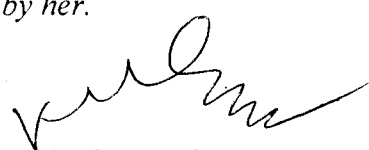


CERTIFICATE – I

*This is to certify that the thesis entitled "Impact of crop loan on adoption of improved farm practices by the farmers of Mandla district" submitted in partial fulfilment of the requirement for the degree of **MASTER OF SCIENCE in AGRICULTURE (EXTENSION EDUCATION)** of Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, is a record of the bonafide research work carried out by **REETA SHRIDHAR** under my guidance and supervision. The subject of the thesis has been approved by the Student's Advisory Committee and the Director of Instruction.*

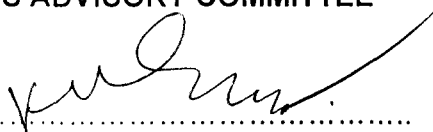
No part of the thesis has been submitted for any other degree or diploma (Certificate awarded etc.) or has been published/published part has been fully acknowledged. All the assistance and help received during the course of investigation has been duly acknowledged by her.


(Dr. K.K. Saxena)

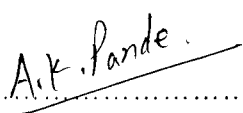
Chairman of the Advisory Committee

THESIS APPROVED BY THE STUDENT'S ADVISORY COMMITTEE

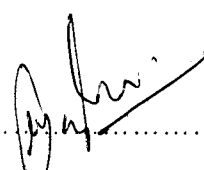
Chairman Dr. K.K. Saxena


.....

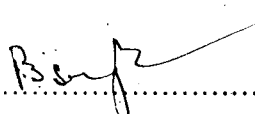
Member Dr. A.K. Pande


.....

Member Dr. N.K. Raghuwanshi


.....

Member Dr. R.B. Singh



.....

CERTIFICATE - II

This is to certify that the thesis entitled "Impact of crop loan on adoption of improved farm practices by the farmers of Mandla district" submitted by REETA SHRIDHAR to the Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, in partial fulfilment towards the requirements for the degree of MASTER OF SCIENCE IN AGRICULTURE in the Department of EXTENSION EDUCATION has been, after evaluation, approved by the External Examiner and by the Student's Advisory Committee after an oral examination on the same.

Place: Jabalpur

Date: 18/12/2022


(Dr. K.K. Saxena)

Chairman of the Advisory Committee

MEMBERS OF THE ADVISORY COMMITTEE

Chairman

Dr. K.K. Saxena



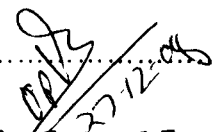
Head of Department

Dr. K.K. Saxena



Director of Instruction

Dr. O.P.Veda


22/12/22

Dr. O.P.Veda
J.N.E. Jabalpur
18/12/22

ACKNOWLEDGEMENT

Firstly I bow my head on this occasion in approbation of Lord SHIVA who have constantly showered their illumination and have guided me not only during this study but also throughout my life.

It is a moment of great deep sense of indebtedness to my hon'ble guide and Head of Deptt. Dr K.K. Saxena, Professor, Department of Extension Education, College of Agriculture, Jabalpur and Chairman of my Advisory Committee, for his guidance and constructive criticism, close supervision and constant moral support throughout the period of my study and in the thesis preparation which made the goal easy and to reach this stage.

I feel deeply obligate to the members of my advisory committee, Dr. A.K. Pande, Professor Department of Extension Education, Dr. N.K. Raghuwanshi, Professor, Department of Agril. Economics & farm management and Dr. R.B. Singh, Professor, Department of Mathematics and Statistics, for their esteemed suggestion and constructive criticism throughout the course of investigation.

It is my pleasure in thanking all the respected Professors especially Dr. S.K. Agrawal, Dr. V.K. Pyasi, and Dr. M.K. Dubey, Department of Extension Education and all staff members for their time to time suggestions during the course of study.

I am highly obligate to the Hon'ble Vice-chancellor, Dr. Goutam Kalloo, Hon'ble Ex-Director of Research Services Dr. V.S. Tomar, Hon'ble Ex-Director of Instruction Dr. J.S. Raghu and present Hon'ble DI Dr. O.P. Veda, Hon'ble Dean Dr. S.S. Tomar and Hon'ble Dean Student Welfare Dr. P.K. Bisen,

JNKVV, Jabalpur for their exuberant interest for submission of this piece of research work.

I heartily indebted and thankful to Mr. Uikey (Agricultural Field Officer) State Bank of India, Nainpur to provide necessary information and proper support in time to conduct the interview of borrowers.

It will remiss if I forget to mention gratefulness to my friends namely Suvidha, Nidhi, Charu, Neeta, Prachi, Mr. Rasheed and Vaibhav and loving juniors Swati, Vijeta, Tripti, Ekta, Varalaxmi, Poonam, Mr. Rakesh, Kishore, Varaprasad, Anjanikant and Rahul whose help is thankfully acknowledge.

I express my sincere and profound gratitude to my Departmental staff members Shri S.G.Tiwari, S.N.Patel, Sachin Soni, Sukhchain and Narayan Dada for needful co-operation.

My most intense gratitude and love remains for my loving husband Mr. Neetesh Pandey.

At last but not least, I wish to express my deepest sense of veneration to my father Late Shri Rāj Kumar Shridhar, Mother Smt. Sushila Shridhar, brother Sharad Shridhar, father-in-law shri J.M. Pandey and my sisters Nisha & Neetu lovely kids Ranu, Lucky, Shivam, Somi, Harshu and above all GOD whose affection, blessing and encouragement have become light to me in all my undertakings.

I also thank Mr. Rajkumar Patel (Pooja Reliable Computer Centre) for his co-operation during the work and in preparing the manuscript.

Place : Jabalpur

Date : 10.07.2009


(Reeta Shridhar)

LIST OF CONTENTS

Chapter No.	Title	Page No.
I	Introduction	1-3
II	Review of literature	4-12
III	Methodology	13-29
IV	Results	30-73
V	Discussion	74-81
VI	Summary, Conclusions and Suggestions for further work	82-85
	References	86-88
	Appendix	I - V
	Vita	

LIST OF TABLES

Table No.	Title	Page No.
4.1	Distribution of borrowers according to their age	31
4.2	Distribution of borrowers according to their education level	31
4.3	Distribution of borrowers according to their caste	33
4.4	Distribution of borrowers according to their family size	33
4.5	Distribution of borrowers according to their farm power	33
4.6	Distribution of borrowers according to their contact with development agencies	35
4.7	Distribution of borrowers according to size of land holding	35
4.8	Distribution of borrowers according to their innovativeness	37
4.9	Distribution of borrowers according to their risk bearing ability	37
4.10	Distribution of farmers according to their achievement motivation	39
4.11	Distribution of borrowers according to their attitude towards crop loan	39
4.12	Distribution of borrowers according to their scientific orientation	41
4.13	Distribution of borrowers according to their extent of utilization of crop loan	41
4.14	Distribution of borrowers according to increase in agriculture production per acre	43
4.15	Distribution of borrowers according to increase in agriculture income per acre	43
4.16	Association between age of respondents and increase in agriculture production	46
4.17	Association between education of respondents and increase in agriculture production	47
4.18	Association between caste of respondent and increase in agriculture production	48

Table No.	Title	Page No.
4.19	Association between family size and increase in agriculture production	49
4.20	Association between farm power and increase in agriculture production	50
4.21	Association between contact with development agencies and increase in agriculture production	51
4.22	Association between land holding and increase in agriculture production	52
4.23 (A)	Association between extent of credit utilization and increase in agriculture production	53
4.23 (B)	Association between extent of credit utilization and increase in agriculture production	53
4.24	Association between innovativeness and increase in agriculture production	54
4.25	Association between risk bearing ability and increase in agriculture production	55
4.26	Association between achievement motivation and increase in agriculture production	56
4.27	Association between attitude towards crop loan and increase in agriculture production	57
4.28	Association between scientific orientation and increase in agriculture production	58
4.29	Association between age and increase in agriculture income	59
4.30	Association between education and increase in agriculture income	60
4.31	Association between caste and increase in agriculture income	61
4.32	Association between Family size and increases in agriculture income	62
4.33	Association between farm power and increase in agriculture income	63
4.34	Association between contact with development agencies and increase in agriculture income	64
4.35	Association between land holding and income association and increase in agriculture income	65
4.36 (A)	Association between extent of credit utilization and increase in agriculture income	66

Table No.	Title	Page No.
4.36 (B)	Association between extent of credit utilization and increase in agriculture income	66
4.37	Association between innovativeness and increase in agriculture income	67
4.38	Association between risk bearing ability and increase in agriculture income	68
4.39	Distribution of borrowers according to their achievement motivation	69
4.40	Association between attitude towards crop loan and increase in agriculture income	70
4.41	Association between scientific orientation and increase in agriculture income	71
4.42	Constraints on credit availing procedure	72
4.43	Opinion on credit procedure	72
4.44	Suggestion for betterment of credit schemes	73

LIST OF FIGURES

Figure No.	Title	Page No. (in between)
3.1	Map of Nainpur block	16
4.1	Distribution of borrowers according to their age	32
4.2	Distribution of borrowers according to their education level	32
4.3	Distribution of borrowers according to their caste	34
4.4	Distribution of borrowers according to their family size	34
4.5	Distribution of borrowers according to their farm power	36
4.6	Distribution of borrowers according to their contact with development agencies	36
4.7	Distribution of borrowers according to size of land holding	38
4.8	Distribution of borrowers according to their innovativeness	38
4.9	Distribution of borrowers according to their risk bearing ability	40
4.10	Distribution of farmers according to their achievement motivation	40
4.11	Distribution of borrowers according to their attitude towards crop loan	42
4.12	Distribution of borrowers according to their scientific orientation	42
4.13	Distribution of borrowers according to their extent of utilization of crop loan	44
4.14	Distribution of borrowers according to increase in agriculture production per acre	44
4.15	Distribution of borrowers according to increase in agriculture income per acre	45

INTRODUCTION

INTRODUCTION

Agriculture occupies a very strategic position in Indian economy because it contributes more than 19.86 per cent of Gross Domestic Product at national level and it involves nearly 70 percent population of India, directly and indirectly engaged in agriculture. Moreover, agriculture having such a paramount significance and it is also recognized as "a way of life" for the majority of Indian population. Yet Indian agriculture has been caught in a vicious circle of low productivity, traditional methods of farming and less investment per acre, but nowadays the tremendous increase in production of food grains from 82 million tones in 1960-61 to 209.32 million tones in 2005-06 has been witnessed that the growth was made possible by adoption of high yielding varieties, expansion of irrigation, higher use of modern inputs like seed, fertilizer, insecticide, pesticides etc.

Adoption of these technology has made possible by timely and adequate flow of credit through financial institutions which mobilizing and channalizing the savings for investment into productive economic activities. Thus, credit nowadays considered as economic ladder or elevator in uplifting the socio-economic conditions of farmers. Crop loan is basic instrument of financial institutions to provide improved seed, fertilizer, insecticides, pesticides, irrigation facility to the farmers. Thus, the crop loan helps in increasing the crop production and generation of additional income for social and economical prosperity of farmers. To bring out higher productivity and increased income in agriculture, it required more than just supplying greater quantities of the traditional inputs used in agriculture. Increasing crop yield per hectares required a manifold increase in inputs.

With the nationalization of 14 commercial banks in 1969 and six more in 1980, more credit was being provided to agriculture sector to meet the ever increasing demand for farm credit especially crop loan. The RBI had been providing direction to these commercial banks for

advance credit to farmers on reasonable terms for new technological innovations. In India institutional credit for agriculture was viewed earlier from the angle of protecting farmers from the clutches of money lenders. It was considered as an instrument of production enhancement. At present the role of credit is giving a push to the development process. It acts as lubricant that keeps the wheel of development moving.

Looking to the emphasis of Government for providing crop loan to the large section of the farmers to meet out the financial requirement for purchase of input and its proper utilization in agriculture sectors, the present study was conducted. The study was also designed to determine the flow of credit to the farmers and its utilization for enhancement of agriculture production. An attempt has been made in the study to analyze those constraints and factors which would affect the availability and flow of credit and suggestions.

Objectives:

1. To study the personal, economical and psychological attributes of borrowers.
2. To study the extent of utilization of crop loan in different improved farm practices.
3. To study the impact of crop loan in terms of increase in agriculture production and income of borrowers.
4. To workout the association between personal, economical and psychological attributes of borrowers and impact of crop loan.
5. To study the constraints in flow and availability of crop loan and suggestions to overcome them.

Significance of study

This study was conducted with a view that its result may be useful to the researchers, planners, bank officers, administrators and extension workers who are associated with the planning of financial

requirement for enhancing farm produce and its proper utilization by the farmers.

An attempt was made in this study to analyze those constraints and factors, which would affect the availability, utilization and repayment of agriculture credit by farmers and to suggest measures for formulating strategies to increase the utility of agriculture credit.

Limitations of the study

1. The study was conducted in 10 villages of Nainpur Block of Mandla District.
2. The findings of the study were based on individual research work and may have limited generalization.
3. Study was carried on limited number of borrowers hence the findings will not be generalized and applicable only to the research area.
4. The study was restricted to few variables only due to limited time and resources. The variables are measured by putting questions to each farmer.

CHAPTER - II

REVIEW OF LITERATURE

REVIEW OF LITERATURE

A comprehensive and critical review of past studies provides sound base for scientific investigation. It helps in determining appropriate methods and procedures for conducting investigation. The review of literature in the present study to know the impact of crop loan on adoption of improved farm practices by the farmers in terms of increase in agriculture production and income. It lends support in interpretation of findings to draw logical conclusions.

The chapter has been presented under the following sub heads:

- 2.1 Socio-economic and psychological attributes of borrowers.
- 2.2 Socio-economic and psychological attributes of borrowers and their association with increase in agriculture production due to crop loan.
- 2.3 Socio-economic and psychological attributes of borrowers and their association with increase in agriculture income due to crop loan.
- 2.4 Constraints and suggestions stated by borrowers.

Constraints in credit availing procedure

Opinion on credit procedure

Suggestions for betterment of credit scheme

2.1 Social, economical and psychological attributes of borrowers

Phuskele (1972) conducted a study on repayment capacity analysis of the selected different farm size in Jabalpur District and concluded that (57.49%) loan was utilized for the purpose to which it was borrowed.

Bhasin (1980) conducted a study on characteristics of the farmers and their impact on credit utilization and repayment of

agriculture loan extended by Central Bank of India, Rahegoan, Hosangabad and concluded that the majority of borrowers (69%) of medium category had stated that risk should take for availing the loan. A greater portion (91%) said that they are not against availing the loan if the profits are assured.

Raut (1980) conducted a study of factors affecting the repayment behavior of agriculture credit users in the Panagar and concluded that highest percentage of respondents (40%) belonged to old age group.

Kharole (1982) conducted a study on a case study of characteristics of borrowers using sources of information for getting crop loan and its use and stated that risk bearing ability had an impact on the extent use of crop loan.

Jain (1983) conducted a study on study of the socio-economic characteristics of the borrowers under the differential interest rates scheme of State Bank of India, Jabalpur and reported that borrowers generally utilized the loan for the purpose for which they had borrowed.

Nagi Reddy (1986) conducted a study on pattern of credit utilization of borrowers of Rayalseems Gramin Bank, *Andhra* and concluded that the maximum percentage of farmers possessed moderate level of farm power and machinery.

Randive (1989) conducted a study on impact of Integrated Rural Development Programme (IRDP) on its beneficiaries in Kollam Talika of Osmanabad District and reported that majority of beneficiaries of Integrated Rural Development Programme (IRDP) were of lower caste, majority of beneficiaries of IRDP had medium size of family.

Chourasia (1990) pointed out in his study that progressive farmers had high level of contact with the development agencies with respect to scientific information towards agricultural technologies.

Purohit (1990) conducted a study on the impact of IRDP on transfer of agricultural technology and its effect on income generation

sources of rural community in Morar block of Gwalior district and found that the utility of bank schemes as concerned hundred respondents of the farming community, majority of respondents were in opinion that these schemes were useful to the rural community to raise their income sources.

Kumar *et al.* (1992) reported that higher percentage of beneficiaries (50%) have more favorable attitude, which was followed by medium (46%) and less favorable attitude towards Jawahar Rojgar Yojana (JRY).

Rambabu *et al.* (1994) studied on factors influencing attitude of the farmers towards farm credit in Jabalpur and concluded that the maximum borrowers of farm credit had medium level of innovativeness.

Deshpande and Nandpurkar (1997) conducted a study on relation of socio-economic profile with repayment and utilization of bank loan by rural women in Samastipur district and concluded that majority of borrowers (80.92%) were educated upto primary level.

Kumar (1997) conducted a study on the crop loan system, distribution pattern, utilization and repayment of crop loan in Samastipur district (Bihar) and reported that 34% of respondents utilized the amount for the purpose for which it was granted.

Vijayabhinandana and Suryamani (1999) conducted a study on a comparative study on knowledge about crop loan and insurance between benefited and non benefited farmers in Andhra Pradesh and concluded that maximum crop loan and insurance beneficiaries had medium level of innovativeness.

Bochalya and Dhaka (2001) conducted a study on credit utilization behavior of youth under Pradhan Mantri Rojgar Yojna and concluded that more than 50% of beneficiaries utilized the assistance properly at medium to high extent.

Ray *et al.* (2001) conducted a study on problems of land reforms in Arunachal Pradesh and reported that average productivity

was higher on the small size land holding as compared to large size holding.

Singh (2001) conducted a study on rural informal credit market in Bareilly, U.P. and reported that the highest percentage of sample households (52.55%) were middle aged group, majority of respondents (56.45%) received education upto middle standard, 36.08% of sample households were of other backward castes. It was also observed that an average sample households consisted 6 members (Medium family size), further resource rich farmers had greater contact as compared to resource poor farmers extension agencies, maximum percentage of sample households (42.16%) had fell in the category of marginal farmers, 14.9% in small, 6.27% in medium and only 2.16% in big farmers category.

Gupta (2002) studied on flow of credit to small and marginal farmers in Rewa, M.P and concluded in his study that out of total households of both the selected district maximum farmers met out most of their credit requirements for farm implements and machinery through bank loan.

Jamre (2002) conducted a study on impact of Pradhan Mantri Rojgar Yojana in agriculture sector on income and employment generation and concluded that the majority of respondents (89%) belong to middle age group, maximum percentage of respondents (38.18%) fell in HSSC education group. The study also revealed that out of total respondents majority had big size of family, and majority of respondents (36.36%) owned medium size of land holding.

Jha (2002) conducted a study on the role of Regional Rural Bank in increasing agriculture production in Hosangabad tehsil of Hosangabad district of M.P and concluded that out of total sample of borrowers of Regional Rural Bank (RRB), the maximum percentage of borrowers (44%) were from small land sized group.

Rajak (2002) conducted a study on an evaluation of agriculture and allied development programme financed by RRB in Damoh

District and stated that out of total selected respondents maximum 46.87% were of large farming community who received crop loan.

Baghel (2003) conducted a study of impact of Swarn Jayanti Gram Swarajgar Yojna (SGSY) with references to credit utilization for minor irrigation among Tribal farmers of Dewasar Block of Sidhi District and stated that out of total beneficiaries 75 per cent were having no farm power while 24.17 per cent were having low farm power.

Meshram (2003) studied on impact of Swarn Jyanti Gram Swarajgar Yojna with respect to credit utilization extended to beneficiaries for agriculture development in Mandla district reported that as for as economic motivation is concerned 44.17 percent beneficiaries were having medium economic motivation while higher percentage of beneficiaries 45 percent had low level of economic motivation.

Ahmed (2004) conducted a study on micro credit and poverty: new realities and strategic issue in attacking poverty with micro credit and reported that only 12.25% of the total credit used for agriculture activities by the borrowers.

Khan (2006) conducted a study on credit utilization and repayment behaviour of borrowers of Panagar Block of Jabalpur district and concluded that the highest percentage of respondents (46.67%) had low level of risk bearing ability, majority of crop loan borrowers belonged to OBC category.

Association between attributes of borrower and increase in agriculture production

Bere (1977) observed that the impact of state bank of India on tribal rural finance was considerably high. The successful operation of bank has attracted the farmers to borrow the money to a large extent as against co operative societies. He revealed that the majority of farmers have favorable opinion towards taking of farm loans.

Jagannathrao *et al.* (1977) conducted a study on impact of lower interest rate finance on economic conditions of rural weaker section and confirmed that supply of finance at lower interest rate had enabled the beneficiaries to improve their production activities and income.

Rajkuty *et al.* (1993) conducted a study on concurrent evaluation of minor irrigation and horticultural schemes assisted under NSFDC in M.P and reported that there was significant association between achievement motivation, innovativeness and increase in agriculture production of beneficiaries.

Singh *et al.* (1994) studied on credit Appraisal of Credit Problems of Small Farmers in Punjab State and *concluded* in his study that socio-educational variables had no positive and significant association with agriculture production of borrowers.

Singh *et al.* (1997) found that age, education, of the farmers was related significantly with agriculture production of the borrower and age of the farmers was not related significantly with agriculture production of the borrower.

Ventkata Reddy (1998) conducted a study on income generation process in dairy schemes under IRDP and found that attributes of beneficiaries towards loan had significant association with increase in production.

Ahirwal (1999) conducted an evaluation study of training of rural youths for self employment (TRYSEM) scheme of Hatta block of Damoh district and *reported* that size of land holding was significantly associated with increase in income of beneficiaries.

Baghel (2003) conducted a study of impact of Swarn Jayanti Gram Swarajgar Yojna (SGSY) with references to credit utilization for minor irrigation among tribal farmers of Dewasar Block of Sidhi District and *concluded* that the association between various attributes of beneficiaries of SGSY like age, family size, caste, farm power were found to be non significant with increase in agriculture income

whereas education, land holding, attitude, achievement motivation, innovativeness, scientific orientation were found to be significantly associated.

Association between attributes of crop loan borrowers and increase in agriculture income

Kulkarni and Bhatta (1989) conducted a study on the crop loan system, distribution pattern, utilization and repayment of crop loan in Samastipur district (Bihar) and reported that size of family had no association with the increase in income, and extent of credit utilization had significant association with agriculture income.

Bheemappa *et al.* (1990) conducted a study on adoption behavior of dairy project beneficiaries under IRDP Karnataka and reported that age, caste, farm power of farmer was not associated significantly with their income.

Rajkuty *et al.* (1993) conducted a study on concurrent evolution of minor irrigation and horticultural schemes assisted under NSFDC in M.P and reported that significant relationship between contact of development agencies and achievement motivation of beneficiaries and their increased income.

Singh *et al.* (1994) found that age of farmers was not associated with increase in income and also reported that socio-educational variables had no positive association but psychological variables had significant association with increase in agriculture income.

Singh *et al.* (1997) conducted a study on credit appraisal of credit problems of small farmers in Punjab State and found that age of the borrowers was not related significantly, with increase in income.

Venkata Reddy (1998) studied on Income generation process in dairy schemes under IRDP and found that attitude of the beneficiaries had significant association with increase in income.

Das (2002) conducted a case study on co-operative banking in Arunachal Pradesh and reported that the loans provided by the bank

played an important role in improving the economic condition of the borrowers.

Constraints and suggestions stated by borrowers

Shrivastava (1976) studied on impact of State Bank of India loan in acceptance of improved crop technology in Shahpura Block Jabalpur District and observed that non-availability of loan at proper time and short-period of repayment of loan was some important difficulties faced by farmers.

Shukla (1979) conducted a study of factors affecting the behavior of small farmers in relation to the utilization of credit facilities extended by the Central Bank of India, Chourai Branch, Chhindwara District and observed that easily availability of loan-increased production, lesser rate of interest, government subsidy and long period of repayment were considered as incentives by the borrowers.

Singh *et al.* (1979) studied on credit appraisal of credit problems of small farmers in Punjab State and concluded that untimely credit supply, inadequate amount procedural complicity and higher rate of interest were the major difficulties faced in the acquisition of institutional credit in Ferozepur district of Punjab.

Yadav (1993) reported that major problems expressed by the beneficiaries were non-availability of loan in time more time was taken in sanction and the procedure of financing was more complicated.

Rao and Ramesh (1993) conducted a study on Bank finance to agriculture and allied activities survey results and stated that majority of respondents (93%) expressed that they were satisfied with the rate of interest charged by commercial banks as compared to private source of credit.

Debniewska and Swiatkiewicz *et. al.* (1995) studied on agriculture crediting by co operative banks in the wocawek province in the years 1990-1993 and concluded that in the opinion of bank personnel, credit should be reoriented for helping farmers survive hard

times towards encouraging development modernization and intensification of production.

Patel (1999) conducted a study on impact of Integrated Rural Development Programme on income and employment generation with reference to dairy enterprise in Rampur Naikin Block of Sidhi District and reported that important problems faced by the beneficiaries in getting credit were obtaining record from Patwari. Untimely disbursement of loan, problems in filling the bank application form and problems in requisition of application form for credit.

Rajak (2002) conducted a study on an evaluation of agriculture and allied development programme financed by RRB in Damoh District and found in his study that majority of the credit borrowers reported that credit process was very difficult and complicated.

Khan (2006) conducted a study on credit utilization and repayment behavior of borrowers of Panagar Block of Jabalpur district and reported that majority of borrowers stated that interest rate of credit schemes was so high. It should be reduced, large percentage of borrowers also stated that credit procedure was complicated; it should be made as easy.

Sharma *et.al.* (2006) studied on opinion of farmers towards flow and availability of farm credit had mild opinion about bank loan and their suggestions indicated that there was need to improve the farm credit system, and stated that out of total respondents, 79.58% respondents stated that loan procedure was simple while 20.42% respondents stated that the procedure was complicated. In case of opinion regarding rate of interest was optimum while 14.58% reported that it was very high.

METHODOLOGY

METHODOLOGY

This chapter deals with the methods and procedure used for the study. The different steps that undertaken are listed below and details under each step are explained in the succeeding part of the chapter.

The chapter has been divided into following sub-heads:

3.1 Sampling techniques used

- (a.) Locale of the study
- (b.) Selection of block
- (c.) Selection of villages
- (d.) Selection of respondents

3.2 Selection of variables, measurement to scoring procedure and categorization

3.3 Sources, instruments and method of data collection

3.4 Processing and statistical analysis of data

3.5 Validity and reliability of instruments

3.6 Hypothesis of the study

3.1 Sampling techniques used

(a) Locale of study

The study was carried out in Mandla district of Madhya Pradesh. Mandla district surrounded with four districts these are Jabalpur district on North, Balaghat district on the South, Seoni district on the East, and Dindori on the West. Mandla district comprises four tehsils namely; Mandla, Bicchia, Nainpur and Niwas. Mandla district has 9 blocks namely; Mandla, Bichhia, Nainpur, Ghugri, Mawai, Naranyanganj, Mohgaon, Bijadandi and Niwas and 1,214 villages.

Mandla district is located at East central part of the Madhya Pradesh. It is eastern part of Jabalpur district. It lies between the latitude 22°22' and 23°22' North and longitude 80°18' and 81°50' East. The tropic of cancer thus passes through the North of district. The total area of district is 13269 sq km. Thus before bifurcation, it was the 6th largest district in the state.

Geography of Nainpur

Nainpur is located at latitudes 22°43' North 80°12' East. It is located at the absolute centre of the country. It is surrounded by two rivers Chakor and Thanwar. As of 2001 India Census, Nainpur had population of 21,769.

Table 1.: Land utilization pattern of district and tehsil

S.No.	Description	Mandla district (area in hact.)	Nainpur tehsil (area in hact.)
1.	Geographical area	912455	36538
2.	Reserve forest	583195	1149
3.	Total irrigated land	16000	1884

Source: Land Record Deptt., Mandla

(b) Selection of block

Mandla district comprises of 9 blocks out of these only one block i.e. Nainpur was selected purposively because maximum number of beneficiaries of crop loan are in Nainpur branch. The State Bank of India (SBI), Nainpur Branch is the leading in agriculture finance among the all banking institutions. Therefore Nainpur block was selected for present study.

(c) Selection of villages

In Nainpur SBI covers 75 villages. These villages distributed into 22 service area. Out of these total villages, only 10 villages were selected with the help of random sampling.

(d) Selection of respondent

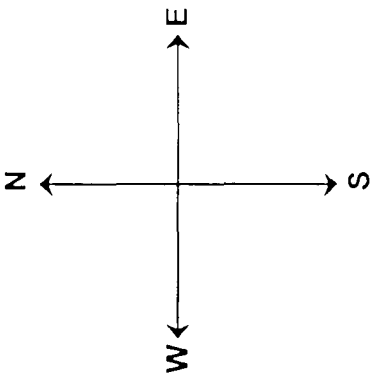
The borrowers of SBI Nainpur branch will be selected for the purpose of study. The 90 borrowers those who borrowed crop loan in 2005-2006 will be selected randomly to assess the impact of crop loan by studying agriculture status prior and after taking the loan. Respondents will be selected by random sampling method from each selected villages.

Table 2: Name of selected villages and number of respondents of Nainpur block of Mandla district

Code no.	Name of village	No. of farmers
A.	Alipur	22
B.	Dhatura	13
C.	Samnapur	11
D.	Niwari	10
E.	Delha	09
F.	Makke	09
G.	Gokulthana	06
H.	Rewada	04
I.	Heerapur	03
J.	Jamgaon	03
	Total	90

3.2 Selection of variables, definitions, measurements, scoring procedure and their categorizations

The independent and dependent variables for this study were as follows:



- | ଫି. (No.) | ନାମ (Name) | ସୂଚକ (Symbol) |
|-----------|-------------------------|---------------|
| ୧ | ପଞ୍ଚାଳ (Panchal) | |
| ୨ | କୋଇଲି ଗାଈ (Koilili Gai) | |
| ୩ | ଫାଲ୍‌ଗୁଣୀ (Falguni) | |
| ୪ | କୋଇଲି ଗାଈ (Koilili Gai) | |
| ୫ | କୋଇଲି ଗାଈ (Koilili Gai) | |
| ୬ | କୋଇଲି ଗାଈ (Koilili Gai) | |
| ୭ | କୋଇଲି ଗାଈ (Koilili Gai) | |
| ୮ | କୋଇଲି ଗାଈ (Koilili Gai) | |

Fig.3.1: Map of Nainpur block

Variables and their measurements

S.No.	Variables	Measurement
Independent variables		
A. Socio-economic variable		
1.	Age	As per chronological age
2.	Education	No. of classes passed
3.	Caste	Self scoring
4.	Family size	Self scoring
5.	Farm power	Self scoring
6.	Contact with development agencies	Self scoring
7.	Land holding	In acres
8.	Income	In rupees
9.	Extent of credit utilization	Self scoring
B. Psychological variables		
10.	Innovativeness	Scale of Maulik 1972
11.	Risk bearing ability	Scale of Supe, 1969
12.	Achievement motivation	Scale of Supe, 1969
13.	Attitude towards farm credit	Self scoring
14.	Scientific orientation	Scale of Supe (1969) with slight modification
Dependent variable		
15.	increase in agricultural production and income	Self scoring

Independent variables

(i) Age

It refers to actual age of the respondent in completed years i.e. chronological age of the respondents. The age was categorized into 3 groups that are young, middle and old age group

S.No.	Categories	Score
1.	Young age group (upto 35 year)	1
2.	Middle age group (36-55 years)	2
3.	Old age group (Above 56 year)	3

(ii) Education

It refers to the formal education attained by the selected respondents individually. To qualify the education, weightage has been given and classified into following groups on the basis of data depending upon the number of years of formal education.

S.No.	Categories	Score
1.	Illiterate	1
2.	Literates	2
3.	Primary	3
4.	Middle	4
5.	Higher level	5
6.	College level	6

(iii) Caste

It refers to the categories of the caste which the respondents belonged from. It is classified into 4 categories as approved by Government of India.

S.No.	Categories	Score
1.	General	3
2.	Other backward class	2
3.	Scheduled caste	1
4.	Scheduled tribes	1

(iv) Family size

It refers to the total members of family of respondents. It classified into the 3 categories according to number of members.

S.No.	Categories	Score
1.	Small size (upto 4)	1
2.	Medium size (5-6)	2
3.	Big size (7 and above)	3

(v) Farm power

It refers to the respondents who had possessed total number of items, which are essential for agriculture farming. Tabulation was done on the basis of maximum and minimum farm power identified and classified into 3 categories.

S.No.	Categories	Score
1.	Less farm power (Upto 3)	1
2.	Moderate farm power (4-6)	2
3.	High farm power (7 and above)	3

(vi) Contact with development agencies

It was operationalized as the degree to which respondents oriented the government agencies for obtaining agriculture information and was measured with the help of self scoring. Responses were recorded on three point continuum as often, sometimes and never and were given 3,2,1 scores respectively. The theoretical score ranges from onto 1 to 21. On the basis of score respondents were categorized into low, medium and high categories.

S.No.	Categories	Score range
1.	Low (7-11)	1
2.	Medium (12-16)	2
3.	High (17-21)	3

(vii) Land holding

It refers to total land possessed by the respondents in terms of acre at the time of investigation. The respondents were classified on the basis of their size of land holding into 3 categories.

S.No.	Categories	Score
1.	Small farmers (upto 5 acre)	1
2.	Medium farmers (5-10 acre)	2
3.	Large farmer (above 10 acre)	3

(viii) Extent of credit utilization

It refers to extent of utilization of borrowed amount by respondents in purpose which they borrowed for. It is calculated in terms of percentage and further classified into 4 categories. The following formula was applied to know the extent of credit utilization

S.No.	Categories	Score
1.	Low credit utilization (0-25%)	1
2.	Medium credit utilization (25-50%)	2
3.	High credit utilization (50-75%)	3
4.	Very high credit utilization (75-100%)	4

(ix) Innovativeness

It is the degree to which in an individual adopt technology relatively earlier than the others in his social system. It was measured with the help of scale developed by Maulik (1972). The scale contains 6 statements of which sixth statement was negatively keyed. Each statement was provided 5 response categories as strongly agreed, agreed, undecided, disagreed and strongly disagreed and were score given 7, 5, 4, 3 and 1 respectively. The possible score range was 6-42. The respondents were further classified into 3 categories based on total score range.

S.No.	Categories	Score
1.	Low innovativeness (6-17)	1
2.	Medium innovativeness (18-30)	2
3.	High innovativeness (31-42)	3

(x) Risk bearing ability

It is the degree to which a farmer is oriented towards risk and uncertainty and had courage to face the problems in farming. It was measured with the help of scale developed by Supe (1969). The scores were assigned to the each statement for strongly agree (7), agree (5), undecided (4), disagree (3) and strongly disagree (1). The

order was reversed in case of negative statement. The possible score range was 6-42. The risk bearing ability range was 6-42. The risk bearing ability categories were formulated into low, medium and high.

S.No.	Categories	Score
1.	Low risk bearing ability (6-17)	1
2.	Medium risk bearing ability (18-30)	2
3.	High risk bearing ability (31-42)	3

(xi) Achievement motivations

It refers to the occupational success in terms of profit maximization and relative of an individual placed on economic ends. It was measured by using the economic motivation scale developed by Supe (1969). Scale consists of six items of which statement number six was negative. Responses were recorded on five point continuum as strongly agree, agree, undecided, disagree, strongly disagree and were given 5, 4, 3, 2 and 1 score, respectively. The theoretical score range was from 6 to 30. The total score indicated the degree of motivation. The obtained data was classified into three categories.

S.No.	Categories	Score
1.	Low achievement motivation (6-14)	1
2.	Medium achievement motivation (15-22)	2
3.	High achievement motivation (23-30)	3

(xii) Attitude towards farm loan

The degree of attitude towards crop loan was measured by an index. This variable refers the attitude regarding the programme by putting various questions, in order to estimate the total score by the beneficiaries was counted.

S.No.	Categories	Score
1.	Less favorable (0-6)	1
2.	Favorable (7-12)	2
3.	Most favorable (13-18)	3

(xiii) Scientific orientation

It is the degree to which the farmer is oriented to the use of scientific method in decision making in farming. It is operationalized as characteristics of farming apprehended cultivators that social and natural force if understood, mobilized through effort and applied will have to solve human problem. Scale of Supe (1969) with slight modification was adopted to measure the scientific orientation of borrowers. It consists 6 items and responses were recorded on five point continuum as strongly agree, agree, undecided, disagree, strongly disagree and were given 7,5,4,3,1 score respectively.

S.No.	Categories	Score
1.	Less scientific orientation (7-14)	1
2.	Medium scientific orientation (15-22)	2
3.	High scientific orientation (23-30)	3

Independent variable

1. Increase in agriculture production

It refers to percentage increase in agriculture production before and after taking loan by the borrowers. It is classified in 3 categories with the help of maximum and minimum value of difference in increase in production. Following formula was applied to know the increase in production.

$$\text{Increase in agriculture production} = \frac{\text{After borrowing} - \text{Before borrowing}}{\text{Before borrowing}} \times 100$$

S.No.	Categories	Score
1.	Low increase in agriculture production (upto 2 quintal)	1
2.	Medium increase in agriculture production (3-5 quintal)	2
3.	High increase in agriculture production (6-8 quintal)	3

2. Increase in agricultural income

It refers to percentage increase in agriculture income before taking and after taking loan by the borrowers. It is classified in 3 categories with the help of maximum and minimum difference between pre and post value of agriculture income. The following formula was applied to know the increase in income.

$$\text{Increase in agriculture income} = \frac{\text{After borrowing} - \text{Before borrowing}}{\text{Before borrowing}} \times 100$$

Concept of impact

Increase in production and income was the measure of impact of crop loan. Thus appropriate tables were made and by comparative studies impact of crop loan was measured.

(a) Impact in terms of production

Season	Crops	Increase in Production quintal/acre		Percentage increase in production
		Before taking loan	After taking loan	
Kharif	A			
	B			
Rabi	C			
	D			
Total				

(b) Impact of crop loan in terms of percentage increase in agriculture income

Season	Crops	Increase in income rupees/ quintal		Percentage increase in income
		Before taking loan	After taking loan	
Kharif	A			
	B			
Rabi	C			
	D			
Total				

3.3 Sources, instruments and methods of data collections

(i) Sources of data collections

(a) Primary data

State Bank of India Nainpur branch was primary source of data collection. The crop loan borrowers of the year 2006-2007 were selected as respondents. The primary data were collected personally through interviewing the selected respondents with the help of structured and pre-tested interview schedule.

(b) Secondary data

The secondary data related to selected villages, block and district were obtained from Senior Agriculture development Officer (SADO) office, tehsil and district statistical and geographical record office.

(ii) Instruments and method of data collections

The interview schedule was designed for collecting the relevant information of selected variable. The questions in interview schedule framed were simple clear and directly related to the purpose of the study and were arranged in logical sequence.

The data were collected personally from respondents in Nainpur block in order to be sure of correctness in response.

The relevance of each question in the context of the objectives of the study, their logical order and working of questions was carefully checked.

3.4 Processing and statistical analysis of data

Data collected were qualitative as well as quantitative. The quantitative data were interpreted in terms of percentage and qualitative data were tabulated on the basis of approved categorization method as described earlier. The following statistical techniques were used in the study:

(a) Percentage mean

(c) Chi-square

(a) Percentage:

The term percentage means a fraction whose denominator is 100 and the numerator of the fraction is called percentage

$$P = \frac{X}{N} \times 100$$

Where;

P = Percentage

X = Frequency of respondents

N = Total no. of respondents ✓

(b) Arithmetic mean:

Arithmetic mean of a set of observations is their sum divided by the number of observations. e.g. The arithmetic mean \bar{X} of n observations X_1, X_2, \dots, X_n is given by

$$\bar{X} = \frac{1}{n} \sum X_i$$

Where;

$i = 1, 2, 3, \dots, n$

\bar{X} = Mean

$\sum X_i$ = Sum of observations

n = number of observations ✓

(d) Chi-square test:

Test to determine whether two attributes are independent by comparison of observed frequencies related to expected frequencies.

$$\chi^2 = \frac{\sum (O_1 - E_1)^2}{E_1} \text{ With d.f. } = (r-1)(c-1)$$

Where;

χ^2 = Chi-square ✓

O_1 = observed frequencies

E_1 = Expected frequencies

Σ = Summation overall

r = Number of rows

c = Number of columns

The expected frequencies X_{ab} on any cell falling in the a^{th} and b^{th} column on the assumption of the independence of the classifications and constant marginal totals will be as given below:

$$X_{ab} = \frac{R_a \times C_b}{N}$$

Where;

X_{ab} = Expected frequency on any cell falling in the row and b^{th} column

R_a = Total of the row

C_b = Total of the column

N = Total number of respondents

Calculated Chi-square value was noted with on the contingency table reference to the Chi-value at 0.05 level probability with appropriate degree of freedom.

Note: In the $r \times c$ contingency table only when cell frequency was less than 5, then to maintain the continuity property method of nearby cell frequencies was applied, but in case of 2×2 contingency table to maintain the same continuity property. Yate's correction degree of freedom was modified accordingly.

3.5 Validity and reliability of instruments

Validity refers to whether the data collection instruments measure what is supposed to measure. Validity of interview schedule for their study maximized by taking the following steps:

- (a.) The interview schedule was thoroughly discussed with the members of the authority, advisory committee and their suggestions were incorporated.
- (b.) Pre-testing of the interview schedule provided an additional check for improving the instrument.
- (c.) The relevance of each question in terms of the objectives was checked carefully.

Reliability of an interview schedule refers to its consistency. It has been observed property that the interview had reliability before it was used as the data collection instrument.

3.6 Hypothesis of the study

Relevant hypothesis were formulated on the basis of study and was tested in the null form as follows:

- (a.) There is no significant association between age of respondents and increase in agriculture production due to crop loan.
- (b.) There is no significant association between education level of borrowers and increase in agriculture production due to crop loan.
- (c.) There is no significant association between caste of borrowers and increase in agriculture production due to crop loan.
- (d.) There is no significant association between family size of borrowers and increase in agriculture production due to crop loan.
- (e.) There is no significant association between farm power and increase in agriculture production due to crop loan.
- (f.) There is no significant association between contact of borrowers with development agencies and increase in agriculture production due to crop loan.
- (g.) There is no significant association between land holding of borrowers and increase in agriculture production due to crop loan.
- (h.) There is no significant association between innovativeness of borrowers and increase in agriculture production due to crop loan.
- (i.) There is no significant association between risk bearing ability of borrowers and increase in agriculture production due to crop loan.

- (j.) There is no significant association between achievement motivation of borrowers and increase in agriculture production due to crop loan.
- (k.) There is no significant association between attitude of borrowers towards crop loan and increase in agriculture production due to crop loan.
- (l.) There is no significant association between scientific orientation of borrowers and increase in agriculture production due to crop loan.
- (m.) There is no significant association between extent of credit utilization by the borrowers and increase in agriculture production due to crop loan.
- (n.) There is no significant association between age of borrowers and increase in agriculture income due to crop loan.
- (o.) There is no significant association between education level of borrowers and increase in agriculture income due to crop loan.
- (p.) There is no significant association between caste of borrowers and increase in agriculture income due to crop loan.
- (q.) There is no significant association between family size of borrowers and increase in agriculture income due to crop loan.
- (r.) There is no significant association between farm power of borrowers and increase in agriculture income due to crop loan.
- (s.) There is no significant association between contact of borrowers with development agencies and increase in agriculture income due to crop loan.
- (t.) There is no significant association between land holding of borrowers and increase in agriculture income due to crop loan.
- (u.) There is no significant association between innovativeness of borrowers and increase in agriculture income due to crop loan.



- (v.) There is no significant association between risk bearing ability of borrowers and increase in agriculture income due to crop loan.
- (w.) There is no significant association between achievement motivation of borrowers and increase in agriculture income due to crop loan.
- (x.) There is no significant association between attitude towards crop loan of borrowers and increase in agriculture income due to crop loan.
- (y.) There is no significant association between scientific orientation of borrowers and increase in agriculture income due to crop loan.
- (z.) There is no significant association between extent credit utilization of borrowers and increase in agriculture income due to crop loan.

RESULTS

RESULTS

Analysis and Interpretation of Data

This chapter deals with the analysis and interpretation of data, which were collected from the sample of 90 borrowers of SBI, Nainpur branch who were financed crop loan for increase agriculture production and income. The results were expressed in terms of percentage. Chi-Square test was applied to work out association between dependent and independent variables. The data were processed keeping in view of the objectives of the study.

The chapter was divided into the following sub-heads:

- (4.1) - Attributes of borrowers.
- (4.2) - Extent of credit utilization
- (4.3) - Impact of crop loan in terms of increase in agriculture production and income.
- (4.4.1) - Association between socio personal-economic and psychological attributes of borrowers and increase in agriculture production.
- (4.4.2) - Association between socio personal-economic and psychological attributes of borrowers and increase in agriculture income
- (4.5) - Constraints in flow and availability of crop loan and suggestion for betterment of scheme
- (4.5.1) - Constraints faced in credit availing procedure
- (4.5.2) - Opinion in credit procedure
- (4.5.3) - Suggestion for betterment of crop loan scheme.

4.1 Attributes of Borrowers

The attributes of different categories of borrowers of Nainpur block of Mandla district of Madhya Pradesh were studied in terms of socio-personal-economic and psychological aspects which were presented as below.

4.1.1 Age

Table 4.1: Distribution of borrowers according to their age

S.No.	Categories	Frequency	Percentage
1	Young age group	35	38.89
2	Middle age group	38	42.22
3	Old age group	17	18.89
Total		90	100.00

The table 4.1 reveals that out of the total borrowers, 38.89 per cent were of young age group, 42.22 per cent were of middle age group and 18.89 per cent of old age group.

Thus it may be stated that, the higher percentage of the borrowers (42.00%) belonged to middle age group followed by young age group of borrowers (38.89%).

4.1.2 Education level

Table 4.2: Distribution of borrowers according to their education level

S.No.	Categories	Frequency	Percentage
1	Illiterate	28	31.12
2	Upto middle	38	42.22
3	High school and above	24	26.66
Total		90	100.00

The table 4.2 illustrates that out of total borrowers 31.12 per cent were illiterate 42.22 per cent borrowers had received education upto middle level and 26.66 per cent had gained high school and above level of education.

Thus it can be stated that maximum borrowers (42.22%) were educated upto middle school level.

Fig. 4.1: Distribution of borrowers according to their age

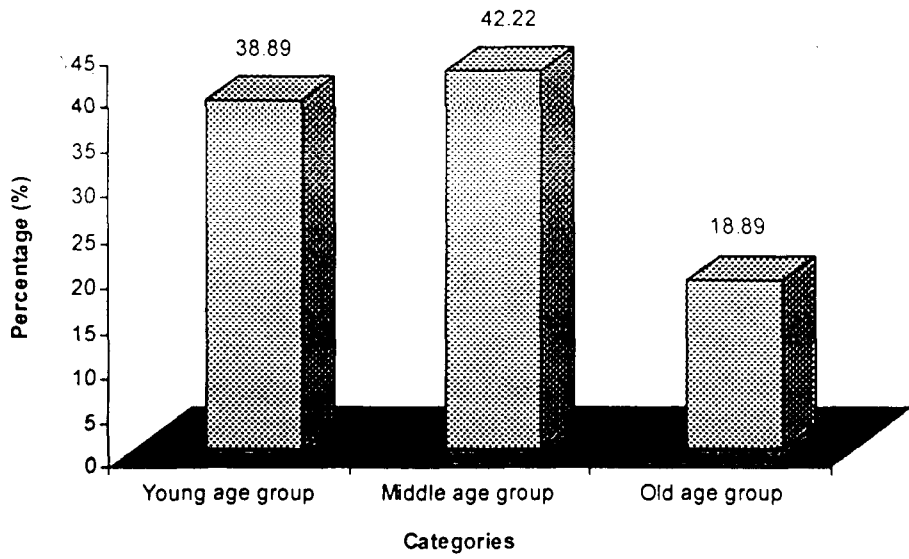
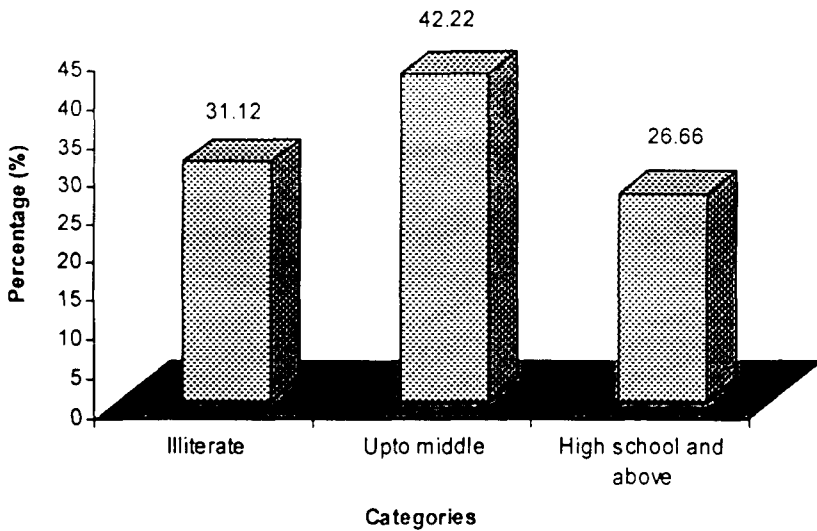


Fig. 4.2: Distribution of borrowers according to their education level



4.1.3 Caste

Table 4.3: Distribution of borrowers according to their caste

S.No.	Categories	Frequency	Percentage
1	General	23	25.55
2	Other background Class	38	42.23
3	Scheduled category (SC +ST)	29	32.22
Total		90	100.00

The table 4.3 shows that out of total borrowers, 25.55 per cent belonged to general category. 42.23 per cent belonged to OBC category and 32.22 per cent belonged to scheduled category (SC + ST).

Thus it may be stated that the maximum percentage of borrowers (42.23%) belonged to OBC category of caste.

4.1.4 Family size

Table 4.4: Distribution of borrowers according to their family size

S.No.	Categories	Frequency	Percentage
1	Small family	32	35.55
2	Medium family	36	40.00
3	Big family	22	24.55
Total		90	100.00

The table 4.4 indicates that out of total borrowers 35.55 per cent had small size family, 40.00 per cent had medium size family and 24.55 per cent had big size family.

Thus it may be concluded that maximum percentage of borrowers (40%) belonged to medium size family group.

4.1.5 Farm power

Table 4.5: Distribution of borrowers according to their farm power

S.No.	Categories	Frequency	Percentage
1	Low farm power	27	30.00
2	Moderate farm power	42	46.66
3	High farm power	21	23.34
Total		90	100.00

Fig. 4.3: Distribution of borrowers according to their caste

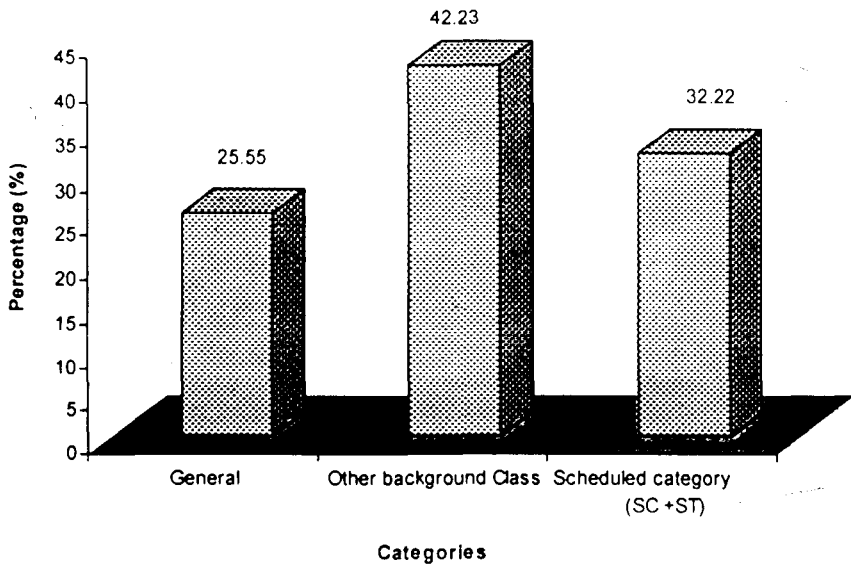
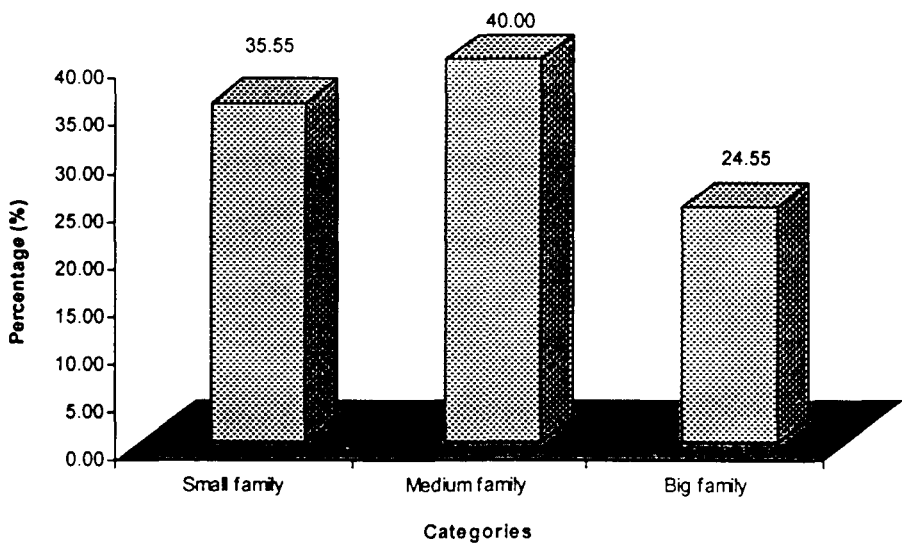


Fig. 4.4: Distribution of borrowers according to their family size



The table 4.5 shows that out of total borrowers 30.00 per cent had low farm power, 46.66 per cent had moderate farm power and 23.34 per cent had high farm power.

Thus it may be concluded that maximum percentage of borrowers (46.66%) had moderate farm power.

4.1.6 Contact with development agencies

Table 4.6: Distribution of borrowers according to their contact with development agencies

S.No.	Categories	Frequency	Percentage
1	Low contact with development agencies	26	28.89
2	Medium contact with development agencies	44	48.89
3	High contact with development agencies	20	22.22
Total		90	100.00

The table 4.6 reveals that out of total borrowers 28.89 had low contact with development agencies, 48.89 per cent had medium contact and 22.22 per cent had high contact with development agencies.

This it may be concluded that maximum percentage of borrowers (48.89%) had medium contact with development agencies.

4.1.7 Land holding

Table 4.7: Distribution of borrowers according to size of land holding

S.No.	Categories	Frequency	Percentage
1	Small farmer	20	22.22
2	Medium farmer	42	46.66
3	Large farmer	28	31.12
Total		90	100.00

The table 4.7 shows that out of total borrowers 22.22 per cent belonged to small farmer category. 46.66 per cent belonged to medium farmer category and 31.12 per cent belonged to large farmer category.

Fig. 4.5: Distribution of borrowers according to their farm power

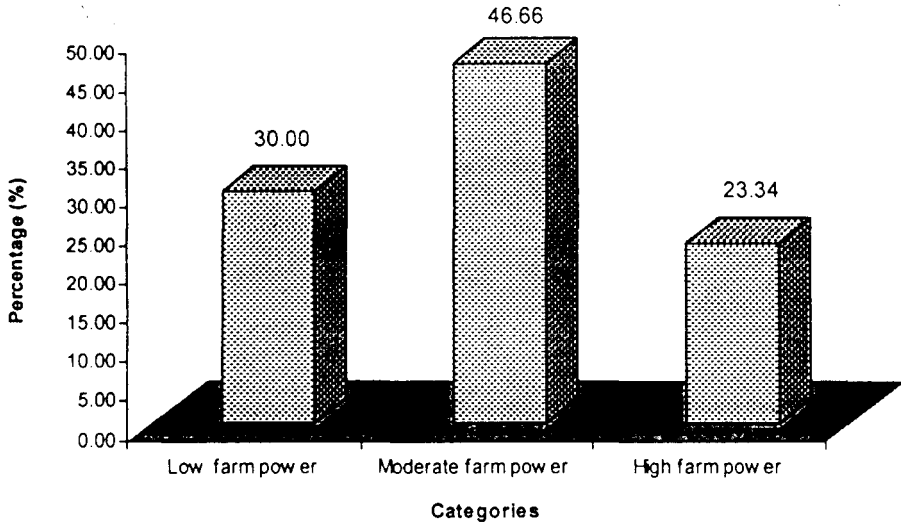
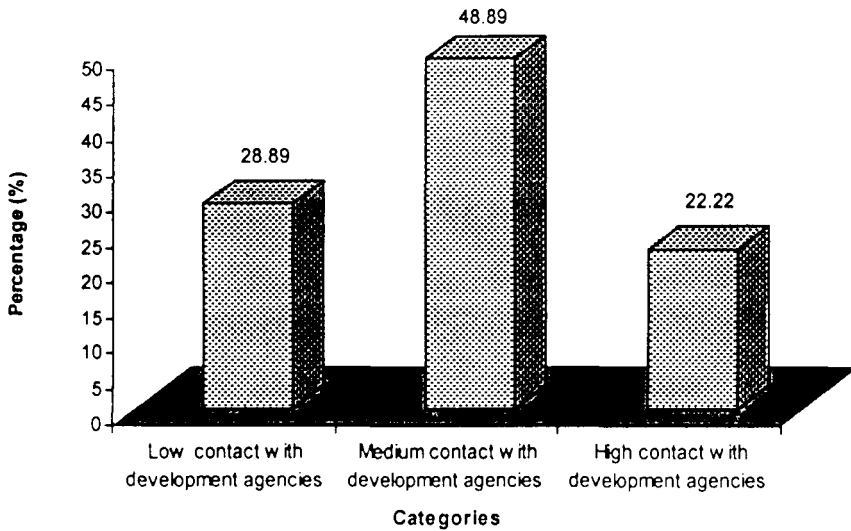


Fig. 4.6: Distribution of borrowers according to their contact with development agencies



Thus it can be concluded that maximum percentage of borrowers (46.66%) belonged to the category of medium farmer followed by large and small farmers.

4.1.8 Innovativeness

Table 4.8: Distribution of borrowers according to their innovativeness

S.No.	Categories	Frequency	Percentage
1	Low innovativeness	32	35.55
2	Medium innovativeness	40	44.45
3	High innovativeness	18	20.00
Total		90	100.00

The table 4.8 indicates that out of total borrowers 35.33 per cent had low innovativeness, 46.66 per cent had medium innovativeness and 20 per cent had high innovativeness.

Thus it may be concluded that maximum percentage of borrowers (46.66%) had medium innovativeness.

4.1.9 Risk bearing ability

Table 4.9: Distribution of borrowers according to their risk bearing ability

S.No.	Categories	Frequency	Percentage
1	Low risk bearing ability	30	33.34
2	Medium risk bearing ability	42	46.66
3	High risk bearing ability	18	20.00
Total		90	100.00

The table 4.9 illustrates that out of total borrowers 33.34 per cent had low risk bearing ability, 46.66 per cent had medium risk bearing ability and 20 per cent had high risk bearing ability.

Thus it may be concluded that maximum percentage of borrowers (46.66%) had medium level of risk bearing ability.

Fig. 4.7: Distribution of borrowers according to size of land holding

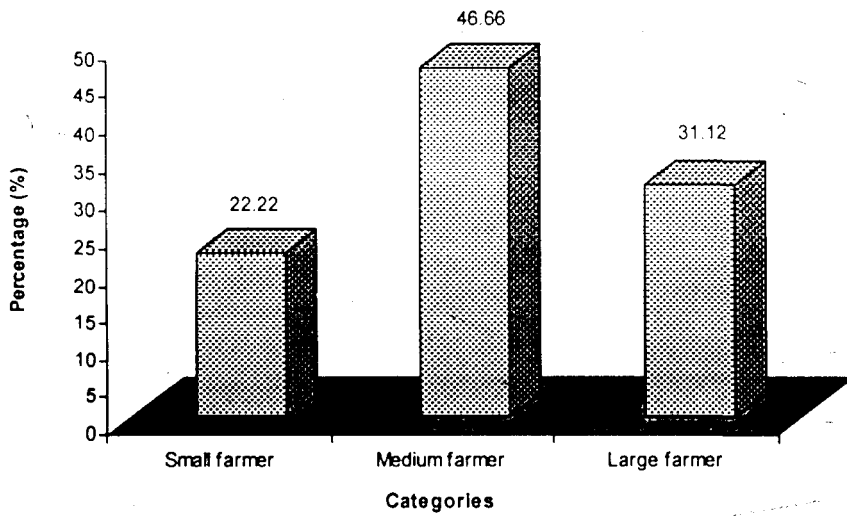
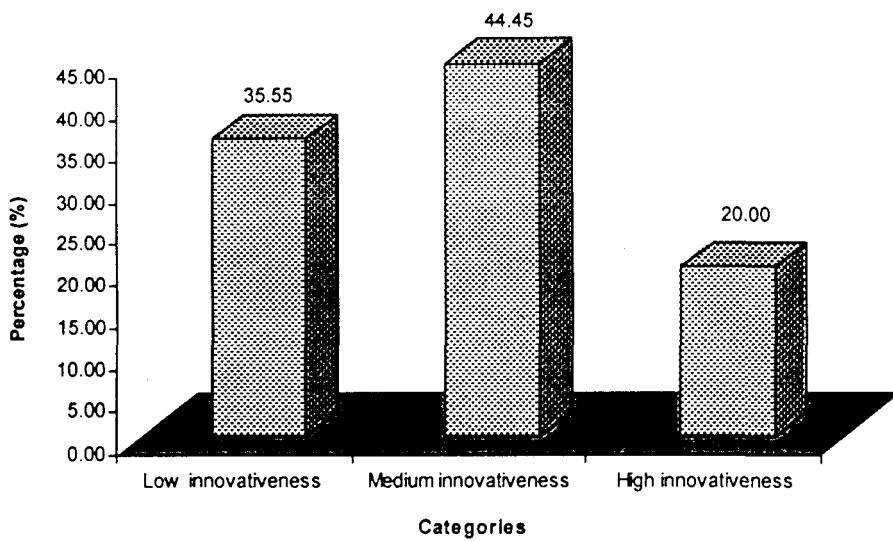


Fig. 4.8: Distribution of borrowers according to their innovativeness



4.1.10 Achievement motivation

Table 4.10: Distribution of farmers according to their achievement motivation

S.No.	Categories	Frequency	Percentage
1	Low achievement motivation	30	33.34
2	Medium achievement motivation	40	44.44
3	High achievement motivation	20	11.12
Total		90	100.00

The table 4.10 indicates that out of total borrowers 33.34 per cent had low achievement motivation, 44.44 per cent had medium and 11.42 per cent had high achievement motivation.

Thus it may be concluded that maximum percentage of borrowers (44.44%) of had medium achievement motivation.

4.1.11 Attitude towards crop loan

Table 4.11: Distribution of borrowers according to their attitude towards crop loan

S.No.	Categories	Frequency	Percentage
1	Less favorable attitude	16	17.77
2	Favorable	51	56.67
3	Most favorable	23	25.56
Total		90	100.00

The data illustrated that out of total selected borrowers 17.77 per cent had less favorable attitude towards crop loan, 56.67 per cent had favorable and 25.56 per cent had most favorable attitude towards crop loan.

Thus it may be concluded that maximum percentage of selected borrowers (56.67%) had favorable attitude towards crop loan.

Fig. 4.9: Distribution of borrowers according to their risk bearing ability

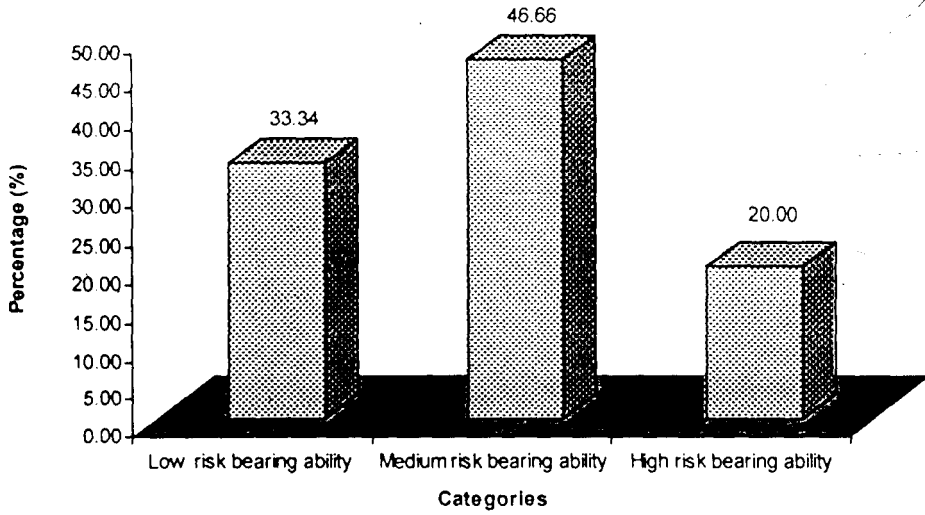
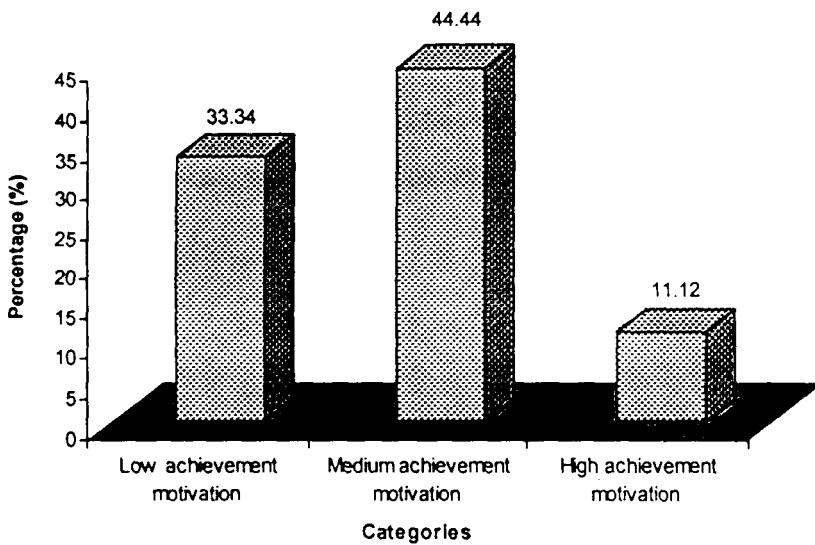


Fig. 4.10: Distribution of borrowers according to their achievement motivation



4.1.12 Scientific orientation

Table 4.12: Distribution of borrowers according to their scientific orientation

S.No.	Categories	Frequency	Percentage
1	Low scientific orientation	25	27.77
2	Medium scientific orientation	37	41.12
3	High scientific orientation	28	31.11
Total		90	100.00

The table reveals that out of total selected borrowers 27.77 per cent had less scientific orientation, 41.12 per cent had medium and 31.11 per cent had high scientific orientation.

Thus it may be concluded that maximum percentage of selected borrowers (41.12%) had medium scientific orientation.

4.2 Extent of credit utilization

Table 4.13: Distribution of borrowers according to their extent of utilization of crop loan

S.No.	Categories	Frequency	Percentage
1	Low credit utilization	7	7.77
2	Medium credit utilization	21	23.34
3	High credit utilization	38	42.23
4	Very high credit utilization	24	26.66

The table 4.13 reveals that out of total borrowers 7.77 per cent had low extent of credit utilization, 23.34 per cent had medium extent of credit utilization, 42.23 per cent had high extent credit utilization and 26.66 per cent had very high extent of credit utilization.

Thus it may be concluded that maximum percentage of borrowers (42.23%) had high extent of utilization of crop loan.

Fig. 4.11: Distribution of borrowers according to their attitude towards crop loan

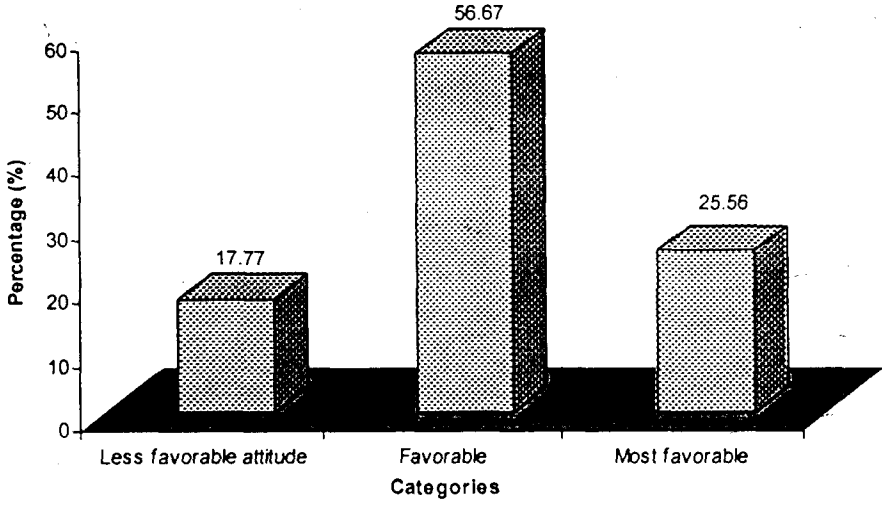
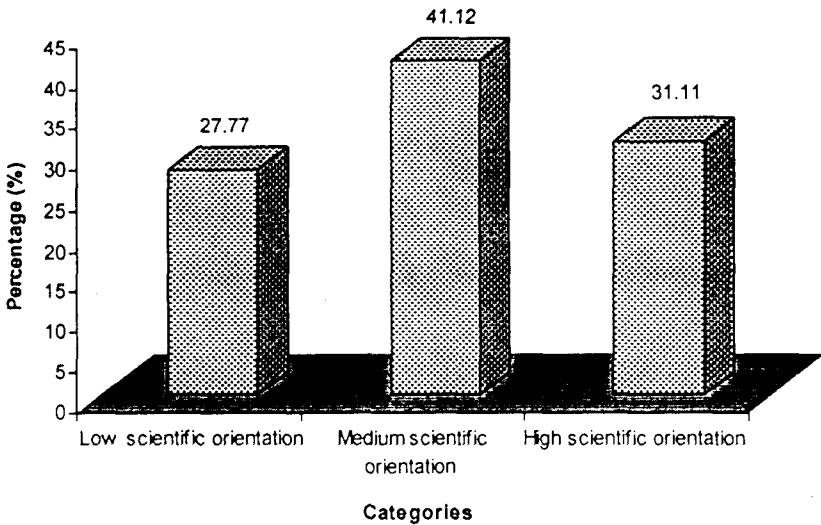


Fig. 4.12: Distribution of borrowers according to their scientific orientation



4.3.1 Impact of crop loan in terms of increase in agriculture production per acre due to crop loan ✓

Table 4.14: Distribution of borrowers according to increase in agriculture production per acre

S.No.	Categories	Frequency	Percentage
1	Low increase in production	22	24.45
2	Medium increase in production	30	33.33
3	High increase in production	38	42.22
Total		90	100.00

The data presented in table 4.14 shows that out of total selected borrowers 24.45 per cent had low increase in production, 33.33 per cent had medium and 42.22 per cent had high increase in agriculture production after borrowing loan from bank.

Thus it may be concluded that maximum percentage of borrowers (42.22%) had highly increased their agriculture production per acre after taking loan followed by medium and low.

4.3.2 Impact of crop loan in terms of increase in agriculture income per acre due to crop loan ✓

Table 4.15: Distribution of borrowers according to increase in agriculture income per acre

S.No.	Categories	Frequency	Percentage
1	Low increase in income	19	21.11
2	Medium increase in income	31	34.44
3	High increase in income	40	44.45
Total		90	100

The data illustrated that out of total selected borrowers 21.11 per cent had low increase in income. 34.44 per cent had medium and 44.45 per cent had high increase in agriculture income per acre after taking loan.

Thus it may be concluded that maximum percentage of selected borrowers (44.45%) had increased their agriculture income per acre after taking loan.



Fig. 4.13: Distribution of borrowers according to their extent of utilization of crop loan

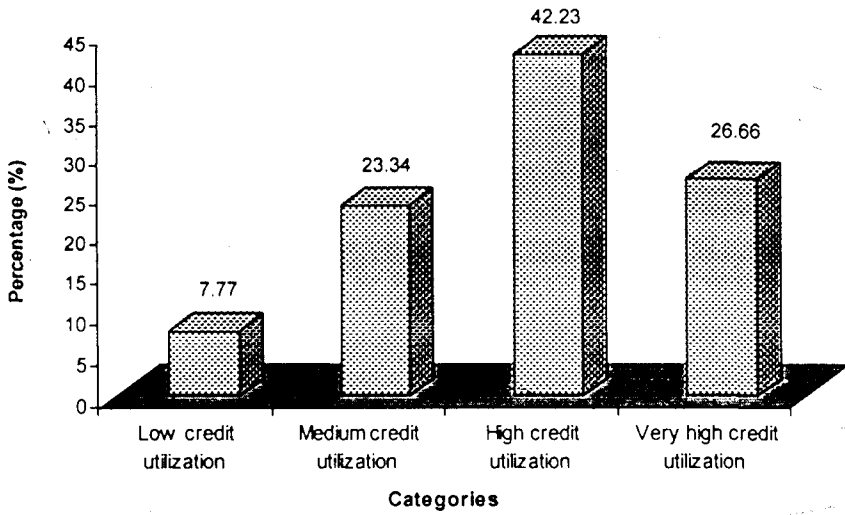


Fig. 4.14: Distribution of borrowers according to increase in agriculture production per acre

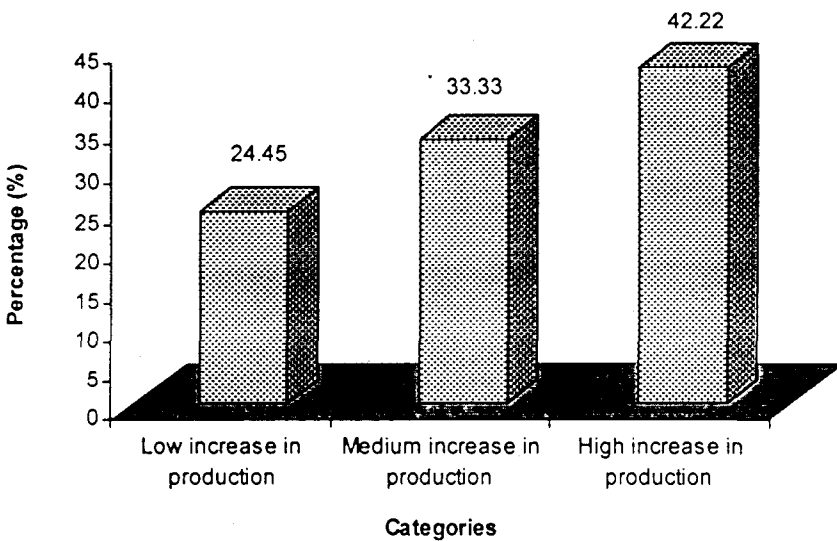
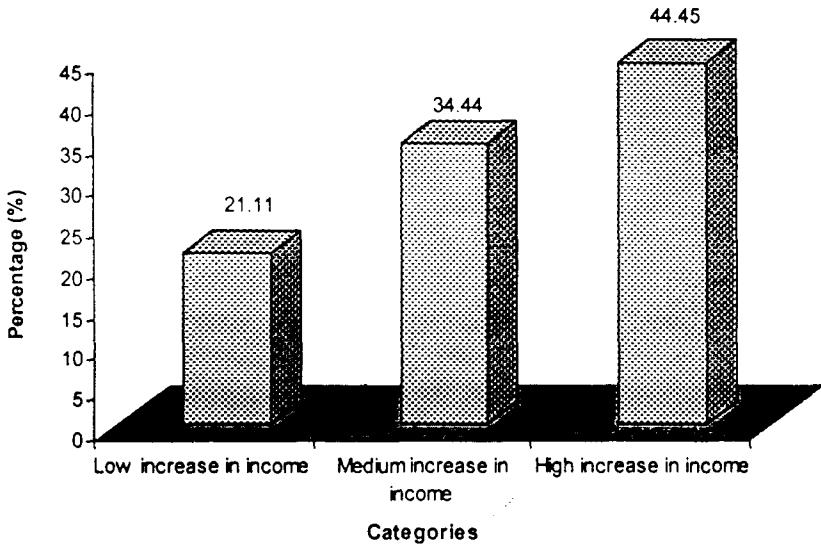


Fig. 4.15: Distribution of borrowers according to increase in agriculture income per acre



4.4.1 Association between attributes of respondents and increase in agricultural production due to crop loan

Table 4.16 Association between age of respondents and increase in agriculture production

Age	Increase in agriculture production			Total
	Low	Medium	High	
Young	7 (20.00)	18 (51.42)	10 (28.58)	35
Middle	9 (23.68)	7 (18.42)	22 (57.90)	38
Old	6 (35.29)	5 (29.42)	6 (35.29)	17
Total	22	30	38	90

(Figures in parentheses indicate percentage)

$\chi^2 = 10.99$, Significant at 0.05 level with d.f. 4, table value is 9.48

Table 4.16 reveals the association between age of borrowers and their increase in agriculture production per acre due to crop loan. It was evident from the above data that the out of total young age borrowers 20 per cent had low, 51.42 per cent had medium and 28.58 per cent had high increase in production. Whereas, out of total middle age group of borrowers 23.68 per cent had low, 18.42 per cent had medium, 57.90 per cent had high increase in production. In case of old age group 35.29 per cent had low, 29.42 per cent had medium and 35.29 per cent had high increase in production. From the above discussion it can be concluded that majority of borrowers (57.90%) were of middle age group who were getting higher production due to crop loan.

The chi-square value 10.99 was found to be significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between age of borrowers and their increase in agriculture production due to crop loan.

Table 4.17 Association between education of respondents and increase in agriculture production

Education	Increase in agriculture production			Total
	Low	Medium	High	
Illiterate	7 (25.00)	15 (53.58)	6 (21.42)	28
Upto middle	10 (26.32)	6 (15.79)	22 (57.89)	38
High school and above	5 (20.83)	9 (37.50)	10 (41.67)	24
Total	22	30	38	90

(Figures in parentheses indicate percentage)

$\chi^2 = 12.29$, Significant at 0.05 level with d.f. 4, table value 9.48

Table 4.17 reveals the association between education of borrowers and increase in agriculture production due to crop loan. It was clear from the above table that out of total illiterate category of borrowers 25 per cent had low, 53.58 per cent had medium, and 21.42 per cent had high increase in production. Whereas out of total borrowers who were educated up to middle level 26.32 per cent had low, 15.79 per cent had medium and 57.89 per cent had high increase in production. In case of borrowers who were educated upto high school and above, 20.83 per cent had low, 37.50 per cent had medium and 41.67 per cent had high increase in production. From the above discussion it can be concluded that majority of borrowers (57.89%) educated upto middle level who were getting higher production due to crop loan.

The chi-square value 12.29 was found to be significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between education level of borrowers and increase in agriculture production due to crop loan.

Table 4.18: Association between caste of respondent and increase in agriculture production

Caste	Increase in agriculture production			Total
	Low	Medium	High	
General	7 (30.43)	9 (39.13)	7 (30.43)	23
OBC	5 (13.15)	16 (42.12)	17 (44.73)	38
SC + ST	10 (34.48)	5 (17.24)	14 (48.28)	29
Total	22	30	38	90

(Figures in parentheses indicate percentage)

$\chi^2 = 7.83$, non-significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.18 reveals the association between caste of borrowers and increase in agriculture production due to crop loan. It was apparent from the table that out of total general category of borrowers 30.43 per cent had low, 39.13 per cent had medium, and 30.43 per cent had high agriculture production. Whereas out of total OBC category of borrowers 13.15 per cent had low, 42.12 per cent had medium and 44.73 per cent had high production. In case of scheduled category (SC/ST) 34.48 per cent had low, 17.24 per cent had medium and 48.28 per cent had high agriculture production. From the above discussion it can be concluded that majority of borrowers (48.28%) were of SC/ST category who were getting higher production due to crop loan.

The chi-square value 7.83 was found to be non-significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was no significant association between caste of borrowers and increase in agriculture production due to crop loan.

Table 4.19: Association between family size and increase in agriculture production

Family size	Increase in agriculture production			Total
	Low	Medium	High	
Small	8 (25.00)	16 (50.00)	8 (25.00)	32
Medium	9 (25.00)	9 (25.00)	18 (50.00)	36
Big	5 (22.73)	5 (22.73)	12 (54.54)	22
Total	22	30	38	90

(Figures in parentheses indicate percentage)

$\chi^2 = 11.06$, Significant at 0.05 level with d.f.4, tabulated value 9.48

Table 4.19 reveals the association between family size of borrowers and increase in agriculture production due to crop loan. It was evident from the table that out of total small size family of borrowers 25 per cent had low, 50 per cent had medium and 25 per cent had high increase in production. Whereas, in medium size family borrowers 25 per cent had low, 25 per cent had medium and 50 per cent had high increase in production. In case of borrowers who were of big size family 22.73 per cent had low, 22.73 per cent had medium and 54.54 per cent had high increase in production. From the above discussion it can be concluded that majority of borrowers (54.54%) were of big size family who were getting higher production due to crop loan.

The chi-square value 11.06 was found to significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between family size and increase in agriculture production of borrowers.

Table 4.20: Association between farm power and increase in agriculture production

Farm power	Increase in agriculture production			Total
	Low	Medium	High	
Low farm power	8 (29.62)	12 (44.45)	7 (25.93)	27
Moderate farm power	7 (16.66)	12 (28.58)	23 (54.76)	42
High farm power	7 (33.34)	6 (28.57)	8 (38.09)	21
Total	22	30	38	90

(Figures in parentheses indicate percentage)

$\chi^2 = 7.13$, non-significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.20 reveals the association between farm power of borrowers and increase in agriculture production due to crop loan. It was clear from the above table that out of total low category of borrowers 29.62 per cent had low, 44.45 per cent had medium, and 25.93 per cent had high agriculture production. Whereas, out of total moderate farm power category 16.66 per cent had low, 28.58 per cent had medium and 54.76 per cent had high increase in production. In case of high farm power holding borrowers 33.34 per cent had low, 28.57 per cent had medium and 38.09 per cent had high increase in production. From the above discussion it can be concluded that majority of borrowers (54.76%) were having moderate farm power who were getting higher production due to crop loan.

The chi-square value 7.13 was found to be non significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was no association between farm power and increase in agriculture production due to crop loan

Table 4.21: Association between contact with development agencies and increase in agriculture production

Contact with development agencies	Increase in agriculture production			Total
	Low	Medium	High	
Low	12 (46.15)	9 (34.62)	5 (19.23)	26
Medium	5 (11.36)	14 (31.82)	25 (56.82)	44
High	5 (25.00)	7 (35.00)	8 (40.00)	20
Total	22	30	38	90

(Figures in parentheses indicate percentage)

$\chi^2 = 13.69$, Significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.21 reveals the association between contact with development agencies and increase in agriculture production due to crop loan. It was evident from the above table that out of total low category of borrowers 46.15 per cent had low, 34.62 per cent had medium and 19.23 per cent had high increase in production. Whereas, out of total medium category of borrowers 11.36 per cent had low, 31.82 per cent had medium and 56.82 per cent had high increase in production. In case of high category of borrowers 25 per cent had low, 35 per cent had medium and 40 per cent had high increase in agriculture production. From the above discussion it can be concluded that majority of borrowers (56.82%) were having medium contact with development agencies and getting higher production due to crop loan.

The chi-square value 13.69 was found to be significant. Thus the conclusion can be drawn that there was significant association between contact with development agencies and increase in agriculture production due to crop loan.

Table 4.22: Association between land holding and increase in agriculture production

Land holding	Increase in agriculture production			Total
	Low	Medium	High	
Small	8 (40.00)	7 (35.00)	5 (25.00)	20
Medium	7 (16.66)	10 (23.81)	25 (59.53)	42
Large	7 (25.00)	13 (46.43)	8 (28.57)	28
Total	22	30	38	90

(Figures in parentheses indicate percentage)

$\chi^2 = 12.01$, significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.22 reveals the association between land holding of borrowers and increase in agriculture production. It was evident from the above table that out of total small farmers category 40 per cent had low, 35 per cent had medium and 25 per cent had high increase agriculture production. Whereas, out of total borrowers who were of medium farmers category. 16.66 per cent had low, 23.81 per cent had medium, and 59.53 per cent had high increase in agriculture production. In case of borrowers who were of large farmers category 25.00 per cent had low, 46.43 per cent had medium and, 28.57 per cent had high increase in agriculture production. From the above discussion it can be concluded that majority of borrowers (59.53%) were medium farmer and getting higher production due to crop loan.

The chi-square value 12.01 was found to be significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between land holding of borrowers and increase in agriculture production.

Table 4.23 (A): Association between extent of credit utilization and increase in agriculture production

Extent of credit utilization	Increase in agriculture production			Total
	Low	Medium	High	
Low credit utilization	3 (42.88)	2 (28.56)	2 (28.56)	7
Medium credit utilization	8 (38.09)	10 (47.62)	3 (14.29)	21
High credit utilization	6 (15.79)	13 (34.21)	19 (50.00)	38
Very high credit utilization	5 (20.83)	5 (20.83)	14 (58.34)	24

(Figures in parentheses indicate percentage)

$\chi^2 = 10.82$, Significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.23 (B): Association between extent of credit utilization and increase in agriculture production

Extent of credit utilization	Increase in agriculture production			Total
	Low	Medium	High	
Low + medium	11 (39.28)	12 (42.86)	5 (17.86)	28
High	6 (15.79)	13 (34.21)	19 (50.00)	38
Very high	5 (20.83)	5 (20.83)	14 (58.34)	24
Total	22	30	38	90

Table 4.23 reveals the association between extent of credit utilization and increase in agriculture production. It was evident from the data that out of total borrowers low credit utilization category 42.88 per cent had low, 28.56 per cent had medium and 28.56 per cent had high increase in income. In case of medium credit utilization category, out of total borrowers 38.09 per cent had low, 47.62 per cent had medium, 14.29 per cent had high increase in income. In case of high credit utilization category 15.79 per cent low, 34.21 per cent had medium and 50.00 per cent had high increase in income. In case of very high credit utilization category, out of total borrowers 20.83 per cent had low, 20.83 per cent had medium, and 58.34 per cent had

high increase in agriculture production. Low and medium credit utilization table were merged because observed frequency is less than 5 in 3 x 2 contingency table. From the above discussion it can be concluded that majority of borrowers (58.34%) were belonged to very high credit utilization category and getting higher production due to crop loan.

The chi-square value 10.82 was found to be significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between extent of credit utilization and increase in agriculture production due to crop loan.

Table 4.24: Association between innovativeness and increase in agriculture production

Innovativeness	Increase in agriculture production			Total
	Low	Medium	High	
Low	11 (34.37)	15 (46.88)	6 (18.75)	32
Medium	6 (15.00)	10 (25.00)	24 (60.00)	40
High	5 (27.78)	5 (27.78)	8 (44.44)	18
Total	22	30	38	90

(Figures in parentheses indicate percentage)

$\chi^2 = 13.60$, Significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.24 reveals the association between innovativeness and increase in agriculture production. It was evident from the above table that out of total low category of borrowers 34.37 per cent had low, 46.88 per cent had medium and 18.75 per cent had high increase in production. Whereas out of total medium category 15 per cent had low, 25 per cent had medium and 60 per cent had high increase in agriculture production. In case of borrowers who were of high innovativeness category 27.78 per cent had low, 27.78 per cent had medium and 44.44 per cent had high increase in agriculture production. From the above discussion it can be concluded that

majority of borrowers (60.00%) were having medium innovativeness and getting higher production due to crop loan.

The chi-square value of 13.60 was found to be significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between innovativeness and increase in agriculture production due to crop loan.

Table 4.25: Association between risk bearing ability and increase in agriculture production

Risk bearing ability	Increase in agriculture production			Total
	Low	Medium	High	
Low	11 (36.67)	8 (26.66)	11 (36.67)	30
Medium	6 (14.28)	17 (40.48)	19 (45.24)	42
High	5 (27.78)	5 (27.77)	8 (44.45)	18
Total	22	30	38	90

(Figures in parentheses indicate percentage)

$\chi^2 = 14.26$, Significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.25 reveals the association between risk bearing ability and increase in agriculture production. It was evident from the above table that out of total low category borrowers 36.67 per cent had low, 26.66 per cent had medium, and 36.67 per cent had high increase in production. Whereas out of total borrowers of medium category 14.28 per cent had low, 40.48 per cent had medium, 45.24 per cent had high increase in agriculture production. In case of borrowers who were of high risk bearing category 27.78 per cent had low, 27.77 per cent had medium, 44.45 per cent had high increase in production. From the above discussion it can be concluded that majority of borrowers

(45.24%) were having medium risk bearing ability and getting higher production due to crop loan.

The chi-square value 14.26 was found to be significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between risk bearing ability and increase in agriculture production due to crop loan.

Table 4.26: Association between achievement motivation and increase in agriculture production

Achievement motivation	Increase in agriculture production			Total
	Low	Medium	High	
Low	10 (33.34)	14 (46.66)	6 (20.00)	30
Medium	6 (15.00)	10 (25.00)	24 (60.00)	40
High	6 (30.00)	6 (30.00)	7 (40.00)	20
Total	22	30	38	90

(Figures in parentheses indicate percentage)

$\chi^2 = 11.67$, significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.26 reveals the association between achievement motivation and increase in agriculture production. It was evident from the table that out of total low category borrowers 33.34 per cent had low, 46.66 per cent had medium and 20.00 per cent had high increase in agriculture production. Whereas out of total borrowers who were of medium achievement motivation category 15.00 per cent had low, 25.00 per cent had medium and 60.00 per cent had high increase in production. In case of borrowers who were of high achievement motivation category 30.00 per cent had low, 30.00 per cent had medium and 40.00 per cent had high increase in production. From the above discussion it can be concluded that majority of borrowers

(60.00%) were having medium achievement motivation and getting higher production due to crop loan.

The chi-square value 11.67 was found to be significant at 0.05 level of significance. Thus the conclusion can be drawn that there was significant association between achievement motivation and increase in agriculture production.

Table 4.27: Association between attitude towards crop loan and increase in agriculture production

Attitude towards farm credit	Increase in agriculture production			Total
	Low	Medium	High	
Less favorable	6 (37.50)	5 (31.25)	5 (31.25)	16
Favorable	8 (15.68)	15 (29.42)	28 (54.90)	51
Most favorable	8 (34.78)	10 (43.48)	5 (21.74)	23
Total	22	30	38	90

(Figures in parentheses indicate percentage)

$\chi^2 = 9.80$, significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.27 reveals the association between attitude towards crop loan and increase in agriculture production due to crop loan. It was apparent from the data out of total less favorable attitude category 37.50 per cent had low, 31.25 per cent had medium and 31.25 per cent had high increase in production. In case of favorable category, 15.68 per cent had low, 29.42 per cent had medium and 54.90 per cent had high increase in production. Whereas, out of total borrowers who were of most favorable attitude towards crop loan 34.78 per cent had low, 43.48 per cent had medium and 21.74 per cent had high increase in production. From the above discussion it

can be concluded that majority of borrowers (54.90%) were having favorable attitude and getting higher production due to crop loan.

The chi-square value 9.80 was found to be significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between attitudes towards crop loan and increase in agricultural production due to crop loan.

Table 4.28: Association between scientific orientation and increase in agriculture production

Scientific orientation	Increase in agriculture production			Total
	Low	Medium	High	
Low	10 (40.00)	8 (32.00)	7 (28.00)	25
Medium	7 (18.92)	17 (45.94)	13 (35.14)	37
High	5 (17.86)	5 (17.86)	18 (64.28)	28
Total	22	30	38	90

(Figures in parentheses indicate percentage)

$\chi^2 = 11.90$, significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.28 shows the association between scientific orientation and increase in agriculture production. It was evident from the table that out of total low scientific orientation category of borrowers 40.00 per cent had low, 32 per cent had medium and 28.00 per cent had high increase in production. Whereas in medium category of borrowers 18.92 per cent had low, 45.94 per cent had medium and 35.14 per cent had high increase in production. In case out of total borrowers of high scientific orientation category 17.85 per cent had low, 17.85 per cent had medium and 64.28 per cent had high increase in production. From the above discussion it can be concluded that

majority of borrowers (64.28%) were having high scientific orientation and getting higher production due to crop loan.

The chi-square value 11.90 was found to be significant at 0.05 level of significance. Thus the conclusion may be drawn that there was significant association between scientific orientation and increase in agriculture production due to crop loan.

4.4.2 Association between attributes of borrowers and increase in agricultural income due to crop loan

Table 4.29: Association between age and increase in agriculture income

Age	Increase in Agriculture Income			Total
	Low	Medium	High	
Young	6 (17.14)	13 (37.14)	16 (45.72)	35
Middle	6 (15.78)	13 (34.22)	19 (50.00)	38
Old	7 (41.18)	5 (29.41)	5 (29.41)	17
Total	19	31	40	90

(Figures in parentheses indicate percentage)

$\chi^2 = 5.33$, non-significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.29 illustrates the association between age of borrowers and increase in agriculture income due to crop loan. It was evident from the table that out of total borrowers of young age group 17.14 per cent had low, 37.14 per cent had medium and 45.72 per cent had high increase in income. Whereas out of total borrowers of middle age group 15.78 per cent had low, 34.22 per cent had medium and 50.00 per cent had high increase in agriculture income. In case of old age group borrowers 41.18 per cent had low, 29.41 per cent had medium and 29.41 per cent had high increase in agriculture income. From the above discussion it can be concluded that majority of borrowers

(50.00%) were of middle age group who were generating higher agriculture income due to crop loan.

The chi-square value 5.33 was found to be non significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was no association between age of borrowers and increase in agriculture income due to crop loan.

Table 4.30: Association between education and increase in agriculture income

Education	Increase in Agriculture Income			Total
	Low	Medium	High	
Illiterate	9 (32.14)	14 (50.00)	5 (17.86)	28
Upto middle	5 (13.16)	11 (23.94)	22 (57.90)	38
High school and above	5 (20.84)	6 (25.00)	13 (54.16)	24
Total	19	31	40	90

(Figures in parentheses indicate percentage)

$\chi^2 = 12.16$, significant at 0.05 with d.f. 4, tabulated value 9.48

Table 4.30 reveals the association between education of borrowers and increase in agriculture income due to crop loan. It was evident from the table that out of total illiterate borrowers 32.14 per cent had low, 50 per cent had medium and 17.86 per cent had high increase in agriculture income. Whereas, out of total borrowers who were educated upto middle level, 13.16 per cent had low, 23.94 per cent had medium and 57.90 per cent had high increase in income. In case of borrowers who were received education upto high school and above, 20.84 per cent had low, 25.00 per cent had medium and 54.16 per cent had high increase in agriculture income. From the above discussion an inference can be drawn that majority of borrowers

(50.00%) were of middle age group who were generating higher agriculture income due to crop loan.

The chi-square value 12.16 was found to be significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between education of borrowers and increase in agriculture income due to crop loan.

Table 4.31: Association between caste and increase in agriculture income

Caste	Increase in Agriculture Income			Total
	Low	Medium	High	
General	7 (30.43)	8 (34.79)	8 (34.78)	23
OBC	5 (13.15)	9 (23.68)	24 (63.16)	38
SC + ST	7 (24.14)	14 (48.28)	8 (27.58)	29
Total	19	31	40	90

(Figures in parentheses indicate percentage)

$\chi^2 = 8.40$ non significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.31 shows the association between caste and increase in agriculture income due to crop loan. It was clear from the table that out of total borrowers of general category 30.43 per cent had low, 34.79 per cent had medium and 34.78 per cent had high increase in income. Whereas, from out of total borrowers of OBC category 13.15 per cent had low, 23.68 per cent had 23.68 and 63.16 per cent had high increase in agriculture income. In case of scheduled category (SC/ST) 24.14 per cent had low, 48.28 per cent had medium and 27.58 per cent and had increase in agriculture income due to crop loan. From the above discussion it can be concluded that majority of

borrowers (63.16%) were of OBC category who were generating higher agriculture income due to crop loan.

The chi-square value 8.40 was found to be non significant at 0.05 level of significance. Thus, it can be concluded that there was no association between caste of borrowers and increase in agriculture income due to crop loan.

Table 4.32: Association between Family size and increases in agriculture income

Family Size	Increase in Agriculture Income			Total
	Low	Medium	High	
Small	8 (25.00)	15 (46.88)	9 (28.12)	32
Medium	6 (16.67)	10 (27.78)	20 (55.55)	36
Big	5 (22.73)	6 (27.27)	11 (50.00)	22
Total	19	31	40	90

(Figures in parentheses indicate percentage)

$\chi^2 = 5.85$ non significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.32 reveals the association between family size and increase in agriculture income due to crop loan. It was evident from the table that out of total borrowers of small size family 25 per cent had low, 46.88 per cent had medium, and 28.12 per cent had high increase in income. Whereas, out of total borrowers of medium size family 16.67 per cent had low, 27.78 per cent had medium and 55.55 per cent had high increase in income. In case of big size family out of total borrowers 22.73 per cent had low, 27.27 per cent had medium and 50.00 per cent had high increase in agriculture income due to crop loan. From the above discussion, it can be concluded that

majority of borrowers (55.55%) were of medium size family, who were generating higher agriculture income due to crop loan.

The chi-square value 5.85 was found to be non significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was no association between family size and increase in income of borrowers due to crop loan.

Table 4.33: Association between farm power and increase in agriculture income

Farm Power	Increase in Agriculture Income			Total
	Low	Medium	High	
Low farm power	5 (18.52)	12 (44.45)	10 (37.04)	27
Moderate farm power	8 (19.05)	13 (30.95)	21 (50.00)	42
High farm power	6 (28.57)	6 (28.57)	9 (42.86)	21
Total	19	31	40	90

(Figures in parentheses indicate percentage)

$\chi^2 = 2.46$, non-significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.33 reveals the association between farm power and increase in agriculture income due to crop loan. It was evident from the table that out of total borrowers of low farm power category 18.52 per cent had low, 44.45 per cent had medium, and 37.04 per cent had high farm power. Whereas, out of total borrowers of moderate farm power category 19.05 per cent had low, 30.95 per cent had medium and 50.00 per cent had high increase in income. In case of high farm power category 28.57 per cent had low, 28.57 per cent had medium and 42.86 per cent had high increase in agricultural income due to crop loan. From the above discussion it can be concluded that

majority of borrowers (50.00%) were having moderate farm power who were generating higher agriculture income due to crop loan.

The chi-square value 2.46 was found to be non significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was no association between farm power and increase in agriculture income due to crop loan.

Table 4.34: Association between contact with development agencies and increase in agriculture income

Contact with development agencies	Increase in Agriculture Income			Total
	Low	Medium	High	
Low	9 (34.62)	10 (38.46)	7 (26.92)	26
Medium	5 (11.36)	12 (27.28)	27 (61.36)	44
High	5 (25.00)	9 (45.00)	6 (30.00)	20
Total	19	31	40	90

(Figures in parentheses indicate percentage)

$\chi^2 = 11.34$, significant at 0.05 level with d.f. 4, tabulated value 9.48

The table 4.34 reveals the association between contact with development agencies and increase in agriculture income due to crop loan. It was evident from the table that out of total borrowers of low contact group 34.62 per cent had low, 38.46 per cent had medium 26.92 per cent had high increase in income. Whereas out of total borrowers of medium contact group 11.36 per cent had low, 27.28 per cent had medium, 61.36 per cent had high increase in agriculture income. In case of high contact group 25.00 per cent had low, 45.00 per cent had medium and 30.00 per cent had high increase in agricultural income, due to crop loan. From the above discussion it can be concluded that majority of borrowers (61.36%) were having

medium contact development agencies who were generating higher agriculture income due to crop loan.

The chi-square value 11.34 was found to be significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between contact with development agencies of borrowers and increase in agriculture income.

Table 4.35: Association between land holding and income association and increase in agriculture income

Land holding	Increase in Agriculture Income			Total
	Low	Medium	High	
Small	7 (35.00)	8 (40.00)	5 (25.00)	20
Medium	6 (14.28)	10 (23.81)	26 (61.91)	42
Large	6 (21.43)	13 (46.43)	9 (32.14)	28
Total	19	31	40	90

(Figures in parentheses indicate percentage)

$\chi^2 = 11.00$ significant at 0.05 level with d.f. 4, tabulated value 9.48

The 4.35 reveals the association between land holding of borrowers and increase in agriculture income. It was evident from the above table that out of total borrowers of small size land holding 35.00 per cent had low, 40.00 per cent had medium and 25.00 per cent had high increase in income. Whereas, out of total borrowers of medium size land holding 14.28 per cent had low, 23.81 per cent had medium and 61.91 per cent had high increase in income. In case of large farmers out of total borrowers 21.43 per cent had low, 46.43 per cent had medium and 32.14 per cent had high increase in income. From the above discussion it can be concluded that majority of borrowers

(61.91%) were having medium sized land holding who were generating higher agriculture income due to crop loan.

The chi-square value 11.00 was found to be significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between size of land holding and increase in agriculture income.

Table 4.36 (A): Association between extent of credit utilization and increase in agriculture income

Extent of credit utilization	Increase in Agriculture Income			Total
	Low	Medium	High	
Low	2 (28.57)	3 (42.86)	2 (28.57)	7
Medium	6 (28.58)	11 (52.38)	4 (19.04)	21
High	5 (13.15)	7 (18.43)	26 (68.42)	38
Very High	6 (25.00)	10 (41.67)	8 (33.33)	24

(Figures in parentheses indicate percentage)

$\chi^2 = 16.08$ significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.36 (B): Association between extent of credit utilization and increase in agriculture income

Extent of Credit utilization	Increase in Agriculture Income			Total
	Low	Medium	High	
Low +Medium	8 (28.57)	14 (50.00)	6 (21.43)	28
High	5 (13.15)	7 (18.43)	26 (68.42)	38
Very High	6 (25.00)	10 (41.67)	8 (33.33)	24
Total	19	31	40	90

Table 4.36 reveals the association between extent of credit utilization by borrowers and increase in agriculture income. It was evident from the above table that out of total low credit utilization category 28.57 per cent had low, 42.86 per cent had medium and

28.57 per cent had high increase in income. In case of medium credit utilization category 26.58 per cent had low, 52.38 per cent had medium and 19.04 per cent had high increase in income. Whereas out of total high credit utilization category 13.15 per cent had low, 18.43 per cent had medium income 68.42 per cent had high income. In case of very high credit utilization category 25.00 per cent had low, 41.67 per cent had medium, 33.33 high increase in income. From the above discussion it can be concluded that majority of borrowers (68.42%) were utilized the loan at high extent and generated higher agriculture income due to crop loan.

It was observed that cell frequency in one cell was less than 5; hence cell frequencies were merged with that of medium credit utilization. The chi-square value computed was 16.08 which was found to be significant 0.05 level of significance with 4 d.f. Thus it leads to rejection of null hypothesis. Thus, the conclusion can be drawn that there was significant association between extent of credit utilization by the borrowers and increase in agriculture income due to crop loan.

Table 4.37: Association between innovativeness and increase in agriculture income

Innovativeness	increase in agriculture income			Total
	Low	Medium	High	
Low	8 (25.00)	18 (56.25)	6 (18.75)	32
Medium	6 (15.00)	7 (17.50)	27 (67.50)	40
High	5 (27.77)	6 (33.33)	7 (38.88)	18
Total	19	31	40	90

(Figures in parentheses indicate percentage)

$\chi^2 = 19.05$ highly significant at 0.05 level with d.f. 4, tabulated value 9.48

The Table 4.37 reveals the association between innovativeness and increase in agriculture income. It was clear from the table that out of total borrowers 25 per cent had low, 56.25 per cent had medium, and 18.75 per cent had high increase in agriculture income. Whereas,

out of total borrowers of medium innovativeness category 15.00 per cent had low, 17.50 per cent had medium and 67.50 per cent had high increase income. In case of high innovativeness category 27.77 per cent had low, 33.33 per cent had medium, 38.88 per cent had high increase in income. From the above discussion it can be concluded that majority of borrowers (67.50%) were having medium innovativeness and were generating higher agriculture income due to crop loan.

The chi-square value 19.05 was found to be highly significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between innovativeness and increase in agriculture income due to crop loan

Table 4.38: Association between risk bearing ability and increase in agriculture income

Risk Bearing Ability	Increase in agriculture Income			Total
	Low	Medium	High	
Low	7 (31.81)	9 (40.91)	6 (27.28)	22
Medium	6 (20.00)	16 (53.34)	8 (26.66)	30
High	6 (15.79)	6 (15.79)	26 (68.42)	38
Total	19	31	40	90

(Figures in parentheses indicate percentage)

$\chi^2 = 17.35$ highly significant at 0.05 level with d.f.4, tabulated value 9.48.

The table 4.38 reveals the association between risk bearing ability and increase in agriculture income. It was evident from the above table that out of total borrowers of low category 31.81 per cent had low, 40.91 per cent had medium and 27.28 per cent had high increase in income. Whereas, out of total borrowers of medium risk

bearing category 20.00 per cent had low, 53.34 per cent had medium and 26.66 per cent had high increase in income. In case of high risk bearing category 15.79 per cent had low, 15.79 per cent had medium, and 68.42 per cent had high increase in income. From the above discussion it can be concluded that majority of borrowers (68.42%) were having high risk bearing ability and who were generating higher agriculture income due to crop loan.

The chi-square value of 17.35 is found to be highly significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between risk bearing ability of borrowers and increase in agriculture income.

Table 4.39: Distribution of borrowers according to their achievement motivation

Achievement Motivation	Increase in agriculture income			Total
	Low	Medium	High	
Low	9 (30.00)	15 (50.00)	6 (20.00)	30
Medium	5 (12.50)	10 (25.00)	25 (62.50)	40
High	5 (25.00)	6 (30.00)	9 (45.00)	20
Total	19	31	40	90

(Figures in parentheses indicate percentage)

Table 4.39 reveals the association between achievement motivation and increase in agriculture income. It was evident from the above table that out of total borrowers of low category 30.00 per cent had low, 50.00 per cent had medium and 20.00 per cent had high increase in income. Whereas, the total borrowers belonged to medium category 12.50 per cent had low, 25.00 per cent had medium and 62.50 per cent had high increase in income. In case of high category, out of total borrowers 25.00 per cent had low, 30.00 per cent had medium and 45.00 per cent had high increase in income. From the

above discussion it can be concluded that majority of borrowers (62.50%) were having medium achievement motivation who were generating higher agriculture income due to crop loan.

The chi-square value 12.84 was found to be significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between achievement motivation and increase in agriculture income.

Table 4.40: Association between attitude towards crop loan and increase in agriculture income

Attitude towards crop loan	Increase in Agriculture Income			Total
	Low	Medium	High	
Less favorable	6 (37.50)	5 (31.25)	5 (31.25)	16
Favorable	6 (11.77)	15 (29.41)	30 (58.82)	51
Highly favorable	7 (30.44)	11 (47.82)	5 (21.74)	23
Total	19	31	40	90

(Figures in parentheses indicate percentage)

$\chi^2 = 12.35$, significant at 0.05 level with d.f. 4, tabulated value 9.48

Table 4.40 reveals the association between attitude of borrowers towards crop loan and increase in agriculture income due to crop loan. It was evident from the table that out of total less favorable attitude showing borrowers 37.50 per cent had low, 31.25 per cent had medium and 31.25 per cent had high increase in income. Whereas, out of total borrowers showing favorable attitude, 11.77 per cent had low, 29.41 per cent had medium and 58.82 per cent had high increase in income. In case of highly favorable attitude showing category 30.44 per cent had low, 47.82 per cent had medium and 21.74 per cent had high increase in income. From the above discussion it can be concluded that majority of borrowers (58.82%)

were having favorable attitude who were generating higher agriculture income due to crop loan.

The chi-square value 12.35 was found to be significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between attitude towards crop loan and increase in agriculture income.

Table 4.41: Association between scientific orientation and increase in agriculture income

Scientific orientation	Increase in Agriculture Income			Total
	Low	Medium	High	
Low	8 (32.00)	5 (20.00)	12 (48.00)	25
Medium	5 (13.52)	19 (51.35)	12 (32.44)	37
High	6 (21.48)	6 (21.48)	16 (57.14)	28
Total	19	31	40	90

(Figures in parentheses indicate percentage)

$\chi^2 = 10.46$, significant at 0.05 level with d.f 4, tabulated value 9.48

Table 4.41 reveals the association between scientific orientation and increase in agriculture income. It was evident from the table that out of total borrowers of low category 32.00 per cent had low, 20.00 per cent had medium and 48.00 per cent had high increase in income. Whereas, out of total borrowers of medium category 13.52 per cent had low, 51.35 per cent had medium, 32.44 per cent had high increase in income. In case of high scientific orientation category out of total borrowers 21.48 per cent had low, 21.48 per cent had medium and 57.14 per cent had high increase in agriculture income. From the above discussion it can be concluded that majority of borrowers (57.14%) were having high scientific orientation who were generating higher agriculture income due to crop loan.

The chi-square value 10.46 was found to be significant at 0.05 level of significance. Thus, the conclusion can be drawn that there was significant association between scientific orientation and increase in agriculture income.

4.5 Constraints in flow and availability of crop loan and suggestions to overcome them.

Table 4.42: Constraints on credit availing procedure.

S. No	Constraints	Frequency	Percentage	Rank
1	Procedural complicacy	84	93.34	I
2	Difficult language of application form	67	74.45	III
3	Delay in credit sanction	77	85.56	II
4	Lack of proper information about credit schemes	64	71.12	IV

Table 4.42 reveals the constraints faced by the borrowers in credit availing procedure. The data indicates that majority of borrowers (93.34%) stated procedural complicacy as main problem followed by delay in credit sanction (85.56%), difficult language of application form (74.45%) and lack of proper information about credit schemes (71.12%).

Table 4.43: Opinion on credit procedure

S. No	Opinion	Frequency	Percentage	Rank
1	Interest rate should be less	66	73.34	I
2	Repayment period should be extended	36	40.00	IV
3	Credit limit should be extended	42	46.67	III
4	Complicated procedure should be easy	48	53.34	II

Table 4.43 reveals the opinion on credit procedure stated by the borrowers. The data indicates that majority of borrowers (73.34%) stated that interest rate of crop loan should be less as most preferred opinion to make the crop loan scheme more flexible and beneficial followed by complicated procedure should be easy (53.34%), crop

loan limit should be extended (46.67%), repayment period should be more than one year (40.00%).

Table 4.44: Suggestion for betterment of credit schemes

S. No	Suggestions	Frequency for YES	Rank
A.	Suggestion before availing credit		
1	Application form should be easily available	81	III
2	Language should be easy of application form	80	IV
3	Timely availability of loan	84	II
4	Credit grant should not based on land holding	53	V
5	Credit process should be easy	86	I
6	Credit should not granted in installments	84	II
B.	Suggestion after availing credit		
1	Timely technical support	58	VII
2	Interest rate should be least	88	II
3	Mobile facility of mechanical maintenance	78	V
4	Credit requirement should based upon the requirement	71	VI
5	Field survey should be done in time	78	V
6	Interest should not charged till the completion of purpose	80	IV
7	Credit should be interest free in case of natural calamities	90	I
8	There should be separate counter for farmers in bank.	85	III

Table 4.44 reveals the suggestions for betterment of crop loan schemes stated by the borrowers. These suggestions were collected in two stages of crop loan availing process. In first stage, before availing crop loan, majority of borrowers stated that loan procedure should be easy, timely availability of loan, loan should not granted in installments, applications form should be easily available. Credit should be interest free in case of natural calamities, interest rate should be less, separate counter for farmer in bank were the most common suggestion after loan availing stage. Borrowers were also suggested that technical support should be given them by agriculture field officer.

DISCUSSION

DISCUSSION

The study has been conducted as per objectives and some important findings were discussed to draw logical conclusions for making generalization of the results.

5.1 Socio-economic attributes of borrowers

All the socio-economic and personal attributes of borrowers were analyzed in the study. In case of the age of borrowers, majority (42.22%) belonged to middle age group. The finding was supported by Singh (2001) and Jamre (2002).

The majority of borrowers (42.28%) were educated up to middle standard. The schooling facilities were limited up to middle standard in selected study area and rural people were not in favor of sending their children outside the villages for education purpose. In spite of various programmes launched by State and Central Government to increase the literacy percentage in rural areas, it remained 59.40 per cent due to conservative attitude of people to encourage children for higher education outside the villages. This finding was supported by Singh (2001).

In case of caste, majority of borrowers (42.23%) belonged to OBC category. In the study area, population of OBC was maximum who were engaged in farming and borrowed loan from bank. The finding was supported by Khan (2006).

The majorities of borrowers (40.00%) belonged to medium size family and were usually more innovative. They made investment in purchasing farm inputs through own resources and financial institutions. It has been observed in most of the cases the farmers of small size family cultivated their fields themselves and did not need any financial assistance. Big size families were usually joint families therefore, the reason for not taking loan might be joint responsibility of

repayment. Randive (1989) and Singh (2001) supported above finding.

The higher percentage of borrowers (46.66%) had moderate farm power. This might be due to farm machineries were costlier and farmers unable to buy them, therefore, they hired the machineries for performing the agriculture operations. It was also economical to farmers to hire the machineries rather than purchasing. This finding was supported by Nagireddy *et al.* (1986)

The higher percentage of borrowers (48.89%) had medium contact with development agencies. The developmental institutions related to agriculture and allied enterprises are located away from the villages and inaccessible to them, therefore, only those farmers who were resourceful might have approached the developmental institutions. This finding was very similar and supported by Singh (2001)

The majority of borrowers (46.66%) were having medium size of land holding. The farmers owning medium size of land holding usually invest more amount in farming as compare to small and big farmers. The finding was supported by Raut (1980) and Jamre (2002).

The higher percentage of borrowers (44.45%) had medium innovativeness. Younger and middle aged borrowers showed more innovativeness. They had comparatively more knowledge and awareness about financial support for technological growth of agriculture provided by Indian Govt. through banks. Studies of Rambabu (1994) and Vijaybhinandana and Suraymani (1999) supported the above finding.

The higher percentage of borrowers (46.66%) showed medium level of risk bearing ability which was moderate in nature. The medium level of risk was indicative of their moderate thinking for bearing the risk attached to the crop loan. This finding was supported by Bhasin (1980).

The majority of borrowers (44.44%) were having medium achievement motivation. It is social value that emphasizes a desire for excellence in order to attain a sense of personal accomplishment. In the study medium level of achievement motivation might be due to cherishing the modern values of developed societies. Sahu (1998) Singh (2001) and Meshram (2003) supported the above finding.

Regarding the attitude of borrowers towards crop loan, the higher percentage (56.67%) were showing favorable attitude. This might be due to the fact that crop loan has financially supported the farmers to make investment in farming enterprises which helped in increasing the yields of various crops thereby the repayment of loan was easy to the farmers. This finding was supported by Purohit (1990), Kumar *et al.* (1992) and Meshram (2003).

In case of scientific orientation the majority of borrowers (41.12%) were showing medium scientific orientation. The green revolution has paid big dividend to the farmers in enhancing agriculture production due to adoption of scientific crop production technology. This developed mindset of farmers to adopt scientific technology in most of the agriculture and allied enterprises. The finding was supported by Rana (1996).

Regarding to extent of credit utilization, majority of borrowers (42.23%) had high credit utilization. The agriculture credit was supporting the farmers to enhance the production and they could repay the loan in due period of time. When the loan was utilized properly for purchase of critical inputs then there was no problem of repayment. Most of the respondents have utilized crop loan for the purpose it was advance to them. The finding was supported by Puskele (1972), Jain (1983), Kumar (1997), Bochalya and Dhaka (2001).

5.2.1 Impact of crop loan in terms of increase in agriculture production before and after taking loan.

Regarding the increase in agriculture production of crop loan borrowers majority of borrowers (42.22%) had shown high increase, from 6 quintal to 8 quintal per acre in production. This might be possible through better utilization of crop loan and adoption of modern concept of farming with the help of crop loan. This finding was supported by Jagannatrao *et al.* (1977), Bhasin (1980) and Das (2002).

5.2.2 Impact of crop loan in terms of increase in agriculture income before and after taking loan.

Regarding the increase in agriculture income of crop loan borrowers, majority of borrowers (44.45%) had increased income from Rs.76,667 to Rs.1,10,000 as compare to before taking loan. This might be possible through use of crop loan in its actual purpose as purchasing of improved seeds, use of insecticides, pesticides, chemical and organic fertilizers, irrigation etc. This finding was supported by Jagannathrao and Power (1977) and Das (2002).

5.3.1 Association between attributes of borrowers and increase in agriculture production

The age of borrowers showed significant association with increase in agriculture production. Singh *et al.* (1994) found the similar association.

The education had significant association with increase in agriculture production. It might be due to education gives the positive sense and vision to understand the use of new agricultural methods, proper use of inputs in farming and also proper utilization of loan amount thus they can get higher production. Despande and Nandapurkar (1997) also found the similar association in their studies.

The caste of borrowers had non-significant association with increase in agriculture production. The similar finding was stated by Singh *et al.* (1994) in their study.

There was significant association between family size and increase in production because an individual having big family is keen to adopt any new technology. He can get more and better advice from his family members to improve cultivation methods and well manage his family status and expenditure. Bochalya and Dhaka (2001) supported this findings with their study.

The farm power had non-significant association with increase in agriculture production due to crop loan. It allowed accepting the null hypothesis. This finding was supported by Baghel (2003).

The contact with development agencies had significant association between increase in agriculture production. Thus, the null hypothesis was not accepted. It was just because the contact with development agencies created the awareness and clear vision about new innovativeness, agricultural technologies, Govt. policies, and credit facilities thus farmer can improve their crop production. Baghel (2003) supported the above finding.

There was significant association between land holding and increase in agriculture production, due to crop loan. It might be due to farmers having big land holding have eligibility to take more loan amount and incorporated more inputs in their field and thus increase the production. Ahirwal (1999) supported the above finding.

The extent of credit utilization had significant association with increase in agriculture production. This might be possible due to use of loan amount in its actual purpose like purchasing of improved seeds, fertilizer, insecticide etc. Thus production was increased. This finding was supported by Das (2002) and Ahmed (2004).

There was significant association between innovativeness and increase in agriculture production, because farmers having high innovativeness were more adoptable to understand the positive outcomes of proper use of crop loan and can increase their agriculture production. This finding was supported by Baghel (2003).

The risk bearing ability showed significant association with increase in agriculture production, because the farmers having high level of risk bearing ability were able to take risk to borrow loan from the bank and incorporated it in their farm to increase the production. There was risk to repay the loan after availing it. This finding was supported by Bhasin (1980) and Kharole (1982).

There was significant association between achievement motivation and increase in production. This finding was supported by Chourasia (1990).

Attitude towards crop loan showed significant association with increase in agriculture production. The probable reason of above finding might be that if one can show favorable attitude for better achievement towards anything, only he can get it. The farmers who had favorable attitude towards crop loan could increase their agriculture production by its proper use. This finding was supported by Bhasin (1980) and Purohit (1990).

The scientific orientation had significant association with increase in agriculture production. This might be due to adopting the new concepts of modern agriculture technology which resulted in higher increase in agriculture production. This could possible when farmers discontinue the traditional methods of farming and adopt new one. The finding was supported by Patel (1994) and Rana (1996).

5.3.2 Association between attributes of borrowers and increase in agriculture income due to crop loan.

The age had non-significant association with increase in income. The younger and middle aged borrowers were energetic and positive towards generating more income with proper utilization of credit. Bheemppa *et al.* (1990) supported the above finding.

There was significant association between education and increase in agriculture income. This might be due to educated farmers always better to understand the utilization of crop loan in its actual

purpose to generate more income. Singh (2001) supported the above finding.

The caste had non-significant association between increase in agriculture income. The study of Bheemappa (1990) and Singh (1994) were supported the above finding.

The family size had non significant association with increase in agriculture income due to crop loan. Kulkarni and Bhatta (1989) supported the above finding.

The farm power was not associated with increase in agriculture income. Thus the null hypothesis was accepted. Bhagel (2003) also stated the similar association.

The contact with development agencies was significantly associated with increase in income. This might be possible due to high exposure of farmer towards new schemes related to agriculture development. Thus it has increased the production and income of farmers. This finding was supported by Chourasia (1990).

Land holding was significantly associated with increase in agriculture income. It is just because with the increase in land size the chances of getting higher production and income were more. Thus the null hypothesis was rejected. This finding was supported by Ray *et al.* (2001) and Singh (2001).

The extent of credit utilization showed significant association with increases in agriculture production. It might be possible because the loaned money was utilized properly for purchase of inputs thereby raising the crop production in the same proportion. This finding was supported by Kumar (1977) and Bhasin (1980).

The innovativeness was significantly associated with increase in agriculture income due to crop loan. The probable reason of this finding might be knowledge and adoption of new concept of agriculture methods. Thus null hypothesis was rejected. This association was supported by Vijaybhinandana and Suryamani (1999).

There was significant association between risk bearing ability and increase in income. Risk was involved if anyone adopted an innovation; otherwise he could not improve his present condition. Null hypothesis was rejected in this case. Kharole (1982) supported this finding.

There was significant association between attitude of borrowers towards crop loan, and increase in agriculture income due to crop loan. Thus null hypothesis was rejected. Bhasin (1980) and Purohit (1990) stated same finding.

There was significant association between scientific orientation and increase in agriculture income. This leads to rejection of null hypothesis. The above finding was supported by Patel (1994).

5.4 Constraints and suggestions

Procedural complicacy, delay in credit sanction higher rate of interest, lack of proper information about loan scheme, credit limit is too short and based on land holding were the very common problem faced by the borrowers. The above findings were supported by Shrivastava (1976), Jagannatrao (1977) and Khan (2006).

Credit should be interest free in case of natural calamities, credit process should be easy, separate counter farmers, timely availability of loan were the very common suggestions obtained by the borrowers. These findings were supported by Khan (2006) and Sharma *et al.* (2006).

**SUMMARY, CONCLUSION
AND SUGGESTIONS FOR
FURTHER WORK**

SUMMARY, CONCLUSION AND SUGGESTIONS FOR FURTHER WORK

Summary

Agriculture occupies a very strategic position in Indian economy because it contributes more 19.86 percent of GDP at national level. Yet it has been caught in a vicious circle of low productivity but nowadays the tremendous increase in production of food grains witnessed that the growth was made possible through the financial assistance of various financial institutions. They are providing various loan schemes and crop loan is one of them. It is important instrument to provide seed fertilizer, insecticides, pesticides and other essential inputs which can bring a boom on agriculture sector. The present study was conducted to know the impact of crop loan with the following specific objectives:

1. To study the socio-economic psychological attributes of borrowers.
2. To study the extent of credit utilization.
3. To study the impact of crop loan on increase in agriculture production and income.
4. To work out the association between socio- economic and psychological attributes of borrowers and impact of crops loan.
5. To study the constraints in flow and availability of crop loan and suggestions to overcome them.

The multistage sampling method was used in the study. One block Nainpur was purposively selected for the study. The respondents were selected from 10 villages which were come under the service area of state bank of India .SBI was selected as a source of primary data because it was leading branch of Nainpur in agriculture financing. 90 respondents from 10 villages were selected with random sampling method. The data were obtained through pre-tested structural schedule with the help of personal interview. The

collected data were classified, tabulated and presented on the basis of frequencies and percentage. In order to ascertain relationship between independent and dependent variables chi-square test has been worked out.

A. Socio- Economical psychological attributes of borrowers

The socio-economic, psychological attributes of borrowers of SBI Nainpur branch were studied and after reviewing the results on the basis of information gained, conclusion was derived that out of total respondents, maximum percentage of borrowers (42.22%) were from middle age group (36-55 years) and majority (42.22%) had educated upto middle level, majority (42.23%) belonged to OBC category. Out of total sample of borrowers (40.00%) had medium family size (5-6 members), (46.66%) had moderate farm power, majority (48.89%) had medium contact with development agencies. Maximum borrowers (46.66 %) were medium farmers (6 to10 acre land holding). Majority (40.45%) of borrowers showed medium innovativeness, (46.66%) percent had medium risk bearing ability. Most of borrowers (44.44%) had medium achievement motivation. Maximum borrowers (56.67%) showed favourable attitude towards crop loan and maximum borrowers (41.12%) had medium scientific orientation. Out of total borrowers highest percentage (42.23%) had high credit utilization quality, majority of borrowers (42.22%) had got high increase in agriculture production by use of crop loan and (44.45%) percent borrowers had generated high agriculture income due to use of crop loan.

B. Association between attributes of borrowers and increase in agriculture production due to crop loan

Age, education level, family size, contact with development agencies, land holding, extent of credit utilization, innovativeness, risk bearing ability, achievement motivation, scientific orientation, and attitude towards crop loan were found positive and significantly associated with agriculture production due to crop loan, while caste,

farm power showed non-significant association with increase in agriculture production due to crop loan.

C. Association between attributes of borrowers and increase in agriculture income due to crop loan

Land holding, contact with development agencies, extent of credit utilization, innovativeness, risk bearing ability, achievement motivation, attitude towards crop loan, scientific orientation were significantly associated with increase in production while age, caste, farm power, family size showed non-significant association with increase in agriculture income due to crop loan.

D. Constraints, opinion and suggestions stated by the borrowers

Major constraints in loan financing procedure: Majority of borrowers (93.34%) stated that procedure of crop loan was too complicated. It should be made easy. Large percentages of borrowers (85.56%) were also stated delay in loan sanction as a big problem.

These problems may be resolved by charging less interest rate and it should be made free in case of natural calamities. One of the Important suggestion is there should be separate counter for farmers in bank and credit should not be based on size of land holding.

E. Suggestions for further research work

1. This study was conducted in one block covering only ten villages. Therefore this study needs to be repeated for other areas with different with different categories of borrowers. The results of the study can be precisely given if the larger area of the study is covered with adequate number of respondents to ascertain the findings.
2. The study was confined to the borrowers of only one year. Thus the study should be repeated in next 2 or 3 years continuously to

confirm the results about impact of crop loan on farmer's socio-economic status.

3. In this study dependent and independent variables were limited. Therefore for futures study, may consider large variables, which could influence upon crop loan and its benefits on crop production and income.

REFERENCES

REFERENCES

- Ahirwal, P.K. (1999). "An evaluation study of training of rural youths for self employment (TRYSEM) scheme of Hatta block of Damoh district (M.P.)" *M.Sc. (Ag.) Thesis (Unpub.) JNKVV, Jabalpur.*
- Ahmed, Salehuddin (2004). "Micro credit and poverty: New realities and strategic issue in Salehuddin and M.A. Hakim (eds.) Attacking poverty with microcredit." Palli Karma-Sahayak Foundation and the University Press Limited.
- Baghel, S.P.K.S. (2003). "A study of impact of Swarn Jayanti Gram Swarajgar Yojna (SGSY) with references to credit utilization for minor irrigation among Tribal farmers of Dewasal Block of Sidhi District." *M.Sc. (Ag.) Thesis (Unpub.) JNKVV, Jabalpur.*
- Bhasin, Deepak (1980). "Characteristics of the farmers and their impact on credit utilization and repayment of agriculture loan extended by Central Bank of India, Rahetgoan, Hosangabad." *M.Sc. (Ag.) Thesis (Unpub.) JNKVV, Jabalpur.*
- Bheemappa, A.; Chondongi, D.M. and Tulsiram, J. (1990). "Adoption behaviour of dairy project beneficiaries under IRDP Karnataka, *J. Agril. Sci.*, pp. 228-234.
- Bochalya and Dhaka (2001). "Credit utilization behaviour of youth under Pradhan Mantri Rojgar Yojna." *Indian J. Ext. Edu.* XXXVII: 203-205.
- Chaourasia, S.J. (1990). "A study of adoption of recommended garm technology by progressive farmers in Shahpura block of Jabalpur district M.P." *M.Sc. (Ag.) Thesis, JNKVV, Jabalpur.*
- Copestake, J. (1996). "Gandhian and neoclassical insights from Tamilnadu country side." *Journal of Rural Development India*, 15(1): 31-50.
- Deshpande, S.D. and G.G. Nandapurkar (1997). "Relation of Socio-Economic Profile with Repayment and Utilization of Bank Loan by Rural Women." *J. Mah. Agri. Uni.*, (1998). 23(2): 151-153.
- Das (2002) "Co-portative banking in Arunachal Pradesh; a case study." *Indian co-portative Review*, 38 (1): 48-62
- Debniewska M. and Swiatkiewicz B. (1995) "Agriculture crediting by co operative banks in the wocawek province in the years 1990-1993." *Acta Academia Agriculture ac Technicae Olstensis Oeconomica*,(32)
- Gupta, S.K. (2002). "Flow of Credit to Small and Marginal farmers in M.P." *M.P. Agro. Econ. Res. Cent. of JNKVV.*
- Hossain, Shah and Almgir, M. (1997). Opinion leaders and contract farmers in T and V agricultural system of Bangladesh need for role linkage. *J.Extn. Sys.*, Vol. 13, 83-102.
- Jain, R.K. (1983). "A Study of the Socio-Economic Characteristics of the Borrowers under the Differential Interest Rates Scheme of State Bank of India, Jabalpur." *M.Sc. (Ag.) Thesis (Unpub.) JNKVV, Jabalpur.*

- Jamre. R. (2002). "Impact of Pradhan Mantri Rojgar Yojana in Agriculture Sector on Income and Employment" Generation in District Sihore of M.P." *M.Sc. (Ag.) Thesis (Unpub.) JNKVV, Jabalpur.*
- Jha, P. (2002). "The Role of Regional Rural Bank in Increasing Agriculture Production in Hosangabad Tehsil of Hosangabad district of M.P." *M.S.c (Ag.) Thesis (Unpub.) JNKVV, Jabalpur.*
- Jagannath and Power (1977) "Impact of lower interest rate finance on economic conditions of rural weaker section." *India Jr. of Agril.Eco.* July –Sept. 1982, vol.37, (P.P.) 272
- Khorole V.U.(1982) "A case study of characteristics of borrowers using sources of information for getting crop loan and its use." *M.Sc.(Ag.)Thesis (unpub.),MPKV,Rahori.*
- Khan, A.R. (2006). "A study of credit utilization and repayment behavior of borrowers of Panagar Block of Jabalpur district (M.P.)." *M.Sc. (Ag.) Thesis (Unpub.) JNKVV, Jabalpur.*
- Kulkarni, G.N. and Bhatta, R. (1989). "IRDP in Bijapur an evolution of dairy scheme" *Social Change*, New Delhi.
- Kumar, S. (1997). "The crop loan system, distribution pattern, utilization and repayment of crop loan in Samastipur district (Bihar)." *M.Sc. (Ag.) Thesis (Unpub.) Samastipur, Bihar.*
- Meshram (2003). "Impact of SWARN Jyanti Gram Swarojgar Yojna with respect to credit utilization extended to beneficiaries for agriculture development in Mandla district (M.P.)." *M.Sc. (Ag.) Thesis (Unpub.) JNKVV, Jabalpur.*
- Nagi Reddy, K. and Rathanakumari S. (1988). "Pattern of Credit Utilization of Borrowers of Rayalseems Gramin Bank." *Andhra Agri. J.*, Vol. 33(2): 123-131.
- Patel, M.M. (1994). " Study on factors affecting entrepreneurial and adoption behavior of sugarcane growers of Bhopal-Sagar factor zone of M.P."
- Patel, V.K. (1999). A Study on Impact of Integrated Rural Development Programme on Income and Employment Generation with Reference to Dairy Enterprise in Rampur Naikin Block of Sidhi District (M.P.). *M.Sc. (Ag.) Thesis (Unpub.) JNKVV, Jabalpur.*
- Phuskele, V.K. (1972). "Repayment Capacity Analysis of the Selected Different Farm Size in Jabalpur District." *M.Sc. (Ag.) Thesis (Unpub.) JNKVV, Jabalpur.*
- Purohit, S.K. (1990). "A study of the impact of IRDP on transfer of agricultural technology and its effect on income generation sources of rural community in Morar block of Gwalior district (M.P.)." *M.Sc. (Ag.) Thesis (Unpublished) JNKVV, Jabalpur.*
- Rajak, S.K. (2002). "An Evaluation of Agriculture and Allied Development Programme Financed by RRB in Damoh District." *M.Sc. (Ag.) Thesis (Unpub.) Jabalpur.*
- Rajakutty, S.; Prasad, R.R.; Ckakovorty, B.; Reddi, D.P.R.; Jaykumar, E.C.; Sumanchandra, K.; Sambhi Reddi.; B. Rejnikanth. G.; Srinivasa Raw, I. (1993-94). "Concurrent evaluation of minor irrigation and horticultural schemes assisted under NSFDC in M.P." *Research highlights. 1993-94 (NIRD).*

- Rambhu, P., Daivadeenam P. and Y. Eswara Prasad (1994). "Factors influencing attitude of the farmers towards farm credit." *J. Agri. Banker*, Oct. – Dec. (1994) Vol. 17(4): 22-24.
- Randive, B.S. (1989). "A Study on Impact of Integrated Rural Development Programme (IRDP) on its beneficiaries in Kollam Talika of Osmanabad District." *M.Sc. (Ag.). Thesis (Unpub.) MPKV, Rahori.*
- Raut, A. (1980). "A Study of Factors Affecting the Repayment Behavior of Agriculture Credit Users in the Panagar Block of Jabalpur District". *M.Sc. (Ag.) Thesis (Unpub.) JNKVV, Jabalpur.*
- Rao M. and G.Ramesh Babu (1993) 'Bank finance to Agriculture and Allied activities Survey Results.' *J.Agril.Banker, Oct.-Dec., vol. 16 (4):1-6*
- Roy, Nirod Chandra and Kuri, Praval Kumar (2001). "Problems of land reforms in Arunanchal Pradesh." *IASSI Quarterly*, 20(2): 94-111, Oct. Dec. 2001.
- Sharma, V.K., Dixit V.B., Pachouri R.A., (2006). "Opinion of farmers towards flow and availability of farm credit" *Ind. Res. J. Ext. Edu.*, Jan-May (2006). Vol. 6 (1&2): 32-33.
- Shrivastava, K.K. (1976). "Impact of State Bank of India Loan in Acceptance of Improved Crop Technology in Shahpura Block Jabalpur District." *M.Sc. (Ag.) Thesis (Unpub.) JNKVV, Jabalpur.*
- Shukla (1979). "A Study of Factors Affecting the Behaviour of Small Farmers in Relation to the Utilization of Credit Facilities Extended by the Central Bank of India, Chourai Branch, Chhindwara District." *M.Sc. (Ag.) Thesis (Unpub.) JNKVV, Jabalpur.*
- Singh, A.J., Dhawan K.C. and Pal (1979). "Credit Appraisal of Credit Problems of Small Farmers in Punjab State." *J. Agril. Banker*, Apr-June (1979) Vol. 2(2): 9-12.
- Singh, Ajit (2001). "Rural Informal Credit Market in Uttar Pradesh." Occasional paper-17: NABARD.
- Singh, Hari and Rathore, O.S. (1994). "Correlates of annual income from crop + dairy + goat + poultry farming system." *Maha. J. Ext. Edu.*, Vol. 297-298.
- Venkata Reddy, S. (1998). "Income generation process in dairy schemes under IRDP." *J. Rural Dev.*, Vol. 17, pp. 1-13, NIRD Hyderabad (India).
- Vijayabhinandana, B. and Suryamani M. (1999). "A comparative study on knowledge about crop loan and insurance between benefited and non benefited farmers." *J.Res.ANGRAV*, 27(1&2): 43-46.

APPENDIX

साक्षात्कार प्रश्नावली

अध्ययन विषय -- मण्डला जिले के नैनपुर ब्लाक में किसानों द्वारा उन्नतशील कृषि प्रक्रियाओं को अपनायनेमें फसल ऋण के प्रभाव का अध्ययन ।

शोध अवधि : वर्ष 2007-08

परामर्शदाता
डॉ. के.के. सक्सेना
विभाग प्रमुख
विस्तार शिक्षा विभाग
ज.ने. कृषि विश्वविद्यालय
जवलपुर

शोधकर्ता |
रीता श्रीधर
एम.एस.सी. कृषि
अंतिम वर्ष
ज.ने. कृषि विश्वविद्यालय
जवलपुर

सूचनादाता : भारतीय स्टेट बैंक शाखा नैनपुर के फसल ऋण हितग्राही

प्रारंभिक जानकारी

- (1) हितग्राही का नाम :
- (2) ग्राम :
- (3) आयु (वर्षों में) :
- (4) शैक्षणिक योग्यता :
- | | | |
|--|--|--|
| (i) अशिक्षित | (ii) शिक्षित | अ. पढ़ सकता है
ब. लिख सकता है
स. पढ़ एवं लिख सकता है |
| (iii) प्राथमिक
अ. पहली कक्षा
ब. दूसरी कक्षा
स. तीसरी कक्षा
द. चौथी
इ. पाँचवीं | (iv) माध्यमिक
अ. छठी
ब. सातवीं
स. आठवीं | |
| (v) उच्चतर
अ. नवीं
ब. दसवीं
स. ग्यारहवीं
द. बारहवीं | (vi) उच्चतर से अधिक
अ. स्नातक I, II, III
ब. स्नाकोत्तर I, II | |
- (5) जाति
- | | |
|-------------------|----------------------|
| (i) अनुसूचित जाति | (ii) अनुसूचित जनजाति |
| (iii) पिछड़ा वर्ग | (iv) सामान्य |
- (6) परिवार का प्रकार
- | | |
|-------------------------------------|--------------------------|
| A. (i) एकाकी | (ii) संयुक्त |
| B. परिवार में कुल सदस्यों की संख्या | महिला-
पुरुष
बच्चे |
- (7) प्रक्षेत्र शक्ति
- आपके पास कृषि कार्य में उपयोगी कौन-कौन से यंत्र हैं ? ()
- | | |
|---------------------|-------------------------|
| (i) जन्त/देसी हल | (v) थ्रेसर/कल्टीवेटर |
| (ii) देल जोड़ी | (vi) डीजल/विद्युत यंत्र |
| (iii) सीडड्रिल | (vii) ट्रैक्टर |
| (iv) स्प्रेयर/डस्टर | |
- (8) कृषि क्षेत्र (Acre) (Land holding)
- आपके पास कुल कृषि योग्य भूमि कितनी है ?
- | | |
|--------------|--|
| (i) सिंचित | |
| (ii) असिंचित | |

(9) विकास संस्थाओं से संपर्क (Contact with development agencies)

क्र.	संस्थाओं के नाम	हमेशा	कभी-कभी	कभी-नहीं
1.	कृषि ऋण शाखा (बैंक)			
2.	ग्रामीण विकास कार्यालय			
3.	खादय एजेंसी			
4.	सिंचाई विभाग			
5.	सहकारी समिति			
6.	कृषि विज्ञान केन्द्र			
7.	कृषि उद्यानिकी विभाग			
8.	अन्य			

(10) विभिन्न स्रोतों से आय (रु. में)

1. कृषि से अ. ऋण लेने के पूर्व कृषि से आय
 ब. ऋण लेने के पश्चात कृषि से आय

(11.) ऋण उपयोगिता का स्तर (Extent of credit utilization)

(i) आपने बैंक से कितना फसल ऋण लिया है ?

रु.

(ii) क्या आपने ली गई संपूर्ण राशि का उपयोग कृषि में किया है ?

यदि नहीं तो कितने प्रतिशत ऋण राशि का उपयोग किया है ?

- (a) 75% -100% (b) 50% - 75%
 (c) 25% - 50% (d) 0-25%

(iii) आपने ऋण लेने के पश्चात ऋण राशि का उपयोग कितने समय बाद किया?

- (a) बहुत जल्द (b) कुछ समय बाद
 (c) बहुत समय बाद (d) अभी तक नहीं किया

(iv) शेष राशि का प्रयोग आपने कहाँ किया ?

- (a) बचत में (b) पारिवारिक कार्यों में
 (c) सामाजिक कार्यों में (d) पुराने ऋण की अदायगी में
 (e) अन्य

(12) इन्वेंटिवनेस (नवाचार)

क्र.	कथन	पूर्णतः सहमत	सहमत	अनिश्चित	असहमत	पूर्णतः असहमत
1.	खेती की नई पद्धति पुराने की अपेक्षा परिणाम देती है					
2.	किसानों को अधिक अनुभव के बावजूद कृषि की नई तकनीक अपनानी चाहिए					
3.	एक जागरूक किसान कृषि का उन्नत तकनीकी अपनाता है					
4.	कृषक को अपना जीवनस्तर उपर उठाने हेतु कृषि के परंपरागत तरीके बदलने चाहिए					

(13) जोखिम उठाने की क्षमता (Risk Bearing ability)

क्र.	कथन	पूर्णतः सहमत	सहमत	अनिश्चित	असहमत	पूर्णतः असहमत
1.	एक किसान मिलने वाले छोटे लाभ की तुलना में अधिक लाभ चाहता है, लेकिन उसमें जोखिम की संभावना कम है।					
2.	जो किसान अधिक जोखिम उठाता है, वह अधिक लाभ कमाता है।					
3.	एक किसान को जोखिम उठाना अच्छा है जबकि वह जानता है कि उसकी सफलता के अक्सर अधिक हैं।					
4.	एक किसान के द्वारा कृषि में ऋण तकनीकी विका-सके लिए प्रयास करना जोखिम का काम तो है लेकिन अधिक योग्य है।					
5.	एक किसान एक या दो फसल बोने में होनेवाले जोखिम को कम करने के लिए अधिक संख्या में फसलों को उगाना चाहता है।					
6.	एक किसान के लिए अच्छा होगा कि वह नई तकनीक के लिए तब तक प्रयास न करे जब तक एक अन्य किसान उसी अपनाते के बाद सफलता प्राप्त कर ले।					

(14) प्राप्ति अभिप्रेरण (Achievement motivation)

क्र.	कथन	पूर्णतः सहमत	सहमत	अनिश्चित	असहमत	पूर्णतः असहमत
1.	किसान को अधिक उपज एवं अधिक लाभ के लिए काम करना चाहिए।					
2.	सफल किसान वही है जो अधिक लाभ प्राप्त करता है।					
3.	किसान को अधिक लाभ के लिए प्रयास करना चाहिए।					
4.	अधिक लाभ के लिए किसान को खादय फसलों की जगह नगदी फसलों को उगाना चाहिए।					
5.	किसान को बच्चों को अच्छी शुरुवात के लिए एकटिनाई होती है जब तक कि किसान उन्हें आर्थिक मदद प्रदान नहीं करता है।					
6.	किसान निश्चित रूप से जीविको पार्जन के लिए कमाए किंतु जीवन को मात्र आर्थिक बातों तक सीमित नहीं किया जा सकता है।					

(15) फसल ऋण की तरफ हितग्राही का व्यवहार (Attitudes towards farm credit)

क्र.	कथन	पूर्णतः सहमत	सहमत	असहमत
1.	कृषि ऋण योजना के द्वारा कृषि आय में वृद्धि हुई।			
2.	इस योजना ने खाद बीज की समय पर जरूरतों को पूरा किया है।			
3.	पूर्व की योजनाओं की तुलना में इस योजना से ऋण प्राप्त करना आसान है।			
4.	इस योजना से लाभान्वित किसानों की कृषि योग्य भूमि में वृद्धि हुई है।			
5.	इस योजना के प्रभाव से कृषक नई तकनीक एवं बेहतर बीज किस्मों के उपयोग में सहमत हुए हैं।			
6.	क्या कृषकों के रहन सहन एवं अधिक परिस्थिति में परिवर्तन हुआ है।			

(16) वैज्ञानिक दिग्दर्शन (Scientific orientation)

क्र	कथन	पूर्णत सहमत	सहमत	अनिश्चित	असहमत	पूर्णत असहमत
1.	पुरानी विधियों की अपेक्षा नई विधियों से अच्छे परिणाम प्राप्त होते हैं ।					
2.	किसान के पास अधिक अनुभव होने पर ही उसे नई कृषि विधियों का उपयोग करना चाहिए ।					
3.	यदि नई विधि सीखने में समय लगता है तो भी उसे उसके लिए प्रयास करना चाहिए ।					
4.	एक अच्छा किसान नई विधियों का प्रयोग कृषि में करता है ।					
5.	किसान के जीवन खेती में सुधार के लिए परंपरागत खेती के विधियों में परिवर्तन करना आवश्यक है।					

Objective-2 : To study the extent of utilization of crop loan in different improved farm practices :

प्रश्नांक : आप ने अपने खेत पर कौन-कौन सी फसल लगाने के लिए फसल ऋण हेतु आवेदन किया था ?

खरीफ में : धान..... सोयाबीन..... मक्का..... अन्य.....

रबी में : गेहूँ..... चना..... मटर..... मसूर..... अन्य.....

(ii) आपने कितने ऋण के लिए आवेदन किया था एवं आपने कितना ऋण प्राप्त किया एवं उद्देश्यानुसार उस ऋण का कितना उपयोग किया ?

क्र.	फसल ऋण का उद्देश्य	आवेदित ऋण की मात्रा	प्राप्त किया गया ऋण	उद्देश्य में उपयोग किया गया ऋण
1.	फसलों की अनुशंसा अनुसार खेत की तैयारी में ।			
2.	उन्नत किस्म के बीज खरीदने में ।			
3.	फसल के अनुसार अनुशंसित खाद एवं उर्वरक, रासायनिक खाद का उपयोग करने में ।			
4.	फसल के अनुसार अनुशंसित राख्या में फसल को सिंचित करने में ।			
5.	फसल में अनुशंसा के आधार पर कीटनाशक एवं रोगनाशक दवा के उपयोग करने में ।			
6.	उन्नत तकनीकी द्वारा फसलों की कटाई करने में ।			

Objective-3 : To study the impact of crop loan in terms of increase in agriculture production and income of borrowers:

(कृषि उत्पादन एवं आय में वृद्धि)

(i) ऋण लेने के पूर्व एवं पश्चात प्रति एकड़ कृषि उत्पादन में वृद्धि

फसल	ऋण लेने के पूर्व उत्पादन (प्रति एकड़)	ऋण लेने के पश्चात प्रति ऋण उत्पादन	Impact % increase in prod
खरीफ में			
- धान			
- सोयाबीन			
- अन्य			
रबी में			
- गेहूँ			
- चना			
- मसूर			

- मटर			
- अन्य			

(ii) ऋण लेने के पूर्व एवं बाद में प्रति एकड़ कृषि से कुल आय का विवरण

फसल	ऋण लेने के पूर्व उत्पादन (प्रति एकड़)	ऋण लेने के पश्चात प्रति ऋण उत्पादन	Impact % increase in prod
खरीफ में			
धान			
सोयाबीन			
- अन्य			
रबी में			
- गेहूँ			
- चना			
- मसूर			
- मटर			
- अन्य			

Objective-5 : To study the constraints in flow acid availability of crop loan and suggestions to over come them

Ques.A. बैंक से ऋण प्राप्त करने में आपको कोई कठिनाई महसूस हुई यदि हों तो –

- | | | |
|--------|--|-----------|
| (i) | आवेदन पत्र प्राप्त करने में | हाँ/ नहीं |
| (ii) | पटवारी से खसरा खतीनी लेने में | हाँ/ नहीं |
| (iii) | ऋण सही समय पर मंजूर नहीं होता | हाँ/ नहीं |
| (iv) | ऋण प्राप्त करने की विधि जटिल और लंबी है | हाँ/ नहीं |
| (v) | बैंक से ऋण किश्तों में मिलता है जिससे कड़िनाई होती है | हाँ/ नहीं |
| (vi) | आवश्यकताओं को पूरा करने के लिए ऋण की मात्रा पर्याप्त नहीं होती | हाँ/ नहीं |
| (vii) | बैंक से जांच करने वाले अधिकारी समय पर नहीं आते | हाँ/ नहीं |
| (viii) | बैंक में ऋण हेतु प्रक्रिया फीस ज्यादा ली जाती है | हाँ/ नहीं |

यदि नहीं तो –

- (i) बैंक कर्मचारियों का व्यावहार सहानुभूतिपूर्ण होता है
- (ii) बैंक के कृषि विपणन अधिकारी समय पर जांच पूर्ण करते हैं एवं समय पर तकनीकी सलाह भी देते हैं ।

(B) नीचे दिए गए सुझाओं के बारे में आपका क्या मत है –

- (i) ऋण सीमा पर्याप्त मात्रा में मिलनी चाहिए ।
- (ii) व्याज दर ज्यादा है कम होनी चाहिए ।
- (iii) ऋण किश्तों में न मिलकर एक मुश्त मिलना चाहिए ।
- (iv) ऋण चुकाने की अवधि एक वर्ष से अधिक होनी चाहिए ।
- (v) ऋण राशि कृषि रकदे पर आधारित नहीं होना चाहिए ।
- (vi) नो ड्यूज (देवाकी प्रमाण पत्र) कराने की प्रक्रिया बहुत लंबी एवं जटिल होती है उसे खत्म या फिर छोटी होना चाहिए ।

(C) आपको कौन कौन सी सुविधायें और दी जायें जिससे आप फसल ऋण का उपयोग सही तरीके से कर सकें ।

- 1.
- 2.
- 3.
- 4.

VITA

VITA

The author of this thesis Reeta Shridhar, D/o Late Shri Rajkumar Shridhar was born on 07th June 1979 at Nainpur (M.P.). She passed her Higher Secondary School Certificate Examination from Sarawati Higher Secondary School, Nainpur, Mandla (M.P.) with first division.

She joined the Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur (M.P.) in the year 2000-01 and successfully completed the degree of B.Sc.(Ag.) during the year 2004-2005 with first division.

For further study, She got admission in M.Sc.(Ag.) for specialization in Extension Education at college of Agriculture, JNKVV, Jabalpur where she successfully completed all the course requirement for master's degree with first division.

For the partial fulfillment of the master's degree programme she was allotted a research problem on "Impact of crop loan on adoption of improved farm practices by the farmers of Mandla district" which was successfully conducted by her and being submitted in the form of this thesis.