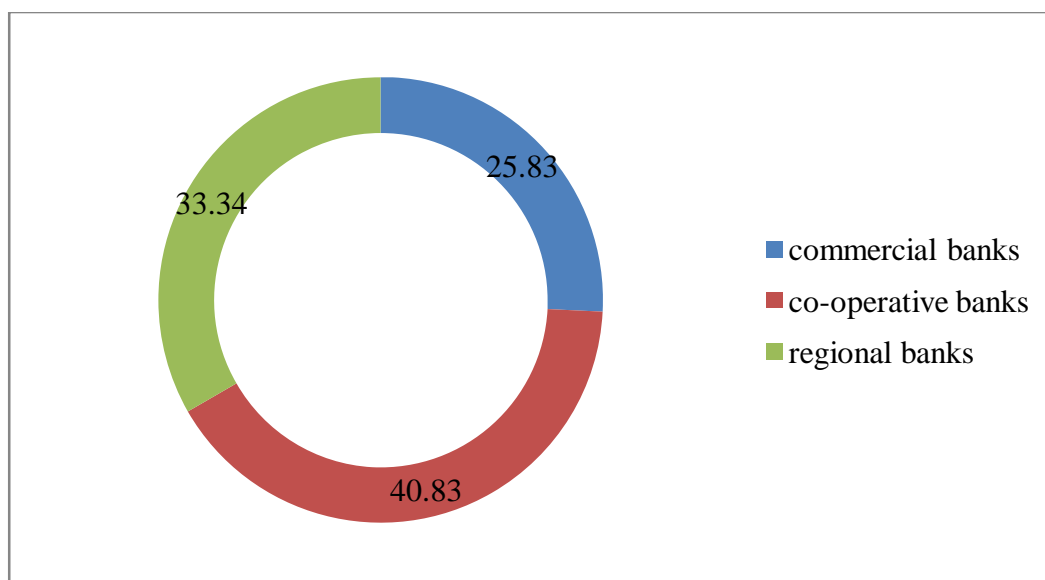
## 4.11 CROP LOAN AVAILED

**Table 4.16. Distribution of beneficiaries according to Crop loan availed (n=120)**

S.No.	Borrowing source	F	%
1	Commercial Banks	32	26.67
2	Co-Operative Banks	49	40.00
3	Regional Rural Banks	39	33.33

From the above Table 4.16 and Fig 4.11 it could be seen that nearly two-fifths (40.00%) of the beneficiaries borrowed loans from the co-operative banks followed by regional banks (33.33%) and commercial banks (26.67%). The reason might be due to Large farmers utilized agriculture crop loan more efficiently when compared to small farmers in both commercial and co-operative banks.

The result was in accordance with Chavan *et al.* (2016).



**Fig. 4.11. Distribution of beneficiaries according to crop loan availed**

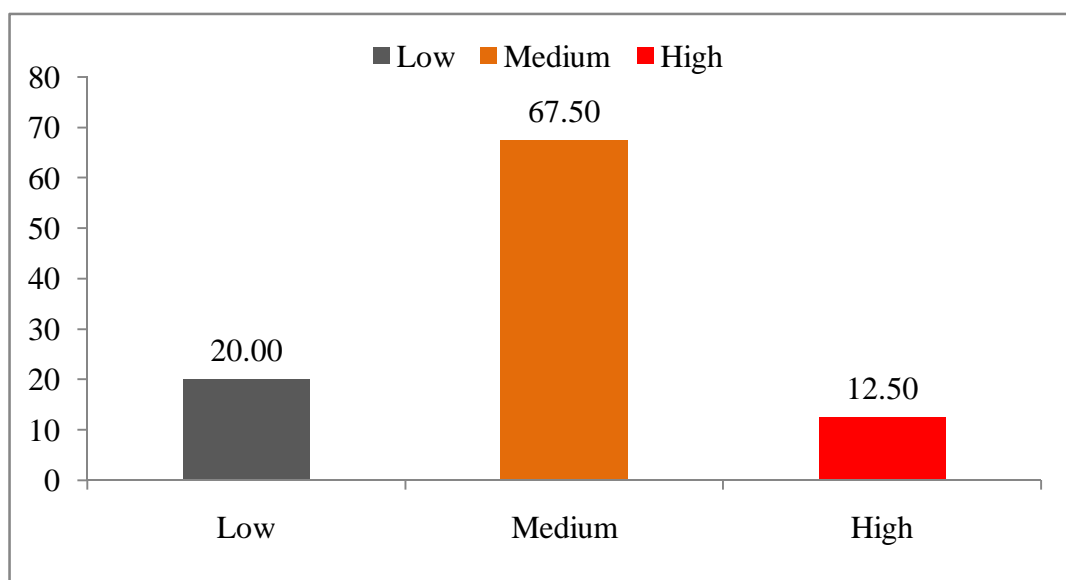
### 4.1.2 Scientific Orientation

**Table 4.17. Distribution of beneficiaries according to the Scientific Orientation (n=120)**

S. No.	Category	Frequency	Percentage
1	Low (< 19.22)	24	20.00
2	Medium (19.23-24.31)	81	67.50
3	High (> 24.32)	15	12.50
Total		120	100.00`
Mean=21.76			SD=2.54

It was evident from the Table 4.17 and Figure 4.12 that more than two-thirds (67.50 %) of the beneficiaries had medium level of scientific orientation, followed by low (20.00 %) and rest (12.50 %) had high level of scientific orientation. Reasons might be due to low extension contact and middle school education leading to low diffusion of scientific technologies among the beneficiaries of PMFBY.

The above findings were in line with the findings with the Palanisamy (2011).



**Fig. 4.12. Distribution of beneficiaries according to scientific orientation.**

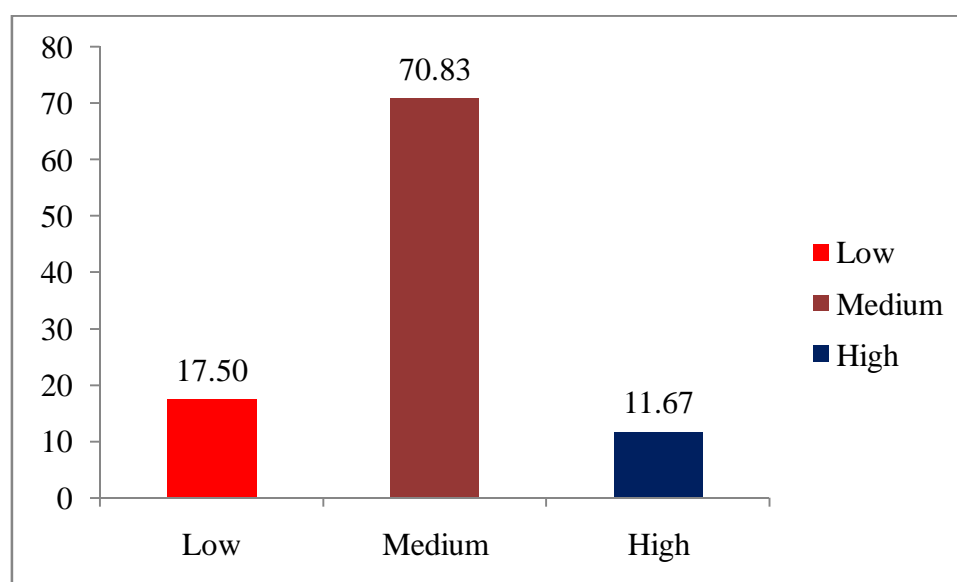
### 4.1.3 Risk Orientation

**Table 4.18. Distribution of beneficiaries according to the Risk Orientation (n=120)**

S. No	Category	Frequency	Percentage
1	Low (< 12.47)	21	17.50
2	Medium (12.48-16.25)	82	70.83
3	High (> 16.26)	14	11.67
Total		120	100.00
Mean=14.36			SD=1.88

A glance at the Table 4.18 and Figure 4.13 revealed that more than two-thirds (70.83 %) of the beneficiaries had medium level of risk orientation, followed by those with (17.05 %) low and (11.67 %) rest had high levels of risk orientation.

This might be due to the reason that majority of the beneficiaries had small holdings and their conditions were mediocre. Medium level of extension contact and involvement in subsidiary occupation by majority of the beneficiaries also might have prevented them from taking much risk in farming. The result was in accordance with Kumar *et al.* (2012) and Dhande and Jambavanth (2017).



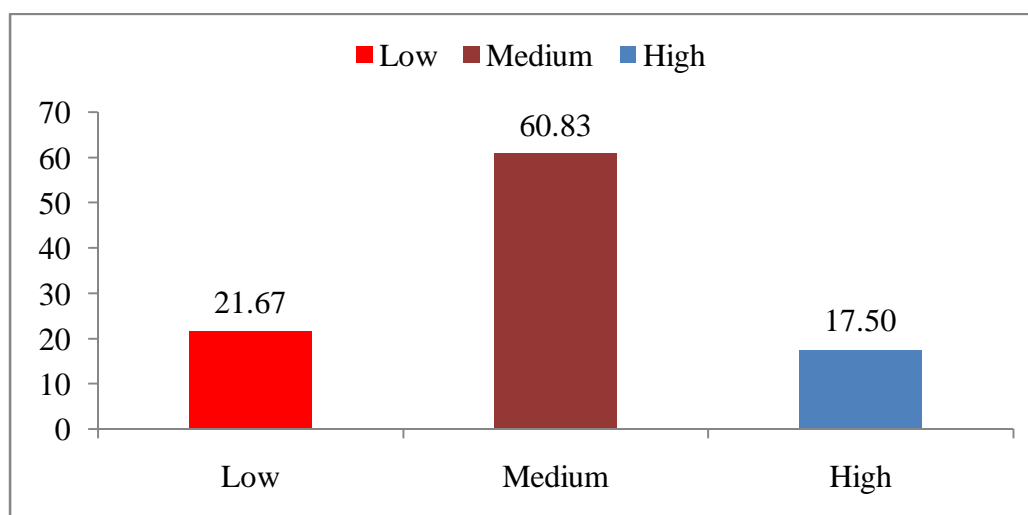
**Fig. 4.13. Distribution of beneficiaries according to risk orientation.**

## 4.2 KNOWLEDGE LEVEL OF BENEFICIARIES ABOUT PMFBY

**Table 4.1.9. Distribution of beneficiaries according to their level of knowledge on PMFBY (n=120)**

S. No.	Category	Frequency	Percentage
1	Low (< 8.22)	22	18.33
2	Medium (8.23-13.58)	74	61.67
3	High (> 13.59)	24	20.00
Total		120	100.00
Mean=10.1		SD=3.24	

A glance at the Table 4.19. and Figure 4.14 revealed that most of beneficiaries (61.67 %) had medium level of knowledge, followed by those with low (18.33 %) and rest (20.00 %) had high levels of knowledge. Some other reasons that could be possible attributed for medium knowledge were irregular visit of Bank officials, insurance officials and extension functionaries due to unmanageable area to be covered



**Fig. 4.14. Distribution of beneficiaries according their level of knowledge about PMFBY.**

**Table 4.20. Item analysis of knowledge level on PMFBY****(n=120)**

S. No	Particulars	Knowledge				Rank
		Correct		Incorrect		
		F	%	F	%	
1.	Year of Introduction of Pradhan Mantri Fasal Bima Yojana (PMFBY) is 2016	51	42.50	69	57.50	<b>X</b>
2.	Pradhan Mantri Fasal Bima Yojana (PMFBY) does not provides the loan for summer crops.	28	23.33	92	76.66	<b>XVI</b>
3.	Pradhan Mantri Fasal Bima Yojana (PMFBY) provides loan for Kharif, Rabi and horticultural crops.	80	66.66	40	33.33	<b>VI</b>
4.	The crops covered under Pradhan Mantri Fasal Bima Yojana (PMFBY) during kharif season are cereals, millets, pulses and oil seed crops.	100	83.33	20	16.66	<b>II</b>
5.	The crops covered under Pradhan Mantri Fasal Bima Yojana (PMFBY) during Rabi season are cereals, millets, pulses and oil seed crops.	47	39.17	73	60.83	<b>XI</b>
6.	The amount of premium rate for kharif crops under the PMFBY is 2%.	112	93.34	8	6.66	<b>I</b>
7.	The amount of premium rate for Rabi crops under the PMFBY is 1.5%.	40	33.33	80	66.67	<b>XIV</b>
8.	The amount of premium rate for commercial and horticultural crops under the PMFBY is 5%.	94	78.33	26	21.67	<b>III</b>
9.	The basis for implementation of Pradhan Mantri Fasal Bima Yojana (PMFBY) is on Area Approach Basis.	7	5.83	113	94.16	<b>XX</b>
10.	The crop loss assessment in Pradhan Mantri Fasal Bima Yojana (PMFBY) is done by using drones and smart phones.	24	20.00	96	80.00	<b>XVIII</b>
11.	The remote sensing lab for crop insurance to gave early warnings to the farmers and government about the losses under Pradhan Mantri Fasal Bima Yojana (PMFBY) was established by HDFC ERGO general insurance company.	27	22.50	93	77.50	<b>XVII</b>
12.	The Farmers under Pradhan Mantri Fasal Bima Yojana (PMFBY) has to intimate individual loss (natural calamities /mid season losses) within 72 hours to the officials of the department of Agriculture DOA.	89	74.16	31	25.84	<b>IV</b>

S. No	Particulars	Knowledge				Rank
		Correct		Incorrect		
		F	%	F	%	
13.	The farmers under Pradhan Mantri Fasal Bima Yojana (PMFBY) has to intimate post- harvest losses within 14 days to department of Agriculture DOA.	76	63.33	44	36.64	<b>VII</b>
14.	Pradhan Mantri Fasal Bima Yojana (PMFBY) beneficiaries is mandatory for Loanee farmers, who have taken institutional loans from banks	42	35.00	78	65.00	<b>XII</b>
15.	Pradhan Mantri Fasal Bima Yojana (PMFBY) beneficiaries is optional for Non-Loanee farmers, who have taken institutional loans from banks.	2	1.66	118	98.34	<b>XXII</b>
16.	The reasons for failure of Pradhan Mantri Fasal Bima Yojana (PMFBY) delay payment, insurance company not respond immediately &village as a unit.	88	73.33	32	26.64	<b>V</b>
17.	The source of funds for government to pay premium in Pradhan Mantri Fasal Bima Yojana (PMFBY) is Krishi Kaliyan Yojana	73	60.83	47	39.17	<b>VIII</b>
18.	The Share of Premium Rate by Central And State Governments in Pradhan Mantri Fasal Bima Yojana (PMFBY) is 50:50.	60	50.00	60	50.00	<b>IX</b>
19.	The companies provide Insurance under this scheme (PMFBY) in Srikakulam is Agriculture Insurance Company Limited	1	0.83	119	99.16	<b>XXIII</b>
20.	The companies provide Insurance under this scheme (PMFBY) are private sector insurance companies and public sector insurance companies	39	32.50	81	67.50	<b>XV</b>
21.	The types of the risks that are covered under this scheme (PMFBY) are yield loss, post harvest losses, localized calamties, wild animals attack.	22	18.33	98	81.64	<b>XIX</b>
22.	The registration of farmers under Pradhan Mantri Fasal Bima Yojana (PMFBY) gradually reduces year by year from inception of the programme	42	35.00	78	65.00	<b>XIII</b>
23.	In Pradhan Mantri Fasal Bima Yojana (PMFBY) the losses arising out of war and nuclear risks, malicious damage and other preventable risks shall be excluded.	3	2.50	117	97.50	<b>XXI</b>

Results furnished in the Table 4.20 revealed that the knowledge level of beneficiaries on PMFBY in percentage ranking order of their decreasing importance are :The amount of premium rate in kharif crops under PMFBY (93.34 %) followed by crops covered under PMFBY during kharif season crops (83.33 %), the amount of premium in horticultural and commercial crops (78.33 %), beneficiaries has intimate the individual losses (natural calamities /mid season losses) within 72 hours to the officials of the department of Agriculture DOA (74.16 %), reasons for failure of PMFBY delay payment, insurance company not respond immediately &village as a unit. (73.33 %), The PMFBY provides loan for kharif, rabi and horticultural crops (66.66 %), The farmers under PMFBY has to intimate the post-harvest losses within 14 days to department of Agriculture DOA (63.33 %), The source of funds for government to pay premium in PMFBY (60.83 %), The share of premium rate by central and state governments in PMFBY (50.00 %), Year in introduction of PMFBY (42.50 %), The crops covered under rabi season (39.17 %), PMFBY is mandatory for Loanee beneficiaries who have taken institutional loans from banks (35.00 %), The registration of farmers under PMFBY gradually reduces year by year from inception of the programme (35.00 %), The amount premium rate for rabi crops under PMFBY (33.33 %), The companies provide insurance under this PMFBY (32.50 %), PMFBY insurance does not provide loan for summer crops (23.33 %), The remote sensing lab for crop insurance to gave early warnings to the farmers and government about the losses under PMFBY (22.50 %), The crop losses assessment in PMFBY was done by using drones and smart phones (20.00%), The types of risks that are covered under this PMFBY (18.33 %), The basis for implementation of PMFBY (5.83 %), In PMFBY the losses arising out of war and nuclear risks, malicious damage and other preventable risks shall be excluded (2.50 %), PMFBY is optional for Non-Loanee beneficiaries taken from banks (1.66 %) and The companies provides insurance (PMFBY) in srikakulam dist (0.83%).

From the Table 4.2. it could be revealed that 75 to 100 per cent of the beneficiaries had knowledge on simple aspects. Generally beneficiaries have more knowledge on aspects which are being followed by them The amount of premium rate in kharif crops under PMFBY (93.34 %) followed by crops covered under PMFBY during kharif season crops (83.33 %), the amount of premium in horticultural and commercial crops (78.33 %).

It could be understood from the Table 4.2. Fifty to less than seventy five per cent of beneficiaries had knowledge about the aspects like farmers has intimate the individual losses (natural calamities /mid season losses) within 72 hours to the officials of the department of Agriculture DOA (74.16 %), reasons for failure of PMFBY delay payment, insurance company not respond immediately &village as a unit. (73.33 %), The PMFBY provides loan for kharif, rabi and horticultural crops (66.66 %), The farmers under PMFBY has to intimate the post-harvest losses within 14 days to department of Agriculture DOA (63.33 %), The source of funds for government to pay premium in PMFBY (60.83 %). For understanding above items needs practical experience in PMFBY and enthusiasm interest and critical on observation on the part of beneficiaries for acquiring knowledge about the above items. so the extension functionaries should organize training programmes, demonstrations to further enhancement of knowledge of the beneficiaries on PMFBY.

From Table 4.2 revealed that 25 to 50 per cent of beneficiaries had knowledge about the aspects like The share of premium rate by central and state governments in PMFBY (50.00 %), Year in introduction of PMFBY (42.50 %), The crops covered under rabi season (39.17 %), PMFBY is mandatory for Loanee farmers who have taken institutional loans from banks (35.00 %), The registration of farmers under PMFBY gradually reduces year by year from inception of the programme (35.00 %), The amount premium rate for rabi crops under PMFBY (33.33 %), The companies provide insurance under this PMFBY (32.50 %). The above items involve technical skills, expertise and comprehensive awareness to understand. Knowledge of the beneficiaries on the areas can be improved by organizing training programmes, screening of videos organization of study tours etc.,

From Table 4.2 revealed that less than 25 per cent of beneficiaries had knowledge about the aspects like PMFBY insurance does not provide loan for summer crops (23.33 %), The remote sensing lab for crop insurance to gave early warnings to the farmers and government about the losses under PMFBY (22.50 %), The crop losses assessment in PMFBY was done by using drones and smart phones (20.00%), The types of risks that are covered under this PMFBY (18.33 %), The basis for implementation of PMFBY (5.83 %), In PMFBY the losses arising out of war and nuclear risks, malicious damage and other preventable risks shall be excluded (2.50 %), PMFBY is optional for Non-Loanee farmers taken from banks (1.66 %) and The

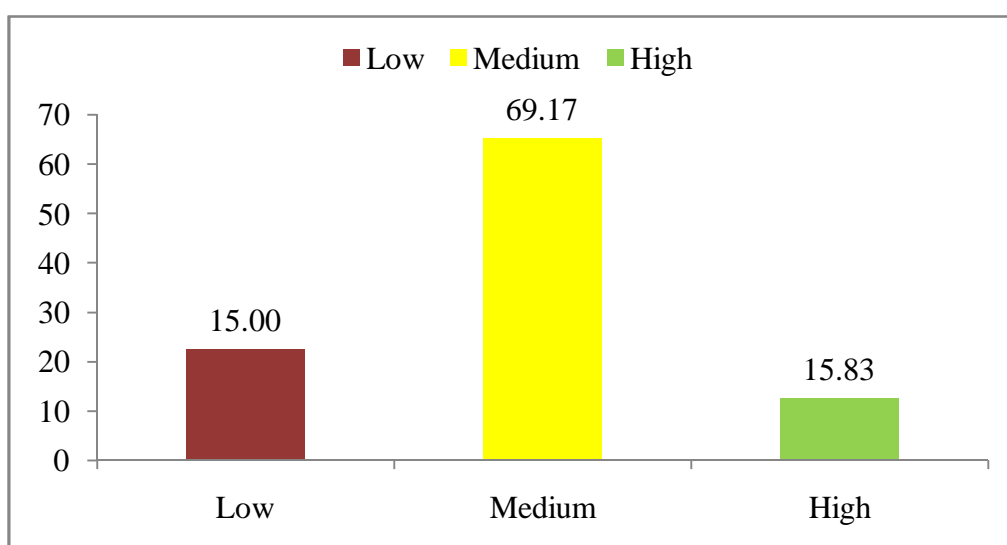
companies provides insurance (PMFBY) in Srikakulam dist (2.00%). Farmers perceived that above items are complex to understand and difficult to implement so there is a need to skill oriented training programmes for enhancement the knowledge of beneficiaries about PMFBY.

### 4.3 OPINION OF BENEFICIARIES ABOUT PRADHAN MANTRI FASAL BIMAYOJANA

**Table 4.21. Distribution of beneficiaries according to their opinion of beneficiaries about PMFBY (n=120)**

S. No	Category	Frequency	Percentage
1	Low (< 6.66)	18	15.00
2	Medium (6.67-11.02)	83	69.17
3	High (> 11.03)	19	15.83
Total		120	100.00
Mean=8.8			SD=2.04

A glance at the Table 4.21 and Figure 4.15 revealed that more than two-third (69.17 %) beneficiaries had medium level of opinion, followed by those with high (15.83 %) and rest low (15.00%) had high pinion. This might be the reason due to lack of aware in crop insurance, most of the beneficiaries belong to middle school education and majority of beneficiaries not exposed/ participated in training programmes related to crop insurance in srikakulam district.



**Fig. 4.15 Distribution of beneficiaries according their opinion of PMFBY**

**Table 4.22. Item analysis of opinion of beneficiaries about PMFBY (n=120)**

S. No.	Particulars	Opinion				Rank
		Favourable		Un Favourable		
		F	%	F	%	
1.	The Pradhan Mantri Fasal Bima Yojana (PMFBY) gives better indemnity to the insured farmers than the earlier National Agricultural Insurance Scheme (NAIS).	90	75.00	30	25.00	<b>8</b>
2.	I have satisfied with the Pradhan Mantri Fasal Bima Yojana (PMFBY).	6	5.00	114	95.00	<b>14</b>
3.	The premium rates for Pradhan Mantri Fasal Bima Yojana (PMFBY) is lower compared to earlier insurance schemes.	110	91.66	10	8.34	<b>4</b>
4.	The premium which is to be paid by the farmers for Pradhan Mantri Fasal Bima Yojana (PMFBY) should be paid by the government.	105	87.50	15	12.50	<b>6</b>
5.	The involvement of insurance companies in settlement of claims more in Pradhan Mantri Fasal Bima Yojana (PMFBY) compared to earlier programmes	113	94.16	7	5.84	<b>3</b>
6.	All the crop insurance schemes as PMFBY,WBCIS etc. helps in attraction and retaining youth in agriculture.	25	20.83	95	79.17	<b>12</b>
7.	I feel that Pradhan Mantri Fasal Bima Yojana (PMFBY) is a good measure against risk and uncertainty.	95	79.16	25	20.84	<b>7</b>
8.	The present method of use of smart phones /drones for assessment of crop damage is an ideal measure.	117	97.50	3	2.50	<b>2</b>
9.	The usage of Information Technology (IT) is more in Pradhan Mantri Fasal Bima Yojana (PMFBY) compared to earlier programmes.	105	87.50	15	15.50	<b>5</b>
10.	The Pradhan Mantri Fasal Bima Yojana (PMFBY) is necessary for improvement of socio-economic conditions of the farmers.	26	21.66	94	78.34	<b>10</b>
11.	Pradhan Mantri Fasal Bima Yojana (PMFBY) is the better programme the reduce losses arised due to natural calamities from the losses compared to earlier programmes.	71	59.16	49	40.84	<b>9</b>

S. No.	Particulars	Opinion				Rank
		Favourable		Un Favourable		
		F	%	F	%	
12.	Pradhan Mantri Fasal Bima Yojana (PMFBY) providing financial support to farmers suffering crop loss/damage arising out of unforeseen events.	117	97.50	3	2.50	<b>1</b>
13.	Pradhan Mantri Fasal Bima Yojana is essential to stabilize the farm income to ensure their continuance in the farming.	15	12.50	105	87.50	<b>13</b>
14.	Pradhan Mantri Fasal Bima Yojana (PMFBY) ensuring flow of credit to the agriculture sector.	26	21.66	94	78.34	<b>11</b>
15.	The Pradhan Mantri Fasal Bima Yojana (PMFBY) facilitates for usage of modern technologies in paddy cultivation in srikakulam dist.	1	0.83	119	99.17	<b>16</b>
16.	I have received compensation at the right time in Pradhan Mantri Fasal Bima Yojana (PMFBY).	2	1.66	118	98.33	<b>15</b>

Results furnished in the Table 4.20 revealed that the opinion on PMFBY by beneficiaries in percentage ranking order of their decreasing importance are the opinion in providing financial support to beneficiaries suffering to farmers suffering crop loss/damage arising out of unforeseen events (97.50 %) followed by present method of usage of smart phones /drones for assessment of crop damage is an ideal measure (97.50 %), compared to earlier programmes the involvement of insurance companies in settlement of claims more in PMFBY (94.16), premium rates are lower compared to earlier insurance schemes (91.66 %), usage of IT (information technology) more in this scheme compared to earlier (87.50 %), the government is paid the insurance premium to the farmers (87.50 %), PMFBY is a good measure for against risk and uncertainty (79.16 %), The Pradhan Mantri Fasal Bima Yojana (PMFBY) gives better indemnity to the insured farmers than the earlier National Agricultural Insurance Scheme (NAIS), PMFBY is better programme to reduce losses araised due to natural calamities from the losses compared to earlier programmes (59.16 %), to improve the socio-economic conditions of the farmers by this scheme (21.66 %), PMFBY is ensuring flow of credit to the agriculture sector (21.66 %), All the crop insurance schemes as PMFBY,WBCIS etc. helps in attraction and retaining youth in agriculture (20.83 %), to stabilize the farm

income and to continuance the farming is essential in this scheme (12.50 %), I was satisfied with this insurance scheme (5.00 %), I have received compensation at the right time in this scheme (1.66 %), PMFBY facilitates for usage of modern technologies in paddy cultivation in Srikakulam dist.(0.83 %).

75.00 per cent of the beneficiaries had favorable opinion on “The PMFBY gives better indemnity to the insured farmers than the earlier National Agricultural Insurance Scheme (NAIS)”. It might be due to the fact that PMFBY provides insurance coverage to farmers against natural calamities and pests and also encourages them to adopt innovative modern agricultural practices, exemption from service tax liability of all the services involved in the implementation of the scheme and simple rules of the schemes.

95.00 per cent of the beneficiaries had unfavourable opinion towards “I have satisfied with the Pradhan Mantri Fasal Bima Yojana” of might due to more involvement of insurance companies in settlement of claims, delay in payment of claims.

91.66 per cent of the beneficiaries had favourable opinion on premium rates that are lower compared to earlier insurance schemes. It might be due to fact that premium to be paid just 2 per cent of the insured value for the kharif crops, 1.5 per cent for rabi crops and 5 per cent for Horticultural crops.

87.50 per cent beneficiaries had favourable opinion towards the premium which is to be payed by the farmers for PMFBY should be payed by the government due to low economic status of the farmers and complexity involved in the payment of premium.

94.16 per cent of the beneficiaries had favorable opinion on Involvement of insurance companies in settlement of claims is move in PMFBY compare to earlier programmes. It might be due to the design of the insured contract was not fair and not beneficial to farmers but favoured mostly the agents. Due to this farmers perceived that, their claims were still not well protected by programmes.

79.17 per cent of the beneficiaries had unfavourable opinion on “all the crop insurance schemes are PMFBY, WBCIS etc.. helps in attraction and retaining youth in agriculture” Reasons for this could be that young generation of rural areas may be interested in occupation other than farming.

79.16 per cent of the beneficiaries had favorable opinion on “I feel that PMFBY is a good measure against risk and uncertainty”. It might be due to the fact that PMFBY included successful aspects of the existing schemes and effectively addressed whatever was lacking in earlier schemes.

It is quite evident from present findings that majority (97.50 %) of the beneficiaries had favorable opinion on usage of smart phones /drones for assessment of crop damage in PMFBY. It might be due to complexity of crop cutting experiments and simplicity of usage of smart phones for assessment of crop damage in PMFBY.

87.50 per cent of the farmers favorable opinion on the premium which is paid by the farmers for PMFBY should be paid by the government; the usage of IT is more in PMFBY is more compare to earlier programmes poor economic conditions of the beneficiaries cumbersome in payment of premium might have been the reason for inducing the beneficiaries to have favourable opinion on payment of premium by the government .The present government of Andhra Pradesh has taken decision to pay the premium to all the eligible farmers.

78.34 per cent of the beneficiaries had unfavorable opinion on “The PMFBY is necessary for improvement of Scio-economic conditions of the farmers”. Reasons for this could be that the study district is one of the most backward district in Andhra Pradesh highly prone to cyclones.

59.16 per cent of the beneficiaries had favourable opinion on PMFBY is the better proportion to reduce the losses arised due to inclusion of more number of natural calamties in this programme compared to earlier programmes this might be due to inclusion of more number of natural calamities in this programme compare to earlier programmes.

97.50 per cent of farmers had favorable opinion towards providing financial support to farmers suffering crop loss/damage arising out of unforeseen events. The possible reason for this might be due to timely getting of financial support from the insurance agencies.

87.50 per cent of the beneficiaries had unfavorable opinion towards “PMFBY is essential to stabilize the farm income to ensure their continuance in the farming. It might be due to the fact farmers are not getting any trainings under PMFBY on modern production technologies of crops and getting sufficient compensation at the right time.

78.34 per cent of the beneficiaries had unfavorable opinion on PMFBY ensuring flow of credit to the agricultural sectors” it might be due to fact that loanee and non-loanee farmers are eligible for PMFBY but, Banks are not providing loans to the tenant farmers.

99.17 per cent of the beneficiaries had unfavorable opinion towards PMFBY facilities for usage modern technologies in paddy cultivation in Srikakulam dist. It clearly indicates that implementing agencies of PMFBY are not disseminating Modern technologies to the paddy growing farmers. So there is need to organization of training programmes to the farmers by the implementing agencies with the assistance of the scientists of ANGRAU.

98.33 per cent of the beneficiaries had unfavorable opinion towards “I have received compensation at the right time in PMFBY. This clearly shows that majority of the farmers are not getting compensation at the right time. It might be due to delay in release of funds from the govt. of India as well as government of Andhra Pradesh.

#### **4.4 RELATIONSHIP BETWEEN SELECTED PROFILE CHARACTERISTICS OF BENEFICIARIES WITH THEIR LEVEL OF KNOWLEDGE AND OPINION OF BENEFICIARIES ABOUT PMFBY**

##### **4.4.1 Relationship of Selected Profile Characteristics of Beneficiaries With Their Level of Knowledge**

An attempt has been made to find out if there exists any relationship between the profile characteristics of farmers viz., age, education, land holding, farming experience, annual income, material possession, extension contact, disaster occurrence pattern, mass media exposure, training undergone, crop loan availed, scientific orientation, risk orientation with their level of knowledge.

**Table 4.23. Correlation coefficient between profile characteristics of beneficiaries with their level of knowledge (n=120)**

S. No.	Independent variable	'r' value
1	Age	-0.063 <sup>NS</sup>
2	Education	0.023 <sup>NS</sup>
3	Land holding	0.413**
4	Farming experience	0.142 <sup>NS</sup>
5	Annual income	0.154 <sup>NS</sup>
6	Material possession	0.188*
7	Extension contact	0.333**
8	Disaster occurrence pattern	0.713**
9	Mass media exposure	0.443**
10	Training undergone	0.312**
11	Crop loan availed	0.224*
12	Scientific orientation	0.491**
13	Risk orientation	0.376**

NS=Non-Significant

\*\*Significant at 0.01 level of probability

\* Significant at 0.05 level of probability

The relationship between the selected profile characteristics and the knowledge level of beneficiaries of PMFBY were tested by null hypothesis and empirical hypothesis.

### Testing of hypothesis

#### Null hypothesis (H<sub>0</sub>)

There will be no significant relationship between the selected profile characteristics of beneficiaries and knowledge level of beneficiaries of PMFBY.

#### Empirical hypothesis (E<sub>H</sub>)

There will be a significant relationship between the selected profile characteristics of knowledge and the knowledge level of beneficiaries of PMFBY.

The results in the Table 4.23. exhibits that out of thirteen independent variables studied landholding, extension contact, disaster occurrence pattern, mass media utilization, training undergone, scientific orientation, risk orientation are positively and significantly correlated with the knowledge level of beneficiaries of PMFBY at one per cent level of significance.

It is evident from the Table 4.23. that computed correlation coefficient ( $r$ ) values of material possession, crop loan availed are positively and significantly correlated with the knowledge level of beneficiaries of PMFBY at five per cent level of significance. The remaining independent variables education, farming experience, annual income are positively and non-significant in their relationship with the knowledge about PMFBY.

The variable age had showed a negative and non-significant relationship with the knowledge level of beneficiaries of PMFBY.

#### **4.4.1.1 Age of beneficiaries versus knowledge about PMFBY**

It could be revealed from the Table 4.23 that there was a negative and non-significant relationship between age of beneficiaries and knowledge about PMFBY.

From this, it could be inferred that as the age increases, will not changes in the knowledge of PMFBY beneficiaries but the relationship was non-significant. Age might have negatively influenced on knowledge of PMFBY beneficiaries.

The similar findings in the line with the findings of Sravan (2012).

#### **4.4.1.2 Education of beneficiaries versus knowledge about PMFBY**

From the Table 4.23., it could be clearly inferred that there was a positive and non-significant relationship between education of beneficiaries and knowledge about PMFBY.

This might be due to reason that as the PMFBY is either compulsory or has been piloted in the state due to which there has been no probable relationship between the education of beneficiaries and their knowledge about PMFBY.

The present finding was in line with the findings of Mohapatra *et. al* (2016)

#### **4.4.1.3 Land holding of beneficiaries versus knowledge about PMFBY**

It was evident that from the Table 4.23 that there was a positive and significant relationship between education and knowledge of PMFBY beneficiaries at one per cent level of significance.

The possible reason might be due to the fact that majority of the PMFBY beneficiaries belongs to small and marginal farmers who are having the medium extension contact and more of credit acquisition through formal institutions for their farming activities.

The present finding was in line with the findings of Dhande and Jambavanth (2017)

#### **4.4.1.4 Farming experience of beneficiaries versus knowledge about PMFBY**

Table 4.23. Clearly exhibited that there was a positive and non-significant relationship between farming experience and knowledge of PMFBY beneficiaries. Majority of the farmers involved in middle to old age group and relatively with middle and high school education level. It is witnessed that experienced farmers have more knowledge due to continuous extension contact as well as mass media exposure. This could be the suitable reason for the positive relationship with the farming experience.

#### **4.4.1.5 Annual income of beneficiaries versus knowledge about PMFBY**

It was evident that from the Table 4.23 that there was a positive and non-significant relationship between annual income and knowledge of beneficiaries of PMFBY.

The possible reason might be that it can be inferred that the farmer's annual income has meager changes in their knowledge level because of most of the farmers were medium to low income category, usually small and marginal farmers are getting less compensation under PMFBY during crop failure.

#### **4.4.1.6 Material possession of beneficiaries versus knowledge about PMFBY**

It was evident that from the Table 4.23. that there was a positive and significant relationship between material possession and knowledge of beneficiaries of PMFBY.

It could be inferred that most of the beneficiaries having the medium material possession category which exposes the farmers to personal cosmopolite like AEO`s, MAO`s, ADA etc., for benefitting of farm machineries' under various agricultural development programmes and during that time may aware about PMFBY which might be enrich the knowledge on PMFBY beneficiaries.

The above finding was in line with the results of Sing *et. al* (1999)

#### **4.4.1.7 Extension contact of beneficiaries versus knowledge about PMFBY**

It was evident that from the Table 4.23. that there was a positive and significant relationship between extension contact and knowledge of beneficiaries of PMFBY.

The probable reason might be due the fact that, PMFBY beneficiaries are pertaining to medium extension contact which explains they should be insured by paying predetermined premium to the extension functionaries' like Banks, AO`s, AEO`s, MAO`s etc., during crop loss caused by natural calamities. The above reason might be evidence for increasing the knowledge among PMFBY beneficiaries.

#### **4.4.1.8 Disaster occurrence pattern of beneficiaries versus knowledge about PMFBY**

It was evident that from the Table 4.23 that there was a positive and significant relationship between disaster occurrence pattern and knowledge of beneficiaries of PMFBY.

The possible reason that, most of the PMFBY beneficiaries belong to high to medium disaster occurrence pattern category, which resulting eager to acquisition of knowledge on disasters and insurance (PMFBY) to overcome huge crop loss as well as economic loss of farmers.

#### **4.4.1.9 Mass media utilization of beneficiaries versus knowledge about PMFBY**

Clearly showed Table 4.23. that there was a positive and significant relationship between mass media exposure and knowledge of beneficiaries of PMFBY at one per cent level of significance.

It could be inferred that most of the beneficiaries had medium level of mass media utilization and beneficiaries were more focused on enriching the knowledge about scientific cultivation practices along with PMFBY and enriched knowledge

utilized for crop production through mass media like news papers, books on agriculture, TV programmes etc., caused by middle school education, middle to old age farmers, small and marginal farmers and medium to low extension contact.

The present finding was in line with the findings of Dhande and Jambavanth (2017).

#### **4.4.1.10 Training undergone of beneficiaries versus knowledge about PMFBY**

It was evident that from the Table 4.23. that there was a positive and highly significant relationship between training undergone and knowledge of beneficiaries of PMFBY at one per cent level of significance .

The possible reason might be due to middle school education, medium extension contact and medium mass media utilization are the probable reasons for influencing the beneficiaries to participation in training programmes organized by department of agriculture, KVKs, SAUs, extension education units.

The present finding was in line with the results of Israel (2003)

#### **4.4.1.11 Crop loan availed by beneficiaries versus knowledge about PMFBY**

It was evident that from the Table 4.23 that there was a positive and significant relationship between scientific orientation and knowledge of beneficiaries of PMFBY at 0.05 level of significance.

It inferred that most of the beneficiaries taken crop loans from institutional sources such as co-operative societies, Regional Rural banks and commercial banks, and it is mandatory to register the crop insurance which may enhance the knowledge about PMFBY.

#### **4.4.1.12 Scientific orientation of beneficiaries versus knowledge about PMFBY**

It was evident that there was a positive and highly significant relationship between scientific orientation and knowledge of PMFBY beneficiaries. The plausible reason might be due to medium level of scientific orientation category which caused by middle school education, medium extension contact and medium level of mass media utilization of PMFBY beneficiaries leads to more enthusiastic to know about latest scientific technologies of crop production. Table 4.23

#### 4.4.1.13 Risk orientation of beneficiaries versus knowledge about PMFBY

It was evident that there was a positive and highly significant relationship between risk orientation and knowledge of beneficiaries of PMFBY at 0.01 level of significance.

Most of the beneficiaries will adopt the risk mitigation techniques like crop insurance, pest and disease resistance, drought resistance varieties and rain water harvesting technologies etc., which are cope up with natural calamities. The above reason may evident for increasing the knowledge about PMFBY . Table 4.23.

#### 4.4.2 Multiple linear regression analysis of selected independent variables with their knowledge level

An attempt has been made to find out the amount of contribution made by the profile characteristics in explaining the variation in the dependent variable i.e., knowledge of farmers towards beneficiaries of PMFBY. The results were presented in Table 4.24.

**Table 4.24. Multiple linear regression analysis of selected independent variables with knowledge of PMFBY beneficiaries**

S. No.	Independent variable	Regression coefficient	Standard error	't' value
1	Age	-0.009	0.049	-0.189 <sup>NS</sup>
2	Education	0.180	0.163	1.103 <sup>NS</sup>
3	Land holding	0.052	0.158	0.326 <sup>NS</sup>
4	Farming experience	0.007	0.035	0.191 <sup>NS</sup>
5	Annual income	5.019	0.000	0.731 <sup>NS</sup>
6	Material possession	0.043	0.025	1.73 <sup>NS</sup>
7	Extension contact	-0.068	0.163	0.417 <sup>NS</sup>
8	Disaster occurrence pattern	0.878	0.157	5.587**
9	Mass media exposure	-0.133	0.142	-0.935 <sup>NS</sup>
10	Training undergone	0.279	0.203	1.376 <sup>NS</sup>
11	Crop loan availed	0.547	0.400	1.368 <sup>NS</sup>
12	Scientific orientation	0.168	0.108	1.551 <sup>NS</sup>
13	Risk orientation	0.133	0.107	1.247 <sup>NS</sup>

a= - 5.362

R<sup>2</sup>=0.564

NS = Non-Significant

\*\*Significant at 0.01 Level of probability

\* Significant at 0.05 Level of probability

From the above table the MLR equation can be fit as  $Y = -5.10 + -0.009x_1 + 0.180x_2 + 0.052x_3 + 0.007x_4 + 5.019x_5 + 0.043x_6 + -0.068x_7 + 0.878^{**}x_8 + -0.133x_9 + 0.279x_{10} + 0.547x_{11} + 0.168x_{12} + 0.133x_{13}$

Table 4.24. revealed that the coefficient of determination “R<sup>2</sup>” value was significant, as the value of “a” was found significant. The “R<sup>2</sup>” value of 0.564 indicated that all the selected thirteen profile characteristics of beneficiaries put together, explained about 56.40 per cent of variation in the knowledge about PMFBY. Remaining 43.60 per cent is due to the extraneous effects of the variables. Hence, it could be stated that the variables selected to a large extent explained the variation in knowledge level of the beneficiaries of PMFBY.

#### 4.4.3 Relationship of the profile characteristics of beneficiaries of PMFBY with their opinion

**Table 4.25. Correlation coefficient between profile characteristics of beneficiaries with their opinion**

S. No.	Independent variable	‘r’ value
1	Age	-0.069 <sup>NS</sup>
2	Education	-0.040 <sup>NS</sup>
3	Land holding	0.390 <sup>**</sup>
4	Farming experience	0.140 <sup>NS</sup>
5	Annual income	0.127 <sup>NS</sup>
6	Material possession	0.094 <sup>NS</sup>
7	Extension contact	0.347 <sup>**</sup>
8	Disaster occurrence pattern	0.625 <sup>**</sup>
9	Mass media exposure	0.419 <sup>**</sup>
10	Training undergone	0.301 <sup>**</sup>
11	Crop loan availed	0.294 <sup>**</sup>
12	Scientific orientation	0.429 <sup>**</sup>
13	Risk orientation	0.378 <sup>**</sup>

NS= Non-Significant

\*\*Significant at 0.01 Level of probability

\* Significant at 0.05 Level of probability

The regression coefficient given in Table 4.24. Further revealed that the profile characteristics namely disaster occurrence pattern were found to be positively significant at 1 per cent level of probability .The other variables viz., training undergone, scientific orientation, risk orientation, education, land holding, farming experience, annual income, material possession, mass media exposure, extension contact, crop loan availed were non-significant in their relationship . The variable age is negatively and non-significant in their relationship.

This implies that disaster occurrence pattern, training undergone, scientific orientation and risk orientation were contributed significantly to the prediction of the variation in the level of knowledge of the beneficiaries of PMFBY.

## **Testing of hypothesis**

### **Null hypothesis (Ho)**

There will be no significant relationship between the selected profile characteristics of beneficiaries and opinion towards beneficiaries of PMFBY.

### **Empirical hypothesis (EH)**

There will be a significant relationship between the selected profile characteristics of beneficiaries and opinion towards beneficiaries of PMFBY.

It is evident from the Table 4.25. that computed the 'r' values of land holdings, disaster occurrence pattern, extension contact, mass media utilization, training undergone, scientific orientation, risk orientation, crop loan availed are positively and significantly correlated at one per cent level of significance with the opinion. The variables as education, annual income, farming experience, material possession are positively and significantly correlated with the opinion.

The independent variable age had negatively and non-significant relationship with the opinion of PMFBY beneficiaries.

#### **4.2.4.1 Age versus opinion of PMFBY beneficiaries**

It was evident that from the Table 4.25 that there was a negative and non-significant relationship between age and opinion of insured farmers.

From this, it could be inferred that as age of beneficiaries increases, will not changes in the opinion of PMFBY beneficiaries because PMFBY is a new scheme for protection of farmers interest during natural calamities, could be well known by the young generation rather than old age group PMFBY beneficiaries.

#### **4.2.4.2 Education versus opinion of PMFBY beneficiaries**

It was evident that from the Table 4.25 that there was a negative and non-significant relationship between education and opinion of beneficiaries of PMFBY.

The probable reason that majority of the beneficiaries educated up to middle school level who are less enthusiastic to know the information about PMFBY which may not give nice opinion.

#### **4.2.4.3 Land holding versus opinion of PMFBY beneficiaries**

It was evident that from the Table 4.25 that there was a positive and significant relationship between land holding and opinion of beneficiaries of PMFBY at 0.01 level of significance.

The possible reason might be due to the fact that majority of the PMFBY beneficiaries belongs to small and marginal farmers who are having the medium extension contact and more of credit acquisition through formal institutions for their farming activities.

The present finding was in line with the findings of Dhande and Jambavanth (2017)

#### **4.2.4.4 Farming experience versus opinion of PMFBY beneficiaries**

It was evident that from the Table 4.25 that there was a positive and non-significant relationship between farming experience and opinion of beneficiaries of PMFBY.

Majority of the beneficiaries with 21-30 years of farming experience and it could be witnessed that experienced farmers having capability of giving acceptable opinion due to continuous medium extension contact as well as medium mass media utilization. This could be the suitable reason for the positive relationship with the farming experience.

The present finding was in line with the findings of Dhande and Jambavanth (2017)

#### **4.2.4.5 Annual income versus opinion of PMFBY beneficiaries**

It was evident that from the Table 4.25 that there was a positive and non-significant relationship between annual income and opinion of beneficiaries of PMFBY. Most of the beneficiaries having medium income, small and marginal and middle school education. They are least of aware of the benefit of crop insurance which leads to low returns, might be the reason for above relationship between annual income and opinion.

#### **4.2.4.6 Material possession versus opinion of PMFBY beneficiaries**

It was evident that from the Table 4.25 that there was a positive and non-significant relationship between material possession of beneficiaries and opinion on PMFBY.

It could be inferred that most of the beneficiaries having the medium material possession category due to beneficiaries may contact with personal cosmopolite like AEO`s, MAO`s, ADA etc., for benefitting of farm machineries' under various agricultural development programmes along with PMFBY which might be judge the opinion on PMFBY beneficiaries.

#### **4.2.4.7 Extension contact versus opinion of PMFBY beneficiaries**

It was evident that from the Table 4.25 that there was a positive and highly significant relationship between extension contact of beneficiaries and opinion about PMFBY at 0.01 per cent level of significance.

The possible cause might be due the fact that, PMFBY beneficiaries belonged to medium extension contact, they should be insured by paying premium to the extension functionaries' like Banks, AO`s, AEO`s, MAO`s etc., during crop damage caused by natural calamities. The above reason might be evidence for good opinion among PMFBY beneficiaries.

The present finding was in line with the findings of Mohapatra *et. al* (2016)

#### **4.2.4.8 Disaster occurrence pattern versus opinion of PMFBY beneficiaries**

It was evident that from the Table 4.25 that there was a positive and significant relationship between disaster occurrence pattern of beneficiaries and opinion about PMFBY.

Most of the PMFBY beneficiaries belong to high disaster occurrence pattern category, which resulting eager to acquisition of knowledge on disasters and insurance to protect beneficiaries interest and beneficiaries had more knowledge, obviously can observed the worthy opinion about PMFBY.

#### **4.2.4.9 Mass media exposure versus opinion of PMFBY beneficiaries**

It was evident that from the Table 4.25 that there was a positive and significant relationship between mass media exposure of beneficiaries and opinion about PMFBY.

It inferred that most of the farmers had a medium level of mass media utilization due to middle school education, medium to old age farmers, small and marginal farmers, medium extension contact and medium knowledge which leading to moderate opinion about PMFBY.

#### **4.2.4.10 Training undergone versus opinion of PMFBY beneficiaries**

It was evident that from the Table 4.25 that there was a positive and highly significant relationship between training undergone and opinion about PMFBY at 0.01 level of significance.

The probable reason might be due to, medium extension contact and medium mass media utilization are the probable causes for motivating the beneficiaries to participation in training programmes organized by department of agriculture, KVKs, SAUs, extension education units etc., which gives good opinion about PMFBY.

#### **4.2.4.11 Crop loan availed versus opinion of PMFBY beneficiaries**

It was evident that from the Table 4.25 that there was a positive and highly significant relationship between crop loan availed by beneficiaries and opinion about PMFBY at 0.01 level of significance.

This might be due to fact that most of the beneficiaries took the crop loans from agriculture co-operative societies which are closed and easily accessible for getting crop insurance and having the medium knowledge which gives medium opinion about PMFBY.

#### **4.2.4.12 Scientific orientation versus opinion of PMFBY beneficiaries**

It was evident that from the Table 4.25 that there was a positive and highly significant relationship between scientific orientation and opinion about PMFBY at 0.01 level of significance.

The plausible reason might be due to medium scientific orientation category of beneficiaries of PMFBY which caused by middle school education, medium extension contact, medium mass media utilization and medium knowledge of PMFBY beneficiaries which leads to more enthusiastic to aware about latest scientific technologies for crop production, which may give good opinion about PMFBY.

#### **4.2.4.13 Risk orientation versus opinion of PMFBY beneficiaries**

It was evident that from the Table 4.25 that there was a positive and highly significant relationship between risk orientation of beneficiaries and opinion about PMFBY at 0.01 level of significance.

When natural calamities occurred uncertainly, which harmed whole crop production system, in this context beneficiaries will adopt the risk mitigation techniques like crop insurance, pest and disease resistance, drought resistance varieties, rain water harvesting technologies etc., which are cope up with natural calamities. The above reason may evident for giving good opinion about PMFBY.

From the Table 4.26. the MLR equation can be fit as  $Y = -0.373 + 0.027x_1 + 0.052x_2 + 0.066x_3 + 0.019x_4 + 2.585x_5 + 0.015x_6 + 0.042x_7 + 0.455^{**}x_8 + -0.062x_9 + 0.172x_{10} + 0.649^{*}x_{11} + 0.073x_{12} + 0.134x_{13}$

Table 4.26. revealed that the coefficient of determination “R<sup>2</sup>” value was significant, as the value of “a” was found significant. The “R<sup>2</sup>” value of 0.456 indicated that all the selected fourteen profile characteristics of beneficiaries put together, explained about 45.60 per cent variation in the opinion of PMFBY. Remaining 54.40 per cent is due to the extraneous effects of the variables. Hence, it could be stated that the variables selected to a large extent explained the variation in selected profile characteristics of beneficiaries, opinion of PMFBY.

**Table 4.26. Multiple linear regression analysis of selected independent variables with opinion about PMFBY beneficiaries**

S. No	Independent variable	Regression coefficient	Standard error	't' value
1	Age	-0.027	0.039	-0.703 <sup>NS</sup>
2	Education	0.052	0.129	0.401 <sup>NS</sup>
3	Land holding	0.066	0.125	0.528 <sup>NS</sup>
4	Farming experience	0.019	0.028	0.670 <sup>NS</sup>
5	Farming experience	2.585	0.000	0.476 <sup>NS</sup>
6	Material possession	0.015	0.020	0.731 <sup>NS</sup>
7	Extension contact	0.042	0.129	0.327 <sup>NS</sup>
8	Disaster occurrence pattern	0.455	0.125	3.652**
9	Mass media exposure	-0.062	0.112	-0.548 <sup>NS</sup>
10	Training undergone	0.172	0.161	1.069 <sup>NS</sup>
11	Crop loan availed	0.649	0.317	2.051*
12	Scientific orientation	0.073	0.086	0.856 <sup>NS</sup>
13	Risk orientation	0.134	0.084	1.590 <sup>NS</sup>

a= -0.373

R<sup>2</sup>= 0.456

NS = Non-Significant

\*\*Significant at 0.01 Level of probability \* Significant at 0.05 Level of probability

An attempt has been made to find out the amount of contribution made by the profile characteristics in explaining the variation in the dependent variable i.e. opinion of the beneficiaries to this version. The results are presented in the Table 4.26.

The regression coefficient given in Table 4.26 Further revealed that the selected profile characteristics namely disaster occurrence pattern, were found to be positively significant at one per cent level of probability and crop loan availed were found to be positively significant at five per cent level of probability. Remaining selected profile characteristics education, land holding, farming experience, annual income, material possession, mass media exposure, extension contact, training undergone, scientific orientation and risk orientation are non-significant in this analysis. The variable age is negatively and non- significant in their relationship.

## **4.5 CONSTRAINTS FACED BY THE BENEFICIARIES OF PMFBY AND SUGGESTIONS GIVEN BY THEM TO OVERCOME THE CONSTRAINTS**

### **4.5.1 Constraints Faced by the Beneficiaries in PMFBY**

An attempt was made to find out the constraints perceived by the beneficiaries in PMFBY and presented in Table 4.27. Ranks were given based on frequency and percentages.

**Table 4.27. Constraints faced by the beneficiaries in PMFBY (n=120)**

<b>S. No.</b>	<b>Constraints</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Rank</b>
1	Lack of knowledge regarding to PMFBY.	109	90.83	<b>I</b>
2	Lack of awareness of benefits of PMFBY.	105	87.60	<b>II</b>
3	Less compensation offered in crop insurance scheme.	98	81.67	<b>III</b>
4	Delay in payment of compensation.	91	75.83	<b>IV</b>
5	Rate of premium is not universal for all crops.	90	75.00	<b>V</b>
6	On-line registration and assessment of risk complexity in PMFBY.	86	71.67	<b>VI</b>
7	More intermediaries in the marketing process	87	72.66	<b>VII</b>
8	Unavailability of experts for assessment of loss at visit time.	80	66.67	<b>VIII</b>
9	Lack of coordination between banks and farmers.	77	64.16	<b>IX</b>
10	High rate of premium	75	62.50	<b>X</b>
11	Poor socio-economic status of the farmers.	74	61.67	<b>XI</b>
12	Individual assessment is not allowed in this scheme.	72	60.00	<b>XII</b>
13	Unavailability of reporting authority at the time of loss.	70	58.33	<b>XIII</b>
14	Lack of well trained insurance professionals.	71	59.70	<b>XIV</b>
15	Corruption while settling claims by the insurance companies.	67	55.83	<b>XV</b>
16	Lack of education of farmers.	64	53.33	<b>XVI</b>
17	Non availability of source for doubt clarification.	63	52.50	<b>XVII</b>
18	Social stigma in getting crop insurance.	58	48.33	<b>XVIII</b>
19	Low scale of finance.	54	45.00	<b>XIX</b>
20	Insufficient bank facilities in rural areas.	51	42.50	<b>XX</b>

**Table 4.28. Suggestions given to overcome the constraints of beneficiaries in PMFBY (n=120)**

S. No.	Suggestions	Beneficiaries		Rank
		F	%	
1.	Procedure of the scheme should be simplified.	114	95.00	<b>I</b>
2.	Organize of awareness programmes for farmers regarding PMFBY.	112	93.33	<b>II</b>
3.	Organization of training programmes on e-filling of insurance and benefit of the farmers.	108	90.00	<b>III</b>
4.	Payment of premium by the government for farmers below the poverty regarding PMFBY.	107	89.17	<b>IV</b>
5.	Premium rate may be decreased.	103	85.83	<b>V</b>
6.	Avoid delay in payment of compensation.	97	80.83	<b>VI</b>
7.	Increase the number of extension agents.	95	79.17	<b>VII</b>
8.	Maintain universal premium for all crops.	94	78.33	<b>VIII</b>
9.	Improve linkage between banks and farmers.	91	75.83	<b>IX</b>
10.	Unit area may be of individual or a village level.	88	73.33	<b>X</b>
11.	Improve socio-economic conditions of the farmers.	87	72.50	<b>XI</b>
12.	Increase the insurance agents in rural areas.	84	70.00	<b>XII</b>
13.	Avoid corruption while settling claims.	82	68.33	<b>XIII</b>
14.	Organization of trainings to the insurance professionals.	80	66.67	<b>XIV</b>
15.	Avoid intermediating in marketing process.	78	65.00	<b>XV</b>
16.	Establishment of night schools to educate adults.	75	62.50	<b>XVI</b>
17.	Eliminate Social stigma in getting crop insurance.	69	57.50	<b>XVII</b>
18.	Enhancement of scale of finance based on actual cost of cultivation of crops.	67	55.83	<b>XVIII</b>
19.	Establishment of sufficient number of banks in rural areas.	64	53.33	<b>XIX</b>
20.	All the crops including vegetables be covered.	60	50.00	<b>XX</b>

The data in the Table 4.27. reveals that the constraints faced by the beneficiaries in PMFBY in percentage in ranking order of their importance as Lack of knowledge regarding to PMFBY, Lack of awareness of benefits of PMFBY, Less compensation offered in crop insurance scheme, Delay in payment of compensation, Rate of premium is not universal for all crops, more intermediaries are present in the

market, On-line registration and assessment of risk complexity in PMFBY, Unavailability of experts for assessment of loss at visit time, Lack of coordination between banks and farmers, High rate of premium, Poor socio-economic status of the farmers, Individual assessment is not allowed in this scheme, Unavailability of reporting authority at the time of loss, Lack of well trained insurance professionals, Corruption while settling claims by the insurance companies, Lack of education of farmers, Non availability of source for doubt clarification, Social stigma in getting crop insurance, Low scale of finance, Insufficient bank facilities in rural areas.

Table 4.28. Clearly showed that suggestions elicited from the beneficiaries of PMFBY in percentage ranking order of their decreasing importance are Procedure of the scheme should be simplified, Organize of awareness programmes for farmers regarding PMFBY, Organization of training programmes on e-filing of insurance and benefit of the farmers, Payment of premium by the government for farmers below the poverty regarding PMFBY, Premium rate may be decreased, Avoid delay in payment of compensation, Increase the number of extension agents, Maintain universal premium for all crops, Improve linkage between banks and farmers, Unit area may be of individual or a village level, Improve socio-economic conditions of the farmers, Increase the insurance agents in rural areas, Avoid corruption while settling claims, Organization of trainings to the insurance professionals, Avoid intermediating in marketing process, Establishment of night schools to educate adults, Eliminate Social stigma in getting crop insurance, Enhancement of scale of finance based on actual cost of cultivation of crops, Establishment of sufficient number of banks in rural areas, All the crops including vegetables be covered.

Thus, it is the responsibility of the government, extension agency and research institutions to provide above suggested facilities to the beneficiaries of Pradhan Mantri Fasal Bema Yojana for getting more benefits from PMFBY.

#### **4.6 STRATEGIES FOR EFFECTIVE IMPLEMENTATION OF PMFBY**

A hypothetical strategies was developed for effective implementation of PMFBY. based on the constraints as perceived by the beneficiaries of PMFBY and suggestions suggested by the beneficiaries of PMFBY and other results derived from the study

#### **4.6.1 Strategies Suggested for Policy Makers for Effective Implementation of PMFBY**

1. More public investment of PMFBY
2. Innovative and vigorous forms of public and private collaboration
3. Establishment of more number of banks in rural areas
4. The government pay the premium for farmers below the poverty line
5. Sum amount be raised

#### **4.6.2 Strategies Suggested for Researchers for Effective Implementation of PMFBY**

1. National insurance academy should be focussed on insurance research to bring about insurance solutions needed by achieving the vision of India being a fully insured society.
2. Conduct research on use of technology in a big way to eliminate the difficulties encountered now due to manual procedure.

#### **4.6.3 Strategies Suggest by Extension Functionaries for Effective Implementation of PMFBY**

1. Organize of training to the insurance professionals at national insurance academy on claims management, markets , risk management etc..
2. Efforts should be directed to use of information technology in dissemination of the knowledge on PMFBY to the farming community.

### **4.7 EMPIRICAL MODEL OF THE STUDY:**

The conceptual model formulated earlier (figure 2.1) for the research study was tested and based on that results an empirical model was developed and it is presented in figure 4.16

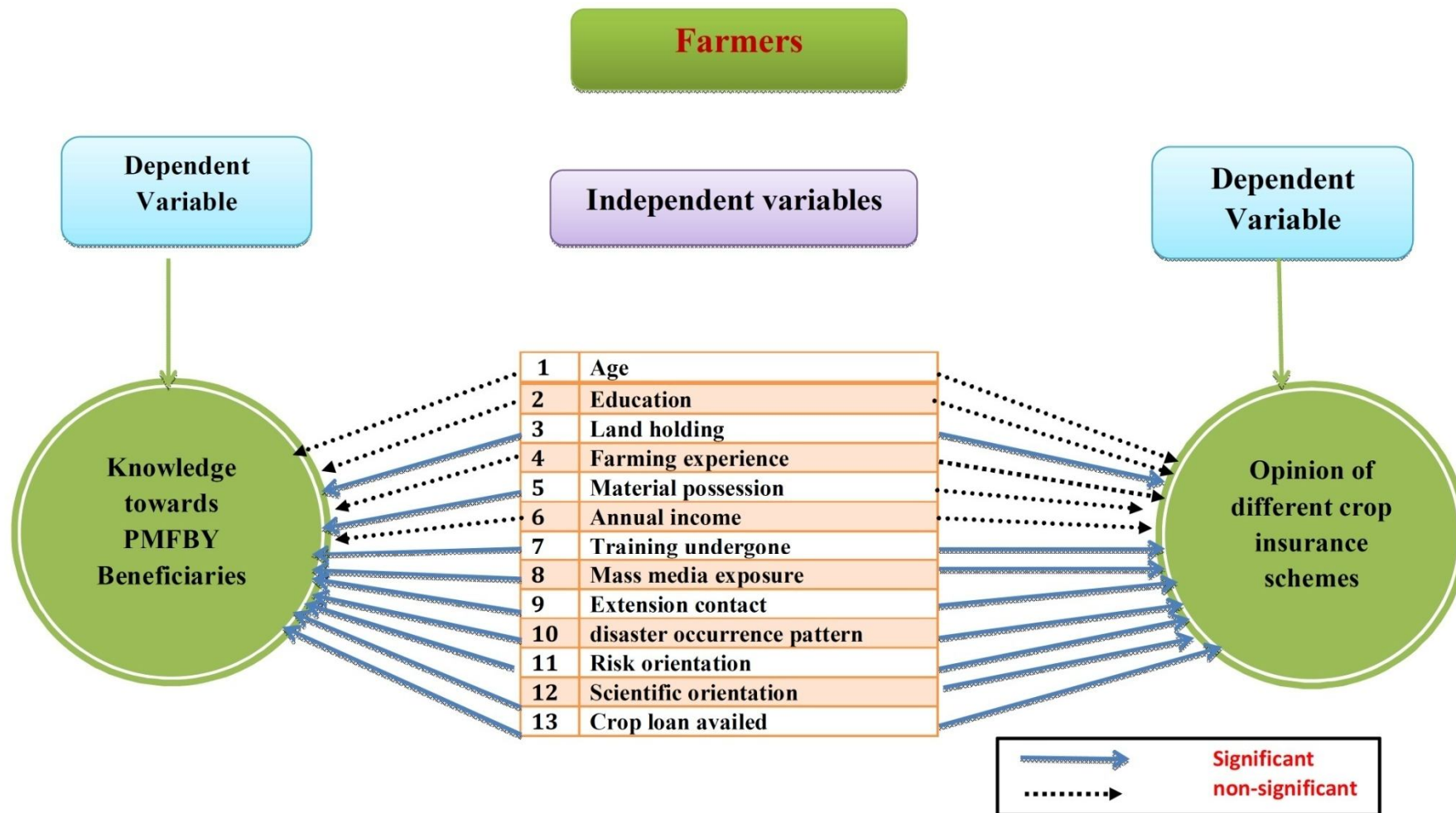
The empirical model indicated that profile characteristics were related to dependent variables viz., knowledge and opinion. Correlation analysis revealed that independent variables namely land holding, disaster occurrence pattern, material possession, extension contact, mass media exposure, training undergone, scientific orientation, risk orientation and crop loan availed showed positive and significant relationship with knowledge towards beneficiaries of PMFBY.

The other independent variables are namely age, education, annual income and farming experience showed positive and non-significant relationship with the knowledge towards beneficiaries of PMFBY.

Whereas, the age showed negative and non- significant relationship with the knowledge towards beneficiaries of PMFB.

It indicated that correlation analysis depicted that independent variables namely land holding, disaster occurrence pattern, crop loan availed extension contact, mass media exposure, training undergone, scientific orientation, risk orientation showed positive and significant relationship with opinion of different crop insurance schemes. The other independent variables namely education, farming experience, annual income, material possession, showed positive and non- significant relationship with opinion of beneficiaries towards PMFBY .

Whereas, the age showed negative and non-significant relationship with opinion towards the beneficiaries of PMFBY.



**Fig. 4.16. Empirical model of the study.**

## Chapter –V

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# Summary and Conclusions

## CHAPTER V

# SUMMARY AND CONCLUSIONS

This chapter provides brief information on the systematized efforts undertaken for the empirical study with a focus on the emerged findings. It includes summary of the findings, implications of the study and suggestions for further research.

Agriculture in India is the back bone of the Economy. The share of agriculture in employment was 48.90 per cent of the workforce and its share in the Gross Domestic Product (GDP) was 17.4 per cent in 2015-16 (Economic Survey, 2015-16). Nearly two- third of the agriculture land in the country is rain-fed and almost 20 percent of the India`s total land area is perennially drought prone. Agriculture sector faces several risks viz. financial ,personal ,production related risks. Farmers highly dependence on monsoon rainfalls. Agriculture in India is proverbially called a **“Gamble on the Monsoon”**. As agriculture is highly dependent on weather , even if small changes occur in any stage of the crop it could affect crop growth and consequence changes occur in the livelihood farmers. Not only environmental effect ,but also pests and disease it effect the crop growth and yield. According to figures from the Ministry of Agriculture, the total number of suicides committed by farmers for agrarian hardships in the last three years stands at 3313.(Kainth 2016).

**Arjun Sengupta** Committee puts the average monthly income of a farm family at Rs. 2,115 which includes Rs.900 from nonfarm activities. Similarly, the Commission for Agricultural Costs and Prices (CACP) analysis has shown the return for many crops to be actually in the negative side/zone. In fact, the **Socio Economic and Caste Census 2011** have confirmed that 75 per cent of all rural households make less than Rs 5,000 per month. Agricultural production and farm incomes in India are frequently affected by natural disasters Susceptibility of agriculture to these disasters is compounded by the outbreak of epidemics and manmade disasters such as fire, sale of spurious seeds, fertilizers and pesticides, price crashes. Agricultural insurance is considered as one of the important mechanism to effectively address the risks to farm production and income resulting from various natural and manmade events.

However the crop insurance (PMFBY) is different from previous programmes ie., in premium rates, inclusion of animal damage, particular period of insurance to kharif and rabi crops. The knowledge level and opinion of beneficiaries of PMFBY is

different from farmer to farmer based on they got indemnity to beneficiaries for damage of crops. Doubling of farm income within 2022 is new challenge. The PMFBY is one of the major aspect to double farm income. Hence we have to know the socio-economic aspects, knowledge and opinion level of beneficiaries of farming community. With this background the present study has been formulated with the following objectives.

## **OBJECTIVES**

- 1) To study the profile of the beneficiaries of Pradhan Mantri Fasal Bima Yojana (PMFBY).
- 2) To measure the knowledge level of beneficiaries about Pradhan Mantri Fasal Bima Yojana (PMFBY).
- 3) To know the opinion of beneficiaries about Pradhan Mantri Fasal Bima Yojana (PMFBY).
- 4) To find out the relationship between profile with knowledge and opinion of beneficiaries under Pradhan Mantri Fasal Bima Yojana (PMFBY).
- 5) To elicit the constraints and suggestions of PMFBY beneficiaries and to formulate the strategies for effective implementation of PMFBY.

After the extensive review of literature, discussion with experts, the independents variables of farmers namely age, education, land holding, farming experience, annual income, material possession, mass media utilization, disaster occurrence pattern, training undergone, extension contact, risk orientation, scientific orientation and crop loan availed were selected. The dependent variables were knowledge and opinion levels of beneficiaries of PMFBY.

## **RESEARCH DESIGN**

*Ex-post facto* research design was used in the present investigation.

## **SAMPLING PROCEDURE**

Srikakulam district was selected purposively for the study due to large area (5,83,700 ha. ha) in Andhra Pradesh. The three divisions namely Srikakulam, Palakonda and Tekkali divisions were selected randomly. Three mandals from each

division namely Ichchapuram, Gara, and etcherla were selected by using random sampling technique. From each of the selected mandal, four villages were selected following random sampling procedure. Muddada, Ponnada, Ibrahimbad, konagaram from Etcherla mandal; ; Gara, Korlam, Korn, Kothurusyigam from Gara mandal; Telukunchi, Tulasigam, Paitharikerthipuram, Haripuram from Ichchpuram mandal were selected. From each village ten beneficiaries were selected based on random sampling method. Thus a total of 120 farmers were selected for the study.

Data was collected through a well-structured interview schedule which was developed keeping in view of the objectives of the study. The collected data were coded, classified and tabulated. The statistical tests like Frequency, Percentage, Mean, Standard Deviation, Correlation Coefficient, and Multiple Linear Regression were used for meaningful interpretation of findings and for drawing conclusions

## **5.1 PROFILE CHARACTERISTICS OF THE FARMERS**

More than half of the beneficiaries belonged to middle age (74.13 %) category, followed by old age (16.70 %) category and young age (9.17 %) category.

Less than one-fourth (23.17 %) of the beneficiaries had middle school, followed by high school (21.66 %), illiterate and primary school (19.16 %), functionally literate (10.00 %), intermediate (4.15 %), Graduation (2.50 %).

More than half (51.66 %) of the beneficiaries had small land holding, followed by marginal (30.85 %), semi medium (14.16 %), medium (2.50 %) and large (0.83 %) land holdings.

More than one third (35.67 %) of the beneficiaries had 21-30 years of farming experience in growing of crops followed by those had 11-20 years (20.18 %), 1 to 10 years (16.66 %), 31-40 years (16.66 %) and more than 41 years (10.83 %).

More than two-third (72.50 %) of the beneficiaries belonged to medium level of Annual Income followed by high (16.66 %) and rest (10.84 %) of the respondents belonged to Low level of annual Income.

Nearly three-fourth (74.17 %) of the beneficiaries had medium level of material possession, followed by those with low (15.00 %) material possession whereas, high (10.83 %) of material possession.

Three-fourth (75.00 %) of the beneficiaries had medium level of extension contact, followed by those with low (14.16 %) extension contact whereas, only 10.84 per cent of the farmers had low level of extension contact.

Nearly half of beneficiaries (49.17 %) of the beneficiaries had high disaster occurrence pattern, followed by those with medium (40.83 %) and low (10.00 %).

More than half of them are (51.64 %) of the beneficiaries had medium level of mass media utilization, followed by those with low (31.66 %) mass media exposure whereas, only 16.70 per cent of the farmers had high level of mass media exposure.

More than two-thirds (73.36 %) of the beneficiaries had received no training followed by one to two trainings (14.16 %), two to four trainings (8.37 %) and four and above (4.11 %) trainings.

More than one-thirds (40.00 %) of the beneficiaries had received loans from the co-operative banks followed by regional rural banks (33.34 %) whereas, only (26.67 %) had commercial banks.

Majority (67.50 %) of the beneficiaries had medium level of scientific orientation, followed by low (20.00 %) and rest (12.50 %) had high level of scientific orientation.

More than two-thirds (70.83 %) of the beneficiaries had medium level of risk orientation, followed by those with high (11.67 %) and rest (17.05 %) had low levels of risk orientation.

## **5.2 KNOWLEDGE TOWARDS BENEFICIARIES OF PMFBY AND OPINION TOWARDS BENEFICIARIES OF PMFBY**

### **5.2.1 Knowledge Towards Beneficiaries of PMFBY**

Most of them (61.67 %) beneficiaries had medium level of knowledge, followed by those with low (20.00 %) and rest (18.33 %) had low levels of knowledge.

## **5.2.2 Opinion of Beneficiaries About PMFBY**

More than two-third (69.17 %) beneficiaries had medium level of opinion, followed by those with high (15.83 %) and rest (15.00 %) had low levels of opinion.

## **5.3 RELATIONSHIP BETWEEN SELECTED PROFILE WITH KNOWLEDGE AND OPINION OF BENEFICIARIES OF PMFBY**

### **5.3.1 Relationship Between Selected Profile and Knowledge of Beneficiaries about PMFBY.**

It observed that exhibits that out of their independent variables studied landholding, extension contact, disaster occurrence pattern, mass media utilization, training undergone, scientific orientation, risk orientation are positively and significantly correlated with the knowledge level of beneficiaries of PMFBY at one per cent level of significance.

Further they computed that correlation coefficient (r) values of material possession, crop loan availed are positively and significantly correlated with the knowledge level of beneficiaries of PMFBY at five per cent level of significance. The remaining independent variables education, farming experience, annual income are positively and non-significant in their relationship with the knowledge about PMFBY.

The variable age is negatively and non-significant in their relationship with the knowledge about PMFBY.

### **5.3.2 Multiple Linear Regression Analysis of Selected Profile Characteristics with Knowledge Towards the Beneficiaries Towards the PMFBY**

It was observed coefficient of determination “R<sup>2</sup>” value was significant, as the value of “a” was found significant. The “R<sup>2</sup>” value of 0.564 indicated that all the selected thirteen profile characteristics of beneficiaries put together, explained about 56.40 per cent of variation in the knowledge about PMFBY. Remaining 43.60 per cent is due to the extraneous effects of the variables. Hence, it could be stated that the variables selected to a large extent explained the variation in knowledge level of the beneficiaries of PMFBY.

Further revealed that the profile characteristics namely disaster occurrence pattern were found to be positively significant at 1 per cent level of probability .The other variables viz., training undergone, scientific orientation, risk orientation, education, land holding, farming experience, annual income, material possession, mass media exposure, extension contact, crop loan availed were non-significant in their relationship . The variable age is negatively and non-significant in their relationship.

### **5.3.3 Relationship Between Selected Profile Characteristics and Opinion Towards the Beneficiaries the PMFBY**

It observed that computed the 'r' values of land holdings, disaster occurrence pattern, extension contact, mass media utilization, training undergone, scientific orientation, risk orientation, crop loan availed are positively and significantly correlated at one per cent level of significance with the opinion. The variables as education, annual income, farming experience, material possession are positively and significantly correlated with the opinion.

The independent variable age had showed negative and non-significant relationship with the opinion .

### **5.3.4 Multiple Linear Regression Analysis of Selected Profile Characteristics with Opinion Towards the Beneficiaries**

It observed that the coefficient of determination " $R^2$ " value was significant, as the value of "a" was found significant. The " $R^2$ " value of 0.456 indicated that all the selected fourteen profile characteristics of beneficiaries put together, explained about 45.60 per cent variation in the opinion of PMFBY. Remaining 54.40 per cent is due to the extraneous effects of the variables. Hence, it could be stated that the variables selected to a large extent explained the variation in selected profile characteristics of beneficiaries, opinion of PMFBY.

An attempt has been made to find out the amount of contribution made by the profile characteristics in explaining the variation in the dependent variable i.e. opinion of the beneficiaries to this version.

Further revealed that the selected profile characteristics namely disaster occurrence pattern, were found to be positively significant at one per cent level of probability and crop loan availed were found to be positively significant at five per cent

level of probability. Remaining selected profile characteristics education, land holding, farming experience, annual income, material possession, mass media exposure, extension contact, training undergone, scientific orientation and risk orientation are non-significant in this analysis. The variable age is negatively and non-significant in their relationship.

## **5.4 CONSTRAINTS FACED BY THE BENEFICIARIES OF PMFBY AND SUGGESTIONS GIVEN BY THEM TO OVERCOME THE CONSTRAINTS.**

### **5.4.1 Constraints Faced by the Beneficiaries about PMFBY**

The most important constraints encountered by the farmers are:

Lack of knowledge regarding to PMFBY, Lack of awareness of benefits of PMFBY, Less compensation offered in crop insurance scheme, Delay in payment of compensation, Rate of premium is not universal for all crops, On-line registration and assessment of risk complexity in PMFBY, Unavailability of experts for assessment of loss at visit time, Lack of coordination between banks and farmers, High rate of premium, Poor socio-economic status of the farmers, Individual assessment is not allowed in this scheme, Unavailability of reporting authority at the time of loss, Lack of well trained insurance professionals, Corruption while settling claims by the insurance companies, Lack of education of farmers, Non availability of source for doubt clarification, Social stigma in getting crop insurance, Low scale of finance, Insufficient bank facilities in rural areas.

### **5.4.2 Suggestions To Overcome The Constraints**

Suggestions made by the farmers to overcome the constraints were:

Procedure of the scheme should be simplified, Organize of awareness programmes for farmers regarding PMFBY, Organization of training programmes on e-filling of insurance and benefit of the farmers, Payment of premium by the government for farmers below the poverty regarding PMFBY, Premium rate may be decreased, Avoid delay in payment of compensation, Increase the number of extension agents, Maintain universal premium for all crops, Improve linkage between banks and farmers, Unit area may be of individual or a village level, Unit area may be of individual or a village level, Improve socio-economic conditions of the farmers, Increase the insurance

agents in rural areas, Avoid corruption while settling claims, Organization of trainings to the insurance professionals, Avoid intermediating in marketing process, Establishment of night schools to educate adults, Eliminate Social stigma in getting crop insurance, Enhancement of scale of finance based on actual cost of cultivation of crops, Establishment of sufficient number of banks in rural areas, All the crops including vegetables be covered.

## **IMPLICATIONS OF THE STUDY:**

1. The age level of the majority of the respondents was middle to old aged and their educational level is also medium. Hence, government and Department of Agriculture should take certain steps to educate the farmers through adult learning classes. Further it leads to know more about the crop insurance (PMFBY).
2. Most of the respondents were in the occupation of Agriculture + labour work and majority of the farmers were middle to old aged. So, proper motivation must be given to the rural youth to take up agriculture as their enterprise and insure (PMFBY) the crop before the period of time. Most of the rural youth were migrating to cities and towns in search of wage employment. There are various reasons for this migration like high education levels, high social status for job holders in the society, to carry out their livelihoods etc.,
3. More than half of the respondents have not received any trainings. So, proper extension strategies should to be designed by Department of Agriculture with collaboration of insurance companies and ANGRAU to make farmers participate in training programmes related to crop insurance (PMFBY). More emphasis must be given to the small and marginal farmers by focusing on them in training programmes instead of large farmers (>10.00 hectares).
4. The variables like mass media utilization and extension contact were in medium level for the farmers in the study area. Therefore, the extension officers of the mandals should emphasize more on creating good rapport with the farmers. Government recently recruited Multi Purpose Extension Officers (MPEOs) which can help in speeding up the process of maintaining contact with the farmers.
5. Majority of the farmers are having medium to low scientific orientation and medium risk orientation which should be built up by teaching better to know about the insured the crops and use of low-cost technologies.

6. Most of the farmers possessed high level of disaster occurrence pattern in among the beneficiaries ie., the areas are present near the coastal zone frequently occurred floods and cyclones that places to create awareness about disasters and reduce the damage of crops, animals and humans. It is the most important scheme (PMFBY) in Srikakulam area because it is nearly located in the coastal region, to insure their crops for getting the financial support to farmers and carry out their livelihoods.
7. The overall knowledge level of beneficiaries about PMFBY was found to be medium level to low level. The opinion level of beneficiaries are also medium to low level. Though the overall knowledge and opinion is medium because the lack of awareness among the beneficiaries. The local extension officials along with scientists should take appropriate knowledge promotional strategies such as trainings, demonstrations, exhibitions, kisan melas, etc., to impart cent per cent knowledge level and opinion among the beneficiaries. Necessary extension strategies are to be framed to bridge the knowledge gap.
8. PMFBY scheme is available only loanee farmers- farmers who take loans from banks are mandatory required for take insurance. PMFBY also concentrate on to cover sharecropper and tenant farmers. The most important thing is the government and insurance companies to built awareness in farmers on PMFBY and Insurance companies to set-up the proper infrastructure for proper implementation of PMFBY. There is still no direct linkage between insurance companies and farmers.
9. Further setup customer service centers nearby villages to contact with the insurance officials for claims and solve their problems about the PMFBY.

## **CONCLUSIONS**

Majority of the farmers belonged to medium level of knowledge and moderate level of opinion towards the beneficiaries of PMFBY. This is due to lack awareness and information about PMFBY not provided by the government and insurance companies to the farmers. The bank officials, extension agents and insurance companies should make efforts to enhance and support to make the insurance the crops and the getting the indemnity to the farmers at right time.

### **Suggestions For Future Research**

1. The present investigation was confined to the specific area of Srikakulam district. Similar studies may be undertaken in other districts also. The study needs to be conducted in all beneficiaries of PMFBY in Andhra Pradesh. So that inference thereof can be generalized to a greater extent than from present study.
2. The present study had considered only few selected profile characteristics in order to find out their relationship with level of knowledge and opinion. A number of other profile characteristics which are likely to affect them may also be studied.
3. The study was conducted according to Ex-post facto research design in order to understand the level of knowledge and opinion of beneficiaries of PMFBY. This approach could be tested by experimental studies in order to know the exact impact of such studies in detailed.
4. A study on training needs of PMFBY beneficiaries can also be taken up.

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# Appendices



Appendix -A  
ACHARYA N.G.RANGA AGRICULTURAL UNIVERSITY  
DEPARTMENT OF AGRICULTURAL EXTENSION  
AGRICULTURAL COLLEGE, BAPATLA

“A critical study on Pradhan Mantri Fasal Bima Yojana in  
Srikakulam District Of Andhra Pradesh”

INTERVIEW SCHEDULE

PART-A

**GENERAL INFORMATION**

**Respondent No.**

- a) Name of the farmer :
- b) Contact number :
- c) Village :
- d) Mandal :
- e) District :

**Profile characteristics of the farmers:-**

**1. AGE (in completed years) : \_\_\_\_\_**

**2. EDUCATION**

- a) Illiterate : \_\_\_\_\_
- b) Functionally literate : \_\_\_\_\_
- c) Primary School (1<sup>st</sup> – 5<sup>th</sup>) : \_\_\_\_\_
- d) Middle School (5<sup>th</sup> – 7<sup>th</sup>) : \_\_\_\_\_
- e) High School (7<sup>th</sup> – 10<sup>th</sup>) : \_\_\_\_\_
- f) Intermediate : \_\_\_\_\_
- g) Graduation : \_\_\_\_\_
- h) Post-Graduation : \_\_\_\_\_

### 3. LAND HOLDING:

- a) Marginal (below 2.5acrs) :\_\_\_\_\_
- b) Small (2.5-5acrs) :\_\_\_\_\_
- c) Semi Medium (5-10acrs) :\_\_\_\_\_
- d) Medium (10-25acrs) :\_\_\_\_\_
- e) Large (above 25acrs) :\_\_\_\_\_

### 4. FARMING EXPERIENCE: -

Experience in farming :\_\_\_\_\_

### 5. ANNUAL INCOME:

- a. Income from agriculture Rs.\_\_\_\_\_
- b. Income from other sources
  - 1. Dairy Rs.\_\_\_\_\_
  - 2. Poultry Rs.\_\_\_\_\_
  - 3. Service Rs.\_\_\_\_\_
  - 4. Business Rs.\_\_\_\_\_
  - 5. Any other Rs.\_\_\_\_\_

Total annual income of the family Rs.\_\_\_\_\_

### 6. Material Possession:

S.No.	ITEM	
1	One farm animal /material Bicycle, Furniture.	
2	Two farm animals /material Bullockcarts, Gorru, Guntakas, Radios, TV, Cellphones	
3	Three to four Farm animals / Improved Farm Implements, Power Sprayer	
4	Four to ten farm animals / Gobargas Plant, Pump Set, Motor Bike	
5	More than ten animals /Tractor /Automobile	
6	Others If any	

## 7. EXTENSION CONTACT

S. No.	SOURCE	FREQUENTLY (3)	OCCASIONALLY (2)	RARELY (1)
1.	Village Panchayat Secretary			
2.	Multi Purpose Extension Officer (MPEO)			
3.	Agricultural Extension Officer (AEO)			
4.	Mandal Agricultural Officer (MAO)			
5.	Assistant Director of Agriculture (ADA)			
6.	Joint Director of Agriculture (JDA)			
7.	Scientists of ANGRAU			
8.	Insurance Company Officers			
9.	Input Dealers			
10.	Bank Officers			
11.	NGO`S			

## 8. Disaster Occurrence Pattern:

a)

S.No.	Name of the disaster	Frequently (3)	Occasional (2)	Rarely (1)
1	Drought			
2	Cyclones			
3	Floods			
4	Earthquake			
5	Heat waves			

b)

S. No.	Name of the disaster	More than two times in a year	Twice in a year	Once in a year	Once in a five years	Once in a ten years	Never
1	Drought						
2	Cyclones						
3	Floods						
4	Earthquake						
5	Heat waves						

### 9. Mass Media utilization:

S.No.	Name of the mass media	Regular (3)	Occasional (2)	Never (1)
1	News papers			
2	Books on Agriculture			
3	Radio Programmes			
4	Television Programmes			
5	Exhibitions and KissanMelas			
6	Any other (specify)			

### 10. TRAINING UNDERGONE

Have you received any training Yes / No

If yes, please give the following details:

S.No.	Name of the training programme	Duration of training(days)	Place of training

## 11. Crop loan availed

S.No.	Borrowing source	Amount borrowed (Rs) During 2017-18
1	Commercial banks	
2	Co-operative society	
3	Regional rural banks	

## 12. Scientific Orientation

S.No.	Statements	SA (5)	A (4)	UD (3)	DA (2)	SDA (1)
1	New methods of farming give better results to farmer than old methods.					
2	The way our forefather where practicing farming is still the best way to follow today					
3	Even a farmer with lot of experience should use new methods of farming .					
4	Though it takes time for a farmer to acess new methods of farming ,it is worth the efforts.					
5	A good farmer should experiments with new ideas of farming.					
6	In order to have our hands productive, to have the farming economically more profitable and eco-friendly, the present system of farming needs to change					

### 13. Risk orientation

<b>S. No.</b>	<b>Statements</b>	<b>A (3)</b>	<b>B (2)</b>	<b>C (1)</b>
1	A farmers should grow large number of crops to avoid greater risks involved in growing one or two crops			
2	A farmer should take more of changes in making a big profit than to be content with a smaller profits.			
3	A farmer who is willing to take greater risks than the average farmer may not have better financial conditions			
4	It is good for a farmer not to try farming methods before other farmers have used them with success			
5	It is good for farmers to take risks but it is not worthy			
6	Trying an entirely new method in farming by a farmer involves risk and wasting of resources			

## PART-B

### Statements regarding to knowledge

1. Year Of Introduction of Pradhan Mantri Fasal Bima Yojana (PMFBY) is \_\_\_\_\_  
a) 2015                      **b) 2016**                      c)2017                      d)2018
2. Pradhan Mantri Fasal Bima Yojana (PMFBY) is not provides the loan for **summer** crops.
3. Pradhan Mantri Fasal Bima Yojana (PMFBY) provides loan for Kharif, Rabi and Summer crops.                      **TRUE /FALSE.**
4. The crops covered under Pradhan Mantri Fasal Bima Yojana (PMFBY) during kharif season are \_\_\_\_\_.  
a) Cereals (Rice, maize, sorghum) and Millets (pearl millet, finger millet)  
b) Pulses  
c) Oil seeds (cotton, groundnut, soyabean)  
**d) All the above**
5. The crops covered under Pradhan Mantri Fasal Bima Yojana (PMFBY) during Rabi season are \_\_\_\_\_.  
a) Cereals (wheat, barley, oats)  
b) Pulses (chickpea,  
c) Oil seeds (linseed, mustard)  
**d) All the above**
6. The amount of premium rate for kharif crops under the PMFBY is \_\_\_\_\_  
a) 1.5%                      **b) 2.0%**                      c) 2.5%                      d) 3.0%
7. The amount of premium rate for Rabi crops under the PMFBY is \_\_\_\_\_  
**a) 1.5%**                      b) 2.0%                      c) 2.5%                      d) 3.0%
8. The amount of premium rate for commercial and horticultural crops under the PMFBY is \_\_\_\_\_.  
a) 2.5%                      **b) 5.0%**                      c) 7.5%                      d) 10%
9. The basis for implementation of Pradhan Mantri Fasal Bima Yojana (PMFBY) is an **Area Approach Basis.**

10. The crop loss assessment in Pradhan Mantri Fasal Bima Yojana (PMFBY) is done by using **smart phones, drones**.

11. The remote sensing lab for crop insurance to give early warnings to the farmers and government about the losses under Pradhan Mantri Fasal Bima Yojana (PMFBY) was established by company **HDFCE ERGO agricultural company**.

12. The Farmers under Pradhan Mantri Fasal Bima Yojana (PMFBY) has to intimate individual loss (natural calamities /mid season losses) within **72 hours** to the officials of the department of Agriculture DOA.

13. The farmers under Pradhan Mantri Fasal Bima Yojana (PMFBY) has to intimate post- harvest losses within **14 days** to department of Agriculture DOA.

14. Pradhan Mantri Fasal Bima Yojana (PMFBY) beneficiaries is mandatory for **loanee** farmers, who have taken institutional loans from banks.

15. Pradhan Mantri Fasal Bima Yojana (PMFBY) farmers is optional for **non-loanee** farmers, who have taken institutional loans from banks.

16. The reasons for failure of Pradhan Mantri Fasal Bima Yojana (PMFBY) is **delay in payment, village as a unit**.

17. The source of funds for government to pay premium in Pradhan Mantri Fasal Bima Yojana (PMFBY) is **Krishi kalian kosh**.

The share of premium rate by central and state governments in Pradhan Mantri Fasal Bima Yojana (PMFBY) is **50:50**.

19. The companies provide Insurance under this scheme (PMFBY) in srikakulam is **National Agriculture insurance company**.

20. The companies provide Insurance under this scheme (PMFBY) are\_\_\_\_\_

a) a) National Insurance Company limited

b) Reliance General Insurance Co. Ltd.

c) HDFC ERGO general insurance company Pvt .Ltd

**d) All the above**

21. The types of the risks that are covered under this scheme (PMFBY) are

\_\_\_\_\_

a) Yield loses

b) Post harvest loses

c) Localized calamities and Wild animals attack

**e) All the above**

22. The registration of farmers under Pradhan Mantri Fasal Bima Yojana (PMFBY) gradually reduces year by year from inception of the programme. **TRUE/ FALSE**

23. In Pradhan Mantri Fasal Bima Yojana (PMFBY) the losses arising out of war and nuclear risks, malicious damage and other preventable risks shall be excluded.

**TRUE/ FALSE.**

### Statements regarding to opinion

S. No.	Statements	<u>Favourable</u>	<u>Un Favourable</u>
1	The Pradhan Mantri Fasal Bima Yojana (PMFBY) gives indemnity to the insured farmers than the earlier National Agricultural Insurance Scheme (NAIS).		
2	I have satisfied with the Pradhan Mantri Fasal Bima Yojana (PMFBY).		
3	The premium rates for Pradhan Mantri Fasal Bima Yojana (PMFBY) is lower compared to earlier insurance schemes .		
4	The premium which is to be paid by the farmers for Pradhan Mantri Fasal Bima Yojana (PMFBY) should be paid by the government.		
5	The involvement of insurance companies in settlement of claims more in Pradhan Mantri Fasal Bima Yojana (PMFBY) compare to earlier programmes		
6	There is a change in area of Paddy cultivation by introduction of Pradhan Mantri Fasal Bima Yojana (PMFBY) in srikakulam dist.		
7	I feel that Pradhan Mantri Fasal Bima Yojana (PMFBY) good measure against risk and uncertainty.		
8	The present method of use of smart phones /drones for assessment of crop damage is an ideal measure.		
9	The usage of Information Technology (IT) is more in Pradhan Mantri Fasal Bima Yojana (PMFBY) compare to earlier programmes.		
10	The Pradhan Mantri Fasal Bima Yojana (PMFBY) is necessary for improvement of socio-economic conditions of the farmers .		
11	Pradhan Mantri Fasal Bima Yojana (PMFBY) is the better programme to reduce losses arised due to natural calamities from to losses compare to earlier programmes.		

12	Pradhan Mantri Fasal Bima Yojana (PMFBY) providing financial support to farmers suffering crop loss/damage arising out of unforeseen events.		
13	Pradhan Mantri Fasal Bima Yojana is essential to stabilize the farm income to ensure their continuance in the farming.		
14	Pradhan Mantri Fasal Bima Yojana (PMFBY) ensuring flow of credit to the agriculture sector; which will contribute to food security, crop diversification and enhancing growth and competitiveness of agriculture sector besides protecting farmers from production risks.		
15	The Pradhan Mantri Fasal Bima Yojana (PMFBY) facilitates for usage of modern technologies in paddy cultivation in srikakulam dist.		
16	I have received compensation at the right time in Pradhan Mantri Fasal Bima Yojana (PMFBY).		

అనుబంధం ఏ



ఆచార్యఎన్. జి.రంగావ్యవసాయవిశ్వవిద్యాలయం

వ్యవసాయవిస్తరణవిద్యాలయవిభాగము

వ్యవసాయకళాశాలబాపట్ల - 532001

“ఆంధ్ర ప్రదేశ్ లోని శ్రేణులు జిల్లాలో ప్రధాన్ మంత్రి ఫసల్ భీమా యోజన పై  
విమర్శనాత్మక అధ్యయనం”

మాఖిక ప్రశ్నపత్రం

భాగము-1

సాధారణసమాచారం

జవాబుదారునిసంఖ్య

f) రైతుపేరు:

g) సంప్రదించాల్సిననెం:

h) గ్రామము:

i) మండలము:

j) జిల్లా:

1. వయస్సు (పూర్తిసంవత్సరాలలో:) .....

2. విద్య :-

a. నిరక్షరాస్యత(1) (.....)

b. క్రియాత్మకంగా అక్షరాస్యులు (2) (.....)

c. ప్రాథమికవిద్య(1<sup>st</sup> - 5<sup>th</sup>) (3) (.....)

- d. మధ్యమికవిద్య(5th-7<sup>th</sup>) (4) (.....)
- e. ఉన్నతవిద్య(7<sup>th</sup> -10<sup>th</sup>) (5) (.....)
- f. కళాశాలవిద్య (6) (.....)
- g. పట్టభద్రుడు (7) (.....)
- h. ఉన్నతపట్టభద్రుడు (8) (.....)

### 3. క్షేత్రపరిమాణం:

- f) సన్నకారు (< 2.5 ఎకరాలు) (1) : (.....)
- g) చిన్నకారు(2.5- 5 ఎకరాలు) (2) : (.....)
- h) చిన్నమధ్యకారు (5-10 ఎకరాలు)(3) : (.....)
- i) మధ్యకారు(10- 25ఎకరాలు) (4) : (.....)
- j) పెద్దకారు (>25ఎకరాలు) (5) : (.....)

### 4. వ్యవసాయఅనుభవం: -

- a) పంటలసాగులో మేకుఎన్నిసంవత్సరాలుఅనుభవంఉంది(.....)
- b) ఐ.సి.టి. పరికరాలువినియోగంలో మేకుఎన్నిసంవత్సరాలుఅనుభవంఉంది(.....)

### 5. వార్షికఆదాయం

- a. వ్యవసాయంనుండిఆదాయం రూ.
- b. ఇతరవనరులనుంచివచ్చేఆదాయం
1. పాడిపరిశ్రమ రూ.
2. కోళ్ళపరిశ్రమ రూ.
3. ఉద్యోగం రూ.
4. వ్యాపారము రూ.
5. ఇతరములు రూ.
- c. మొత్తం రూ.

## 6. వనరులులభ్యత

క్రమ సంఖ్య	ఐటెం	
1	ఒకఎద్దు/సైకిల్/పర్నిచర్	
2	ఒకజతలుఎద్దులు/బండి,నాగలి,గుంటక్,రేడియోసెల్ఫోన్	
3	మూడునుంచినాలుగుజతలుఎద్దులు/నవినవ్యవసాయపరికరాలు,స్ప్రేయర్	
4	నాలుగునుంచినదుజతలుఎద్దులు/గోబర్లస్ట్రాట్,పంప్,మోటార్,రైజర్	
5	పదికన్నా ఎక్కువజతలుఎద్దులు/ట్రాక్టర్,ఆటోమొబైల్	
6	ఇంకా ఏమైనా	

## 7. శిక్షణపొందింది

మీరు శిక్షణ పొందారా? అవును /కాదు అవును అయితే, దయచేసి క్రింది వివరాలను ఇవ్వండి:

క్రమ సంఖ్య	శిక్షణ కార్యక్రమం పేరు	శిక్షణ వ్యవధి (రోజులు)	శిక్షణా స్థలం

## 8. ప్రకృతి వైపరీత్యాల వచ్చుతీరు

క్రమ సంఖ్య	వైపరీత్యం పేరు	తరచుగా	అప్పుడప్పుడు	అరుదుగా
1	కరువు			
2	తుఫాన్			
3	వరదలు			
4	భూకంపం			
5	వేడిగాలులు			

**B**

క్రమ సంఖ్యా	వైపరీత్యంపేరు	రెండుకన్నా ఎక్కువసార్లు	రెండుసార్లు	సంకీచకసారి	5సమత్సారాలుకీచకసారి	10సమత్సారాలుకీచకసారి	ఎప్పుడూలేదు
1	కరువు						
2	తుఫాన్						
3	వరదలు						
4	భూకంపం						
5	వేడిగాలులు						

**9. విస్తరణవిస్తరణ**

క్రమ సంఖ్యా	వర్గం .	తరమగా (3)	అప్పుడప్పుడు (2)	అరుదుగా (1)
1.	గ్రామపంచాయతీకార్యదర్శి			
2.	మల్టీపర్పస్ఎక్స్టెన్షన్ఆఫీసర్ (ఎం.పీ.ఈ.ఓ)			
3.	వ్యవసాయవిస్తరణఅధికారి			
4.	మండలవ్యవసాయఅధికారి			
5.	అసిస్టెంట్ రెజిస్ట్రార్ ఆఫ్ అగ్రికల్చర్			
6.	వ్యవసాయ సహాయ సంచాలకులు / ఉపవ్యవసాయ సహాయ సంచాలకులు			
7.	శాస్త్రవేత్తలు			
8.	స్నేహితులు & బంధువులు			
9.	దుకాణదారులు			
10.	అగ్రి-క్లినిక్లు			
11.	ఎన్.జి.ఓ.లు			
12.	ఇతరములు			

**12. తెగింపుదృక్పథం:**

క్రమసంఖ్య	వివరముల	ఒప్పు కుంటాను (3)	నిర్ణయించ లేను (2)	ఒప్పుకోను (1)
1	తెగింపుఎక్కువతీసుకునేరైతుసాధారణంగాఎక్కువఆర్థిక స్థితిలోఉంటాడు.			
2	రైతుతక్కువకష్టాలలేమిలోకూడినలాభాలలోతృప్తిపడేకంటేఅధికలాభాలుపొందడానికిప్రయత్నించాలి.			
3	వ్యవసాయానికిసంబంధించినపద్ధతులలోఎప్పుడైతేఅధిక లాభశాతంఉందోఆసమయాలలోరైతుఅధికప్రమాదభారాన్ని భరించడానికిసిద్ధంగాఉండాలి.			
4	రైతుఆధునికఐ.సి.టి. పరికరాలనువాడకంలోనష్టాలుకలిగిఉంటుంది, కానీఅదిఆమోదయోగ్యమైనది.			
5	వ్యవసాయంలోఎక్కువకష్టాలనునివారించడానికిరైతుమరిన్నిఐ.సి.టి. పరికరాలను వాడాలి.			

**13. శాస్త్రీయవిన్యాసం:**

క్రమ సంఖ్య	వివరముల	గట్టిగా ఒప్పు కుంటాను (5)	ఒప్పు కుంటాను (4)	నిర్ణయించ లేను (3)	ఒప్పుకోను (2)	గట్టిగా ఒప్పుకోను (1)
1	రైతులకిపాతఐ.సి.టి.పరికరాల కన్నాకొత్తఐ.సి.టి.పరికరాలువిలువైనసమాచారాన్నిఅందిస్తాయి.					
2	ఒకఅనుభవజ్ఞుడైనవ్యవసాయ దారుడుకూడాకొత్తఐ.సి.టి.పరికరాలనుఉపయోగించాలి.					
3	ఒకవ్యవసాయదారుడుకొత్తఐ.సి.టి.పరికరాలనుఉపయోగించడంలోఅధికసమయంతీసుకున్న అవిఉన్నతమైనవి.					

4	మనచేతికష్టార్థితంఉత్పాదకంగా మరియుఆర్థికంగాలభిషాందడా నికి ,పర్యావరణస్నేహపూర్వకమై ఉండడానికిప్రస్తుతవ్యవసాయప ద్ధతులుమార్పడంఅవసరము.					
5	మంచివ్యవసాయదారుడుకొత్తబ .సి .టి .పరికరాలనుప్రయోగించాలి.					
* 6	మనపూర్వికులుపాటించినవ్యవ సాయపద్ధతులుఇప్పటికీఉన్న తమైనవి.					

### 13. పంటరుణలభ్యత

క్రమ సంఖ్య	అప్పవనరు	అప్పుచేసినమొత్తం(2017-18)
1	వాణిజ్యబ్యాంకులు	
2	సహకారబ్యాంకులు	
3	గ్రామీణబ్యాంకులు	

## భాగము-2

1) ప్రధాన మంత్రి ఫసల్ భీమామాయోజన ప్రవేశపెట్టినసంవత్సరం.

ఎ)2015                      బి)2016                      సి)2017                      డి)2018

2) ప్రధాన మంత్రి ఫసల్ భీమామాయోజన పంటలకు ఋణం ఇవ్వదు\_\_\_\_\_

3) ప్రధాన మంత్రి ఫసల్ భీమామాయోజన ఖరీఫ్ వేసవి పంటలులు ఋణం సౌకర్యంకలిపిస్తుంది.  
సత్యం/ అసత్యం.

4) ప్రధాన మంత్రి ఫసల్ భీమా మాయోజన ఖరీఫ్ \_\_\_\_\_ పంటలకు రుణసౌకర్యంకలిపిస్తుంది.

ఎ)ఆహార / ధాన్యపుమరియుచిరుధాన్యాలు

బి)పప్పులుధాన్యాలు

సి)నూనెగింజలు

డి)పైవన్నీ

5) ప్రధాన మంత్రి ఫసల్ భీమామా యోజన రబీకలంలో\_\_\_\_\_పంటలకు రుణసౌకర్యంకలిపిస్తుంది.

ఎ)ఆహార / ధాన్యపుమరియుచిరుధాన్యాలు

బి)పప్పులుధాన్యాలు

సి)నూనెగింజలు

డి)పైవన్నీ

6) ప్రధాన మంత్రి ఫసల్ భీమా యోజన ఖరీఫ్ పంటకు అందించిన ప్రీమియంరేట్.

ఎ)1.5%                      బి)2.0%                      సి)2.5%                      డి)3.0%

7) ప్రధాన మంత్రి ఫసల్ భీమా యోజన రబీ పంటకు అందించిన ప్రీమియంరేట్.

ఎ)1.5%                      బి)2.0%                      సి)2.5%                      డి)3.0%

8) ప్రధాన మంత్రి ఫసల్ భీమా యోజన ఉధ్యోగపంటకు అందించిన ప్రీమియంరేట్.

ఎ)2.5%      బి)5.0%      సి)7.5%      డి)10.0%

9) ప్రధాన మంత్రి ఫసల్ భీమా యోజన అమలకు పరధ్యానంఇచ్చు అంశం \_\_\_\_\_

10) ప్రధానమంత్రిఫసల్భీమాయోజనకిందఇచ్చునష్టపరిహారాన్ని\_\_\_\_\_ఉపయోగించిలెక్కిస్తా.

11)ప్రధాన మంత్రి ఫసల్ భీమా యోజన కింద రైతులకు మరియు ప్రభుత్వానికి పంట నష్టంగురించి ముందుస్తుహెచ్చరికలు ఇచ్చుంటభీమాసంకేతికపద్ధతినిల్యాభ్యాపించే సంస్థ. \_\_\_\_\_

12 ప్రధాన మంత్రి ఫసల్ భీమా యోజన వర్తిచేరైతులు తమ వ్యతిగతనష్టాన్ని ప్రకృతివైపరీత్యాలు లేదా పంటమధ్యకాల నష్టాన్ని\_\_\_\_\_ గంటలులోలోపువ్యవసాయశాకాఅధికారులముతెలియపరచాలి.

13) ప్రధాన మంత్రి ఫసల్ భీమా యోజన కోత అనంతరం పంట నష్టాన్ని\_\_\_\_\_రోజులలో వ్యవసాయంశాకా తెలయపరచాలి.

14) ప్రధాన మంత్రి ఫసల్ భీమా యోజన కింద బ్యాంకు నుంచి సంస్థాగతరుణాలు తీసుకున్నరైతులు \_\_\_\_\_ తప్పనిసరి.

15) ప్రధాన మంత్రి ఫసల్ భీమా యోజన కింద బ్యాంకు నుంచి సంస్థాగతరుణాలు తీసుకున్నరైతులు \_\_\_\_\_ తప్పనిసరికాదు.

16) ప్రధాన మంత్రి ఫసల్ భీమా యోజన వైఫల్యానికి\_\_\_\_\_మరియు\_\_\_\_\_కారణాలు.

17) ప్రధాన మంత్రి ఫసల్ భీమా యోజన ప్రీమియం వెల్లడించడానికి ప్రభుత్వం యొక్క నిదాలుకు మూలం.

18) ప్రధానమంత్రిఫసల్భీమాయోజనప్రీమియంచెల్లించడానికికేంద్రంమరియురాష్ట్రప్రభుత్వాలభాగం \_\_\_\_\_

19) ప్రధాన మంత్రి ఫసల్ భీమా యోజన శ్రీకాకుళంజిల్లాలో భీమా సాకర్యం కలిపించే సంస్థలు (కంపెనీలు).\_\_\_\_\_

20) ప్రధాన మంత్రి ఫసల్ భీమా మాయోజన ద్వారా భీమా సాకర్యం కలిపించే సంస్థ.

21) ప్రధాన మంత్రి ఫసల్ భీమా యోజన కింద చెర్చబడిన నష్టాలు.

ఏ) పంటనష్టం

బి) కోతఅనంతరంనష్టాలు

సి) స్థానికప్రకృతివైపరీత్యాలుమరియుఅటవీజంతువులునష్టాలు

డి) వైవన్నీ

22) ప్రధాన మంత్రి ఫసల్ భీమా యోజన కార్యక్రమం ప్రారంభం నుండి ప్రతిసంవత్సరం రైతులు నమోదు తగ్గుతూ వస్తుంది. సత్యం/అసత్యం

23) ప్రధాన మంత్రి ఫసల్ భీమా యోజనలో యుద్ధాలు, అనునష్టాలు, హానికరనష్టాలు మరియు ఇతర నివారించగల నష్టాలు మినహాయించాలి .సత్యం/అసత్యం

క్రమ సంఖ్య	వివరములు	అవును	కాదు
1	ప్రధాన మంత్రి ఫసల్ భీమా యోజన జాతీయ వ్యవసాయ భీమా ఫథకం కంటే మెరుగ్గా భీమా రైతులు నష్టపరిహారాన్ని చెల్లిస్తుంది.		
2	నేను ప్రధాన మంత్రి ఫసల్ భీమా యోజనలో తృప్తిచెందాను.		
3	ముందువున్నా భీమాపథకాలు కంటే ప్రధాన మంత్రి ఫసల్ భీమా యోజనలో ప్రీమియం రేట్లులు తక్కువ.		
4	ప్రధాన మంత్రి ఫసల్ భీమా యోజనకు రైతులు చలించవలసిన ప్రీమియంను ప్రభుత్వం చెలించాలి .		
5	ప్రధాన మంత్రి ఫసల్ భీమా యోజనలో వాదనపరిష్కారానికి ముందు ఉండే కార్యక్రమం కంటే భీమా సంస్థలు జాప్యం ఎక్కువ.		
6	ప్రధాన మంత్రి ఫసల్ భీమా యోజనలో, దబ్బుబిసిబి స్కాడలగు పంట భీమా పథకాలు యువతను ఆకర్షించి వాళ్ళను వ్యవసాయం లో సుస్థిర పడుటకు సహాయపడును		
7	ప్రధాన మంత్రి ఫసల్ భీమా యోజనలో ప్రమాదం మరియు అనిస్థితికి		

	వ్యతిరేకంగా మంచి చర్య అని నేను భావిస్తున్నాను		
8	పంట నష్టాన్ని అంచనా వేయడానికి ప్రస్థితావాడుతున్న చరవాణిలు, ద్రోనులు మంచి పద్ధతులు.		
9	ప్రధాన మంత్రి ఫసల్ భీమా యోజనలో సమాచారం సంక్యతికతను ఉపయగించడానికి ముందు ఉండే పధకాలు కంటే ఎక్కువ.		
10	ప్రధాన మంత్రి ఫసల్ భీమా యోజన రైతులు సామాజిక ఆర్థికస్థితిని పెంచడానికి అవసరం.		
11	ముందు ఉండేపధకాలు కంటే ప్రకృతివైపరీత్యాలు వలన కలిగేనష్టాన్ని తగ్గించడానికి ప్రధాన మంత్రి ఫసల్ భీమా యోజన మంచి పదఖం.		
12	ప్రధాన మంత్రి యోజన ఊహించని పంట నష్టాలు నుండి రైతులు ఆర్థికంగా ఆదుకోవడానికి సహాయం అందిస్తుంది.		
13	రైతులు వ్యవసాయ ఆదాయం స్థిరత్వానికి మరియు వారి వ్యవసాయ కొనసాగింపునకు ప్రధాన మంత్రి ఫసల్ భీమా యోజన అవసరం.		
14	ప్రధాన మంత్రి యోజన వ్యవసాయ రంగం యొక్క విశిష్టతను పెంచడం వలన రైతులను ఉత్పత్తిని ప్రమాదాల నుండి కాపాడువేలు కాకుండా ఆహారభద్రతను, పంటవైవిధ్యానికి మరియు వ్యవసాయరంగ పెరుగుదలకు పోటీతత్వాన్ని తోడువుతుంది.		
15	శ్రీకాకుళంజిల్లాలో వారిసాగుకు ఆధునిక సంక్యతియాకపదహతులు ఉపయగించడానికి ప్రధాన మంత్రి ఫసల్ భీమా యోజన తోడువుతుంది .		
16	ప్రధాన మంత్రి ఫసల్ భీమా యోజన ద్వారా సరియిన సమయంలో నష్టపూరిహారాన్ని పొదగలిగాను.		



**Researcher collecting information from farmers in Kornii village**



**Researcher collecting information from farmers of Telukunchi village**



**Researcher collecting information from farmers of Ponnada village**



**Researcher collecting information from farmers of Haripuram village**