Impact of Kisan Credit Card (KCC) on Socio-economic Status of the Farmers

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About the book

The present KCC scheme aims at providing adequate and timely support from the banking system to the farmers for the short term cultivation needs for the cultivation of crops. The scheme avoids long time consuming process in securing the credits from the banks. The KCC emphasizes on insurance coverage and financial support to the farmers in the event of failure of crops due to any of the causes, to increase the adoption of progressive farming practices to help farmers in stabilizing the farm income during disaster years and to support and stimulate production of food crops and oilseeds. There are a good number of attractive features of the present KCC scheme.

1. INTRODUCTION

Agriculture is the backbone of the Indian economy, with nearly 67 per cent population of the country depend on it either directly or indirectly for their livelihood. Considering the dominant role of the sector and the importance of credit as an input, a multi-agency approach has been adopted by the Reserve Bank of India (RBI) for ensuring credit flow to the sector. In spite of several improvements in the delivery systems that have been undertaken over time, making institutional credit available to a large number of farmers, particularly small and marginal farmers, continues to be a challenge to the banking industry. Provision of timely and adequate credit has been one of the major challenge for banks in India in dispensation of agricultural and rural credit to the farmers. Constant innovation is required in order to achieve the aim. Agricultural credit cards are not a new concept in the field of agricultural banking in India.

The Kisan Credit Card scheme started by GOI, RBI and NABARD in August, 1998. Government formulated a model scheme for farmers for short term loan on the basis of their land holding, cropping pattern and scale of finance, so that the farmers may use them for readily purchase of Agriculture inputs such as seeds fertilizers and pesticides etc, and also drawn cash for their production needs. The scheme has made a rapid progress with banking system issuing more than 92.9 Lacks cards up to 2010.

The scheme to provide adequate and timely support from the banking system to the farmers for their cultivation needs, including purchase of all inputs in a flexible and cost effective manner. The Co-operatives banks and Regional Rural Bank advised to cover all farmers under KCC by end of March 2007, and to make the renewal process of KCCs more user friendly. The scheme is also covered notified crops are covered for insurance as per Rashtriya Krishi Bima Yojna (RKBY).

The KCC scheme made rapid progress with cumulatively more than 92.9 Lacks cards issued upto to March, 2010. The scheme has also been extended to the borrowers of the long-terms Cooperatives Agriculture Rural Development Banks (SCARDBs) under KCC scheme.

Government has decided that from Kharif 2009-10, farmers would receive crop loans up to a principal amount of Rs. 3 lakhs at 7 per cent rate of interest. The government of India is providing interest subvention of 2 per cent per annum to public sectors banks (RRBs) and cooperatives banks on amount of short term Agriculture credit disbursed out of their own resources. Seasonal refinance to cooperative banks at 2.5 per cent per annum and to RRBs at 4.5 per cent per annum will also be provided through NABARD for this purpose. Further in order to provide relief to the farmers who have availed of crop loans from commercial banks and Primary Agriculture Cooperatives (PACs) for kharif and rabi 2009-10, an amount equal to two percentage points of the borrowers interest liability on principal amount up to Rs. one lakh has been credit to his/her account. The fixation of credit limit is depending upon different banks scheme.

The advantages of this scheme, the farmer free to choose his own purpose like purchase of agricultural implements, land development, purchase of bullock carts. Repair of farm machinery or any other needs including domestic needs like expenditure on account of sickness, children's education and family functions including Agriculture production need.

Objectives of the scheme: The objectives of KCC are as under:

- To meet the short term credit requirements for cultivation of crops.
- Consumption requirements of farmer household.
- Working capital for maintenance of farm assets and of activities allied agriculture like dairy animals, inland fishery etc.

- Investment credit requirement for agriculture and allied activities like pump sets, sprayers, dairy animals etc.
- Post harvest expenses.
- Produce Marketing loan.

Salient features of the Kisan Credit Card (KCC) scheme

- Eligible farmers to be provided with a Kisan Credit Card and a pass- book or cardcum- passbook.
- Revolving cash credit facility involving any number of drawals and repayments within the limit.
- Limit to be fixed on the basis of operational landholding, cropping pattern and scale of finance. Entire production credit needs for full year plus ancillary activities related to crop production to be considered while fixing limit.
- Sub-limits may be fixed at the discretion of banks.
- Card is valid for three years subject to annual renewal. As incentive for good performance, credit limits could be enhanced to take care of increase in costs change in cropping pattern, etc.
- Each drawal to be repaid within a maximum period of twelve months.
- Conversion/ reschedulement of loans also permissible in case of damage to crops due to natural calamities.
- Security, margin, rate of interest, etc. are as per RBI norms.
- Operations may be through issuing branch (and also PACs in the case of Cooperative Banks) through other designated branches at the discretion of bank.
- Withdrawals through slips/cheques accompanied by card and passbook.

Advantages of the Kisan Credit Card scheme

- Access to adequate and timely credit to farmers
- Full year's credit requirement of the borrower is taken care of.
- Minimum paper work and simplification of documentation for drawal of funds from the bank.
- Flexibility to draw cash and buy inputs.
- Assured availability of credit at any time enabling reduced interest burden for the farmer.
- Sanction of the facility for three years subject to annual review and satisfactory operations and provision for enhancement.
- Flexibility of drawals from a branch other than the issuing branch at the discretion of the bank.

Farmers to be covered: All farmers (both loanees and non-loanees irrespective of their size of holdings) including sharecroppers, tenant farmers growing insurable crops are covered.

Sum insured: The sum insured extends up to the value of threshold yield of the crop with an option to cover up to 150 per cent of average yield of the crop on payment of extra premium.

Premium subsidy: Fifty per cent subsidy in premium is allowed to small and marginal farmers, to be shared equally by the Government of India and State Government/Union Territory. Premium subsidy is to be phased out over a period of 5 years.

The impact studies on KCC are rarely available to the researcher which might have been conducted by any other researcher. As on January, 2014, the scheme has completed about 14 years since its initiation. This is the high time to conduct an evaluation study during its

execution period. It is still going on in the country and in the state of Rajasthan. The Government is now prepared to issue the ATM cards to the farmers in place of KCCs. The evaluation study would unfold the strengths and weaknesses of the scheme, on the basis of which corrective measures could be taken for removing the weakness. With this background, the present investigation entitled **"Impact of Kisan Credit Card (KCC) on Socio-economic Status of the Farmers of Bikaner District, Rajasthan"** was undertaken with the following objectives:

1. To study the personal profile and socio-economic status of the Beneficiaries & Non- Beneficiaries of KCC.

2. To find the awareness of the respondents about the KCC scheme.

3. To compare the productivity level of important crops between KCC holders & Non-KCC holders.

4. To find out the utilization pattern of the credit undertaken by KCC holders.

5. To identify the constraints being faced by the KCC farmers.

Importance of the study

Many past studies reveal that finance is the first and foremost crucial factor that hinders application of latest techniques of agriculture. Many agencies like banks, co-operatives and private moneylenders make available the credits sought by the farmers. In order to avoid the malpractices and many other limitations confronting the farmers, Government of India has launched a suitable and prestigious scheme, known as Kisan Credit Card (KCC). So much so, government is also coming forward to issue the ATM cards to the farmers so as to avoid any of the middlemanship, bribery and other problems.

This investigation has found out the types of beneficiaries who are harvesting the benefits of KCC. The results about the study are helpful to know that who have been benefited under the scheme. The analysis about awareness of KCC and adoption level of progressive farming practices of important crops among the KCC holders are useful for the government and all stakeholders to further strengthen the scheme. The findings related to income stability of different crops, constraints under KCC are also of great importance for looking forward for smooth functioning of KCC.

On the whole, the present study is actually the comparison between beneficiaries and non- beneficiaries. Thus, it provides clear portrait of the KCC on the basis of which the corrective measures for further smooth functioning of the same depends.

Limitation of the study

As usual happens with any of the scientific investigations.

1. The present investigation is limited to only one Tehsil of a single district in the state of Rajasthan.
2. The study is based on secondary data obtained from lead bank office annual reports of different branches of Bikaner. The primary data were collected from 10 villages of Bikaner district of Rajasthan. Hence, the results of the study cannot be generalized to other areas as such.
3. When the researcher approached the banker for getting farmer address to colopt a stratified random sampling techniques the banker refused to give any information relating to the card holders on the ground that such matters were to be kept by him as strictly confidential. Therefore the researcher relied on convinces sampling technique for collecting data from farmers.
4. The findings are based on the verbal expression and responses. Although data were collected but taking the respondents in full

confidence, yet error is possible as the borrowers little apprehensive to furnish actual information.

5. Though all the possible precautions were taken to make the study precise, specific and reliable but the time had been a limiting factor with the investigator.

Definition of the terms used

1. **Socio-economic status:** The position that an individual and family occupies with reference to the prevailing average standard of cultural possession, income, material possession and participation of group achieving of community. In the present study, it refers to the relative standard of the farmers in the village with reference to education, social participation, land holding, house, farm power and family type etc.
2. **Beneficiaries:** Those respondents who have benefitted from the KCC scheme.
3. **Non-Beneficiary:** Those respondents who have not benefitted from the KCC scheme.
4. **Awareness:** Awareness in the present context means ability to perceive, to feel, or to be conscious of events, objects or sensory patterns. In this level of consciousness, sensery data can be confirmed by an observer without necessarily implying understandings. More broadly, it is the state or quality of being aware for getting loan among the farmers of study area.
5. **KCC holder:** It refers to the card issued by the bank to the farmer on the basis of his landholding for purchasing the agricultural inputs.
6. **Non–KCC holder:** Those farmers who were not benefitted under the KCC scheme.
7. **Schedule:** It refers to a set of questions which are asked and filled in by the researcher under face-to-face situation with the farmers.

8. **Interview:** Interview is essentially a face-to-face observation carried out by the researcher with the respondents for getting his responses.
9. **Constraints:** Constraints imply forcible restriction and confinement of action. In this study, constraints means “impediments” as perceived by the KCC holders in to grabbing the benefit of the scheme.
10. **Marginal farmers:** The farmers having less than 1 hectare of cultivated land.
11. **Small farmers:** The farmers having 1-2 hectares of cultivated land.
12. **Medium farmers:** The farmers having 2.1 to 4 hectare of cultivated land.
13. **Age:** Age refers to the age of respondents on the date of interview recorded upto nearest year.
14. **Education:** Education is the process of bringing desirable change into the behaviour of human being.
15. **Non-government organization:** A non-government organization which is independent in its administration and working. It receives funds from government or other national/international donating agencies to run its activities.
16. **Caste:** It refers to the social categories whose members are assigned a permanent status within a given hierarchy.
17. **Social participation:** It refers to the degree of involvement of respondents in the formal organization.
18. **Hypothesis:** A hypothesis is a tentative generalization, the validity of which remains to be tested. In its most elementary stage the hypothesis may be hunch, guess and imaginative idea, which becomes the basis of our investigation.

Organization of study

The entire dissertation has been divided into five chapters. The first chapter “Introduction” deals with statement of problem, objectives, scope and importance of the study.

The second chapter “Review of Literature” presents a brief account of the literature reviewed, which has direct or indirect bearing on the present investigation.

The third chapter explains the details about research methodology, tools prepared & used and the statistical techniques followed. The fourth chapter highlights “Results and Discussion”. A brief “Summary and conclusion” of the dissertation has been presented in the fifth chapter followed by ‘Literature cited’. The “Appendices” appear at the end of the thesis.

2. REVIEW OF LITERATURE

In any scientific investigation, collection of a comprehensive and relevant literature is imperative. Besides, giving knowledge of work already done in the field and providing insight into methods and procedures, it provides a basis for operational definitions of major concepts and finally to work out on the basis for interpretation of the results.

Therefore, in this chapter, relevant literature having direct or indirect bearing on the present study have been reviewed in order to avoid lengthiness only the latest studies were incorporated with this understanding in mind the literature pertinent to the problem has been reviewed in light of the objectives of the study. It has been presented under the following sub heads :

2.1 Personal profile and socio-economic status of the Beneficiaries & Non-Beneficiaries of KCC.

2.2 Awareness of the respondents about the KCC scheme.

2.3 Compare the productivity level of important crops between KCC holders & Non- KCC holders.

2.4 Utilization pattern of the credit undertaken by KCC holders.

2.5 Constraints being faced by the KCC farmers.

2.1 Personal profile and socio-economic status of the Beneficiaries & Non-Beneficiaries of KCC.

Chavai (2000) in his study found that 74.32 per cent of the TRYSEM beneficiaries had medium social participation, while 14.87 per cent and 10.81 per cent had high and low participation, respectively.

Sonkamble (2000) revealed that, majority (90.00 per cent) of IRDP beneficiaries had no social participation, 6.00 per cent had low social participation while only 1.40 per cent had higher social participation.

Sharma and Singh (2003) reported that, introduction of improved implement (khurpi-cum-sickle) for manual weeding among the farm women in peri-urban villages of National Capital Region of india, has helped in reducing drudgery by covering more area in unit time and causing less fatigue, due to more convenient shape of handle and light weight of the implement.

Shashidhara (2003) in his study revealed that 42.44 per cent of the respondents belonged to medium level of income (Rs. 1-2 lakh) and in low income category 30.00 per cent of respondents were noticed, whereas 27.70 per cent of the farmers belonged to high income group.

Sandesh (2004) reported that majority (51.67 per cent) of the respondents belonged to medium level of economic motivation. Whereas, 28.33 per cent and 20.00 per cent of the respondents belonged to high and low level of economic motivation categories, respectively.

Wadiwale (2004) conducted study on improvement in quality of life, socio-economic empowerment and evaluation of social status of women of the slums, who had taken small loans from a saving and credit programme. 70 percent of respondents belonged to age group having productive years of life 20-45 years. 47 percent respondents have studied upto primary, 26 percent upto secondary level and 27 percent are illiterate. All had monthly contribution to saving credit programme. Upper limit of loan is Rs. 7500/-.

Bevinahalli (2005) reported that majority of the respondents of SGSY (70.33 per cent) were middle aged while 28.33 per cent were of young age and remaining (1.33 per cent) were old.

Chandra Charan (2005) in his study on profile of Sujala watershed project beneficiary farmers found that, majority (37.33 per cent) had landholding up to 5 acres and 34.67 per cent of the respondents had landholding above 10 acres.

Devalatha (2005) in a study conducted at Gadag district on women self help groups of North Karnataka and reported that majority of the respondents (71.76 per cent) were young aged, while 25.00 per cent of them were middle aged and remaining belonged to old aged category (3.33 per cent).

Kaur (2005) found that majority of respondents were from middle age group and utilize 1 to 3 times loan facility, came under low saving category and half of them used loan for productive purpose, low socio economic status, and regular meeting attended.

Dolli (2006) in his study on sustainability of natural resources management in watershed development project revealed that majority of respondents belonged to large land- holding (7.85 acres).

Kumar *et al.* (2007) reported that half of the farmers had less than or equal to 5 acres of land. However, 24.67 and 25.33 per cent of the beneficiaries were categorized as medium and large farmers, respectively. The involvement of small farmers (61%) was more in rainfed agro eco-system than irrigated agro eco-system (38.67%).

Singh and Kumar (2007) reported that, the use of Kisan Credit Card is encouraging and its distribution is less skewed. Age, male-headed households, household size, farm size, level of education, and self-employment in agriculture appear as significant variables positively determining the choice of institutional sources of credit and possession of Kisan Credit Cards.

Vimalraj (2010) reported that, 90.00 per cent of the respondents belonged to middle age group, whereas 6.70 per cent belonged to old and 3.30 per cent belonged to young age group and 10.00 percent of the awarded farmers had small land holding followed by semi medium (30.00%), medium (43.30%) and large (16.70%) land holdings.

Desai *et al*. (2012) found in their study that a high proportion of the respondents (44.00%) belonged to old age group. More than one third of the respondents had education up to graduation and above (39.00%) level. A large majority of the respondents (89.00%) were having big land holding (>2 ha) while, very negligible per cent of the respondents (1.00%) were landless. More than three-fourth of the respondents (77.00%) belonged to big family. As high as (82.00%) of the respondents belonged to forward caste while, remaining respondents was from backward caste (10.00%) and scheduled caste (8.00%).

Rai Rajesh and Rai j. (2012) revealed that the beneficiaries have some better education as compared to non beneficiaries due to credit facilities with better return. Overall 56.7 percent respondents from all size groups were found with better socio-economic status through credit facilities provided by lead bank as compared to non beneficiaries.

Sahu *et al.* (2012) revealed that the majority of the beneficiary and non-beneficiary respondents were of middle age groups (36 to 50 years) having middle school and primary school level educated, residing in nuclear family system with small size of family (up to 5 members).Majority of the respondents were having marginal land holding (up to 2.50 acre). Majority of the beneficiaries belonged to Rs. 30,001 to Rs. 50,000 (High category) annual income group as compare to non-beneficiaries earned Rs. 20,001 to Rs. 30,000 (Medium category).

Meena and Reddy (2013) revealed that, the income of Kisan Credit Card (KCC) holders is 25 to 30 per cent more than the

Non-Kisan Credit Card (KCC) holders. This income gap is attributed because Kisan Credit Card (KCC) holders use good quality input material in agricultural operations. However, the study also says that, the large number of the farmers in both the categories opined that the rate of interest was high (61.67% in Kisan Credit Card (KCC) and 93.33% in Non-Kisan Credit Card(KCC)). Hence, the study suggests that as the large number of the farmers in both the categories opined that the rate of interest was high 61.67% in Kisan Credit Card (KCC) and 93.33% in Non-Kisan Credit Card(KCC) and also there is a need to consider the additional activities related to crop production while fixing credit limit under Kisan Credit Card (KCC).

2.2 Awareness of the respondents about the KCC scheme.

Vanichetan *et al.* (2002) reported that about 38.00 per cent of the women beneficiaries were highly aware of the existence of functioning of the Swarnajayanti Gram Swarozgar Yojana (SGSY).

Prakash (2004) in his study on SGSY in Salem and Thiruvallur district's of Tamil Nadu state reported that 70.83 per cent of the beneficiaries had medium level of knowledge, whereas, 15.83 per cent and 13.33 per cent of them had low level and high level of knowledge, Respectly

Bheemappa (2006) in a study on awareness of Gram Panchanayat members found that majority (65.83 per cent) of the members had medium level of knowledge whereas, 18.33 and 15.84 per cent of them had low and high level of knowledge regarding the details of SGRYprogramme.

Bishnoi and Singh (2007) revealed that 63% of women over 30 years of age were well aware of the activities of the DWCRA scheme while only 37% of the beneficiaries of less than 30 years of age had any

knowledge about DWCRA. Another important finding was that lower caste women were more aware than middle and higher caste women.

Adinya *et al.* (2008) revealed that 6.34, 7.14 and 3.17 per cent of the respondents were aware of the different sources of agricultural credit services in the northern, central and southern zones of the state, respectively. While the highest level of awareness was recorded for the rotatory savings and credit associations (20.63 per cent) in the informal credit sources category, money lenders recorded an average of 10.31 per cent awareness.

Rawat *et al.* (2009) concluded that Extent of non-participation in credit programme in Garhwal region (63.14 per cent) was found to be lower than in Kumaon region (70.37 per cent). Overall 67 per cent farmers were still out of field of institutional credit programme. In the Garhwal region around 50 per cent farmers were without any insurance while in Garhwal region, this percentage was 46.15. Lack of awareness, complicated procedure, untimely assistance, improper input supply system and risk were reported to be major reasons for non-participation in institutional agricultural credit and insurance programmes.

George *et al.* (2011) revealed that the SHG members stood out distinctly from non-members as the former had better awareness than the latter, which was statistically proved to be highly significant too. All the respondents, irrespective of the groups to which they belonged had maximum awareness of duration of panchayat and beneficiary selection in Gram Sabha.

Lal *et al.* (2011) found that 15.71 percent beneficiaries and 41.42 percent non-beneficiaries were under low awareness level, respectively. Majority of the (57.15%) beneficiaries were medium awareness level and 42.87 percent non-beneficiaries were medium awareness level. It was found 27.14 percent of the beneficiaries were high awareness level and

only 15.71 percent of the non-beneficiaries were high awareness level. It was observed that beneficiaries awareness level is high as compared to non-beneficiaries.

Sangappa *et al.* (2011) reported that maximum numbers of calls (46.37%) were made in the Kharif season, followed by Rabi season (41.68%). The least number of calls were made in the summer season (11.95%). Farmers were confronted with problems related to plant protection, varieties and hybrids, market information, subsidies; hence the KCC personnel need to be trained more in these aspects.

Yadav *et al.* (2011) concluded that significant number of farmers (45.83%) had medium level of awareness about modern communication media. The extent of awareness in non-tribal farmers ranging from 33.33 to 98.33 percent, whereas, in tribal it was found to be from 13.33 to 93.33 percent.

Jhajharia *et al.* (2012) observed that majority (92.72 percent) of farmers were aware about the name of 'Kheti Ri batan' programme broadcasted by AIR, jaipur. More than two third of the respodents were using radio for the timings of broadcast of the 'Kheti Ri Baten' programme of AIR, jaipur. Majority (85.43 percent) of the respondents were aware about, the duration of broadcast of 'Krasha Ri Batan'. All the respondents were about the name of the farm TV programme, like 'Rajasthani news', 'Rangoli' and entertainment programmes followed by more than 90 percent of farmers were aware about the name of 'Choupal', 'Krishi Darshan', 'Kalyani', 'Kheti Badi', 'Prashnotti' programmes delivered from Doordarshan Kendra Jaipur. All the respondents were aware about the duation of telecast of Rangoli, film and entertainment programmes followed by more than 90 percent farmers who were aware about the duration of telecast of 'Choupal' and 'Kheti Badi'. Programmes. Majority (61.92 percent, 57.62 percent and 48.34 percent) of respondents were aware about the name of farm magazines viz. 'Kheti Khaliyan', 'Kheti Ri

Batan' and 'Chokhi Kheti', respectively. Majority of respondents (85.76 percent and 83.11 percent) were aware about the name of newspaper like 'Dainik Bhaskar' and 'Rajasthan Patrika', respectively.

Olekar (2012) concluded that KCC is one of the most innovative, widely accepted, highly appreciated and non-discriminatory banking products. It is beneficial to farmers. Though relative share of the institutions in the issue of agricultural crop loans remain the same the progress under KCC is highly satisfactory. Constant monitoring and thrust given by NABARD has substantially enabled the progress.

Kumar *et al.* (2013) concluded that those respondents who had their annual income more than Rs. 50000, were significantly aware of Fee exemption in field of jobs and educational, provision of imparting free coaching for competitive examinations than their counterparts. It is clear from the study that there are no significant difference between the income of the respondents and loan schemes, knowledge about parental income limit.

2.3 Compare the productivity level of important crops between KCC holders & Non-KCC holders.

Diagne (2002) revealed that under the climatic conditions of 1993-95, smallholder farmers in Malawi were operating close to their potential, given the characteristics of their soil and the technology embodied in the seed and fertilizer used. A notable exception is with respect to tobacco in the Northern region, where there is scope for a significant increase in tobacco productivity. Furthermore, household technical efficiency in growing the various crops is not affected by the level of access tocredit. An exception to this is again tobacco, grown only in the Central and Northern regions, for which access to credit induces a slight improvement in household technical efficiency.

Olagunju, F. I. Adeyemo, R. (2007) observed that the after margin beneficiaries are on the average, endowed with relatively more farm resources than their before merging counterparts. When the levels of resources of the latter were expressed as percentages of those of the former, land stood at 60%, hired labour 30%, family labour 48%, fixed capital 20% and modern material input stood at 27%. The marginal value productivities of land area cultivated and local material inputs are higher for before merging beneficiaries than for after merging beneficiaries. The foregoing is an indication of basic differences in the production behaviour of the two sets of farmers and thus can be concluded that the after merging beneficiaries are more technically efficient than the before merging beneficiaries.

Singh *et al.* (2009) revealed that, the increase in crop yield has been recorded in NATP adopted districts as compared to non-NATP districts. Diversified farming system and adoption of improved farming technologies/practices increased crop yield which resulted in increase of income.

They further reported that, annual income in initial period was relatively high *i.e*. Rs. 93541.66 in NATP districts compared to non-NATP districts (Rs. 89049.33). The average income of a household was increased by more than 11 per cent in NATP districts as compared to 7.23 per cent in non-NATP districts.

Bashir and Hassan (2010) observed that agricultural credit plays an important role in facilitating the transformation of agriculture and raising the participation of farmers in production process.

Samantara (2010) reported that number of encouraging results as hassle free access to institutional loans through KCC effectively resulted in increasing productivity of paddy crop (13.3 per cent) compared to the corresponding yield of non-KCC holders.

Kannan (2011) revealed that the effect of agricultural credit on crop productivity is insignificant. It is suggested that increased credit flow along with an increase in investment on agricultural support services like input and output market infrastructures, irrigation and transport will help in increasing agricultural productivity and farm income. Further, it is suggested that the thrust of agricultural credit policy should move beyond just increasing the amount of credit to the sector, but also in bringing more farmers under the fold of institutional sources.

Sajane *et al.* (2011) observed that the data pertained to the crop year 2008-09. The growth of kisan credit card users in the Belgaum district was negative (-393.38%) and on the other hand, in Sangli district, the growth was positive (36.18%). The total cost of credit as percentage of borrowed amount was higher in the non- kisan credit card category (11.06%) as compared to that in the kisan credit card(4.77%). It was also evident that the credit given by the banks for food crops (jowar and paddy) was less as compared to that for cash crops (potato, sugar cane and soybean).

Abu (2012) concluded that production inputs such as fertilizer and herbicide should be provided through institutional sources at the required time and quantity and they should be made affordable for the end users.

Mohindra and Kaur (2012) revealed that total factor productivity change (TFPCH) in performance of Regional Rural Banks averaged at 1.3 percent during 1991-92 to 2006-0 The decomposition of TFPCH showed that the mean technical progress increased at .9 percent whereas mean technical efficiency has shown a marginal increase 0.1 percent during that period. The highest growth rate has been observed in case of Malwa Grameen Bank and Kshetriya Kisan Grameen Bank which was 5.7 percent and 3.8 percent respectively. The change in scale efficiency has shown increasing trend of 0.3 percent.

Rai and Singh (2012) reported that as diversification adopted by SHG's, the major changes were found in cropping pattern. The area in wheat, paddy and bajara crops were decreased and shifted to vegetables crops. Area in acahar and urad were decreased. However, area in urad and moong were increased. The result also shows that income increased after diversified activities mainly in vegetable crops (132%), pulse crop (49%), milk production (99%), poultry production (109%), goatry (384%) and cereals (7%) likewise employment of SHGS has also increased in vegetables (100%), milk production (50%), poultry (105%) and goatry (105%) in the study area. On the whole income and employment of the SHG's were increased 86.43 per cent and 30.49 per cent, respectively. The study suggests that there is need to educate the people to form the SHG's so that they can utilize the maximum micro-credit to alleviate the poverty.

2.4 Utilization pattern of the credit undertaken by KCC holders.

Bhagat *et al.* (2004) found that the vast majority of farmers were illiterate and possessed small holding. Frequency of using information sources like contact farmers, extension personnel, radio, television and scientist of agricultural universities was much higher than other sources used for gaining information regarding agricultural technology. Also, the respondents preferred to seek agricultural information through contact farmers extension personnel, radio, television and scientist of agricultural universities than other information sources.

Orebiyi (2004) observed that an average loan volume of N29,562.27 was granted per beneficiary while only 56.01% of this amount was utilized for production and about 30.95% was diverted for consumption. An increase in the amount of loan per beneficiary to take care of both the production and consumption needs of the rural farmers is

recommended. This will enable the beneficiaries to purchase agricultural inputs and thereby adopt yield-increasing innovations and techniques, thus jettisoning the out-modelled and outdated equipment for sustainable production.

Gunawardana (2005) reported that majority of the farmers used ‘friends’, ‘neighbours’, ‘village leaders’ and ‘agriculture supervisor’ were the most utilized information sources and ‘kisan mandal meeting’, ‘radio’, ‘newspaper’ and ‘TV’ were the most utilized information channels for different farm practices for tribal and non-tribal area.

Mishra and Samant (2006) revealed, among others, that large farms benefit more from institutional credit than small and medium farms, and that 'current farm expenses' is the most important variable explaining credit use.

Yadav (2006) majority of farmers 66.00% was found medium utilization level of different sources and channels 19.00% respondents belonged to the category of length utilization level of agriculture information and only 15.00% respondents belong to the category of low utilization level of different sources and channels of agriculture information.

Shah et al. (2008) revealed that a significant proportion of the borrowers (65.83 percent) made "full utilization" of their credit while 17.50 percent of them made "partial utilization" in the eight-assigned sectors. But the remaining 16.67 percent did not have any utilization of their credit. Based on the sector wise utilization of credit, the study further reveals that credit assigned for cottage industry was ranked first followed by tailoring, goat rearing, rice threshing, vegetable cultivation, rearing of milching cow, beef fattening and poultry rearing. Regarding the impact, most of the borrowers (88.33%) opined that the credit received from BRDB was profitable. Borrowers' characteristics viz., age, training

experience, credit availability, cosmopoliteness were found to have a significant relationship with the utilization of credit.

Singh (2009) observed that commercial banks financed most of the loans. Loans were used for crops, tractors and other agricultural requirements.

Garg *et al.* (2010) revealed that overall majority of 60.00% of respondents had complete knowledge about credit facilities 78.33% respondents used the society workers/employees as a information source. 65.00% of the respondents used the credit for purchasing of seeds and fertilizers and the majority of the members (80.00%) suggested that finance should be made to society through the commercial banks for timely availability of seed and fertilizers.

Khodke *et al.* (2010) reported that loan utilization pattern, majority of loan borrower farmers fully utilized the available loan for specific purpose. Mass media utilization was significantly related with the credit utilization pattern of loan borrower farmers.

Wagh *et al.* (2011) revealed that majority (70.83 per cent) of the cotton growers had medium utilization of information sources in farming. The analysis related to independent variables viz., age, education, size of land holding, social participation, annual income, motivation, extension contact, showed significant and positive relationship with utilization of information sources. While type of family showed negative and non-significant relationship with utilization of information sources. Majority of respondents (66.67 per cent) most needed agriculture service centre and agricultural news on radio at more extends for receiving agriculture, information.

Dhanabhakyam and Malarvizhi (2012) revealed thatout of the total respondents 27 percent comes to know about this card through

agricultural officers and 15 through bank, and 10 percent comes to know about this card through agricultural officers and 15 through bank, and 10 percent comes to know about this card through friends, and 10 percent through advertisements, and 4 percent comes to kno about this card through relatives repectively.

Khan and Ahmad (2012) reported that the credit for agri. purposes was also used for partially for other purposes. It was utilized for livestock and poultry production, and household needs along with crop rising activities. There is a dire need to make it sure that all agri. credit be utilized for the same purpose for which it was obtained.

Parwate *et al.* (2012) reveled that the majority of them utilized the KCC benefits for crop insurance (95.66%), obtained loan up to maximum allotted limit (93.66%), utilized whole amount of loan for the purpose for which it was drawn/obtained (85.33%), utilized the loan facilities under KCC for all the cropping season (40.00%). However, the overall utilization of KCC was recorded up to 69.60 per cent among the respondents.

Orebiyi et al. (2012) observed that farm income, household size, farming experience, expenditure on labour and level of education are important factors that determine the utilization of institutional credit by farmers while interest rate is not a determinant. This study recommends that credit obtained must be utilized on production activities rather than consumption in order for the loan obtained to be repaid and on time too.

Rai Rajesh and Rai J. (2012) observed that the borrowers loan created better innovation towards irrigation. High yielding varieties and land use pattern which increased cropping intensity as well as yield and income of majority respondents (92%) enganged in agriculture and allied enterprises.

Sharma and Maske (2012) reveled that the, majority of them utilized the KCC benefits for crop insurance (95.66%), obtained loan up to maximum allotted limit (93.66%), utilized whole amount of loan for the purpose for which it was drawn/obtained (85.33%), utilized the loan facilities under KCC for all the cropping season (40.00%). However, the overall utilization of KCC was recorded up to 69.60 per cent among the respondents.

2.5 Constraints being faced by the KCC farmers.

Prasad (2003) discussed the advantages of Automated Teller Machines (ATM) services in agriculture and rural areas in India, where Kisan Credit Card scheme was already in use. It was suggested that KCC could be upgraded to an ATM Kisan Card and introduced to agriculture intensive branches of commercial banks.

Prasad (2003) observed that bank officials suffered from severe problems such as organizational problem, increase in over dues, amounting losses, political interference, willful default, natural calamities etc.

Das (2004) indicated that basic problem with poor is not high rate of interest but the difficulty to get adequate amount of credit on time. Easy access of poor to credit is biggest need of the hour rather than cheaper rate of interest

Lalrinlienna & Kanagaraj (2005) found that lack of Government attention was first and foremost problem. High rate of interest on the loan as a problem was felt by more than one third of the respondents. Insufficiency of loan for income generation was reported by one third of the respondents. High prices of raw material was reported by more than one fourth of the respondents. Conflicts over loan sharing were reported by more than one fifth of the respondents. Marketing of the products was

reported by more than one fifth of the respondents. Delay in disbursement by the banks was reported as a problem by more than one forth of the respondents.

Singh (2005) found that the illiteracy among the elected representatives further adversely affected the effectiveness of the programme. The officials were involved in Excessive paper work. The available staffs were neither experienced nor aware of operational aspect of SGRY. The provision of beneficiary oriented individual/group benefits to the BPL/SCS/ST has not been made good use the programme. Providing 30 per cent of employment opportunities to women is conceptually correct but not happening practically due to socio cultural barriers. Hence the coverage of women was also below the target.

Dubey (2006) attempted to examine the degree of access of KCC to different sections of society in Uttar Pradesh. After analysing the situation, he suggested that the scheme should endeavor to cover all type of crops. The implementation of scheme should be targeted and focused on the real needy sections of society so that the benefits of the scheme could accrue to larger population.

Mehrotra and Mathur (2006) stated that lending institution in form of increasing number of over-dues was facing many problems. The institution also found several weakness such as decline in productivity and efficiency, erosion of repayment ethics and profitability.

Mohan (2006) reviewed status and issues of agricultural credit in India and concluded that though overall flow of agricultural credit in India had increased over the years, there were several gaps in the system like inadequate provision of the credit to small and marginal farmers, paucity of medium and long term lending and limited deposit mobilization and heavy dependence on borrowed funds by major agricultural credit borrowers.

Sidhu and Gill (2006) analyzed issues of agricultural credit and indebtedness in India. They concluded that farmers' suicides were reported from those states which are relatively more advanced forerunners in commercial agriculture, like Andhra Pradesh, Karnataka, Kerala, Maharashtra and Punjab. In Karnataka, farmers' dependence on informal sources of credit was quite high (31.10 Per cent). In majority of the cases, the suicide victim farmers had used loan for investment in agricultural and belonged to category of small and marginal farmers. This indicated breakdown of community sense and social support mechanism in the area of highly commercialized and competitive agriculture.

Kumar and Kapoor (2007) while analyzing development programme and social change among the parhaiyas of latearhr district, Jharkhand revealed that the parhaiya wanted to get the benefits and avail the scheme, but due to their ignorance, lack of awareness, geographical isolation, literacy, less contact with the implementing agencies and officials and other such constraints, they were not getting the benefits of the development programme fully.

Singh et al. (2008) in a study reported that the middle aged rural women majority of whom were illiterate, belonged to labour/daily wage earning families with monthly family income below Rs 3000 become able to generate Rs 700-21000 per month (about 67%). Therefore, there is a huge scope for providing empowerment opportunity to rural community especially landless families, small and marginal farmers by organizing them in self help group.

Raj *et al.* (2010) concluded from their findings that unavailability of quality seeds, poor advisory services particularly training, demonstration & friendly approach, lack of price support for crop inputs, credit facilities, lack of remunerative price of the produce and timely unavailability of inputs were the major constraints opined by the farmers in adoption of hybrid rice cultivation.

Shukla et al. (2010) observed that the lack of adequate supply, assessment of potential credit needs, follow up action and proper uses of borrowed funds are responsible for mounting over dues. Over dues can be minimized, if the expected size of credit is related on a scientific basis to production outlay and the loans are effectively supervised in regard to their utilization and finally, the farmer is approached at the right time for repayment. There are several measures which can be used to tackle the problems of over dues.

Yasir Mehmood Mukhtar Ahmad Anjum (2012) found that sloppy supervision by the bank employees, miss-utilization of loans, high interest rate and change in business/residential place of the borrowers etc. caused delay in repayments of agricultural credit.

Bortamuly and Khuhly (2013) found that majority of the extension personnel (75%) reported the constraints of Inadequate financial support under the ATMA Scheme' followed by 'Involvement of ATMA functionaries in the schemes other than ATMA' (70.8%), 'Lack of external trainer in close proximity' (67.5%), 'Un time release of fund' (60.0%), 'Lack of delegation of authority to the block level functionaries' (55.8%) and 'Voice of extension functionaries have been often neglected' (52.5%).

Thakur and Barman (2013) found that there were 11 major reasons for poor disbursement of KCC. Likewise there were 12 major reasons found in case of poor recovery of loans. The study further indicated that both farmers and banks were responsible for these situations and need some policy changes for improving the situation.

3. RESEARCH METHODOLOGY

This chapter of the study describes the details of methods and procedures followed during the present investigation. This also includes the construction of measuring devices used for data collection and statistical analysis. This chapter has been presented under the following sub-heads:

3.1 Location and sample of the study
3.2 Construction of instruments
3.3 Measurement of variables
3.4 Method of data collection
3.5 Analysis of data
3.6 Statistical measures used

3.1 Location and sample of the study

The present investigation was conducted purposively in Rajasthan state, which lies between 23.55° N latitude and 74.45° E longitude at the elevation of 302 meters (990 ft.) above the mean sea level. Most of rainfall is received from July to September. Sporadic rainfall and its uneven distribution sometimes lead to the conditions of drought and famine. The groundwater level is low (about 10-30 meters). The soil is mainly sandy, loam and silt. The total geographical area of the state is 4.4 M. ha.

3.1.1 Selection of District :

The present study was conducted purposely in Bikaner district of Rajasthan. The Bikaner district was selected due to the following reasons.

(i) The need for study in Bikaner district of Rajasthan is required as till now no study has been designed and undertaken in this area.

Table No.3.1.l Distribution of villages and their population in Bikaner Tehsil

Sr.No.	Villages	Population
1.	Akadeeyawala	227
2.	Ambasar	2028
3.	Anandpura	913
4.	Asera	508
5.	Bachhasar	1718
6.	Bambloo	4480
7.	Bandha	856
8.	Barsingsar	4947
9.	Barh Karnidan	256
10.	Basi	1580
11.	Basi Sahajbardaran	837
12.	Basti Chawadan	147
13.	Beechhwal (rural)	782
14.	Belasar	2373
15.	Bhairupawa	1640
16.	Bherookheera	1414
17.	Bhinasar (rural)	56
18.	Bhojera	463
19.	Bhojoosar	383
20.	Bikaner (m Ci)	529690
21.	Chak Garbi (rural)	34
22.	Daiya	736
23.	Dandoosar	2120
24.	Daudsar	1214
25.	Derjogran	13
26.	Deshnok (rural)	220
27.	Deshnoke (m)	15658
28.	Dewasar	30
29.	Dheereran	465
30.	Dholera Hissa Pemji	233
31.	Dholera No.1	633
32.	Dholera No.2	74

33.	Dholeramagji Hissa	377
34.	Garhwala	4017
35.	Geegasar	1479
36.	Gersar	1375
37.	Gol Pratapsingh	48
38.	Gusaisar	4240
39.	Hemera	1941
40.	Himtasar	989
41.	Husangsar	1655
42.	Jagdewala	1171
43.	Jagnnathsar	189
44.	Jalalsar	2261
45.	Jalwali	1438
46.	Jamsar	2269
47.	Jaimalsar	3555
48.	Jorbeer (rural)	297
49.	Kalasar	2463
50.	Kalyansar Agoona	937
51.	Kalyansar Bara	501
52.	Kalyansar Utrada	309
53.	Kanasar	3131
54.	Karnisar Beekan	624
55.	Katariyasar	2859
56.	Kawni	2703
57.	Kesar Desar Boran	328
58.	Kesar Desar Gangaguran	754
59.	Kesar Desar Jatan	4152
60.	Khara	2982
61.	Kharda	2409
62.	Kheechiya	1239
63.	Kilchoo Deodan	1302
64.	Kilchoo Sahlotan	587
65.	Kolasar	2115
66.	Ladera	323
67.	Lakhoosar	1970
68.	Lalamdesar	3042

69.	Lalsar	625
70.	Lalsinghpura	638
71.	Malasar	2020
72.	Meghasar	1181
73.	Mehrasar	681
74.	Molaniya	970
75.	Moondsar	6095
76.	Nagasar Pawaran	247
77.	Nagasar Sugni	849
78.	Nainon Ka Bas	260
79.	Nal Chhoti	956
80.	Nalbari	6706
81.	Napasar	19550
82.	Noor Mohammad Ki Dhani	181
83.	Noorsar	697
84.	Norang Desar	3923
85.	Palana	7403
86.	Panpalsar	585
87.	Pemasar	1659
88.	Raisar	1643
89.	Rajera	2624
90.	Ramsar	5312
91.	Ranisar	1267
92.	Rawatsar Kumharan	229
93.	Ridmalsar Purohitan	2596
94.	Ridmalsar Sipahiyan	2384
95.	Roopera	445
96.	Runiya Barawas	2003
97.	Saroopdesar	2808
98.	Sawaisar	1186
99.	Seethal	4550
100.	Serera	2403
101.	Sharah Acharjan	29
102.	Sharah Bardi	356
103.	Sharah Bedana	236
104.	Sharah Bhauvyas	258

105.	Sharah Borla	16
106.	Sharah Brahmanan	126
107.	Sharah Dholera	183
108.	Sharah Harkhasar Bagoran	9
109.	Sharah Jatan	198
110.	Sharah Kajani	95
111.	Sharah Koojiya	476
112.	Sharah Nathaniya (Rural)	256
113.	Sharah Ratani Vyas	246
114.	Sharah Roopayat	743
115.	Sharah Sutharan Gopalan	350
116.	Sharah Sutharan Makran	259
117.	Sharah Teliya (Rural)	380
118.	Sharah Koojiya	476
119.	Shivbari (rural)	34
120.	Shobhasar	1379
121.	Sujasar	403
122.	Suratsinghpura	1715
123.	Surdhana Chauhanan	1392
124.	Surdhana Padiharan	383
125.	Tejrasar	3044
126.	Udai Ramsar	6539
127.	Udasar	4186

Sourse : www.populationofindia.co.in

http://www.slbcrajasthan.com/BIKANER.pdf

Present Researcher studying in Bikaner District is well acquainted as compared to other district of Rajasthan which enables him to collect reliable and authentic information.

3.1.2 Selection of Tehsil :

District Bikaner comprises eight Tehsils viz., Bikaner, Lunkaransar, Sri Dungargarh, Nokha, Kolayat, Pugal, Chhatargarh, Khajuwala. As per report of service area plan of Bikaner District. Tehsil Bikaner appears to be at 1st and foremost place as far as its total population (2,363,937) is concerned.

This was followed by other seven Tehsils. Therefore, Tehsil Bikaner was being proposed to be included and selected for the present study with the impression that desired representative sample (KCC farmers) would be available to the student researcher.

3.1.3 Selection of villages :

There were one hundred and twenty seven villages in Bikaner Tehsil. Complete list of villages was prepaired with names and total population. The villages were arranged in descending order based on total population, first ten villages based on highest population were drawn up and included for the investigation. Thus, the following ten villages were selected for the investigation.

Fig. 3.1 Locale of study Bikaner district and its selected Bikaner tehsil in Rajasthan

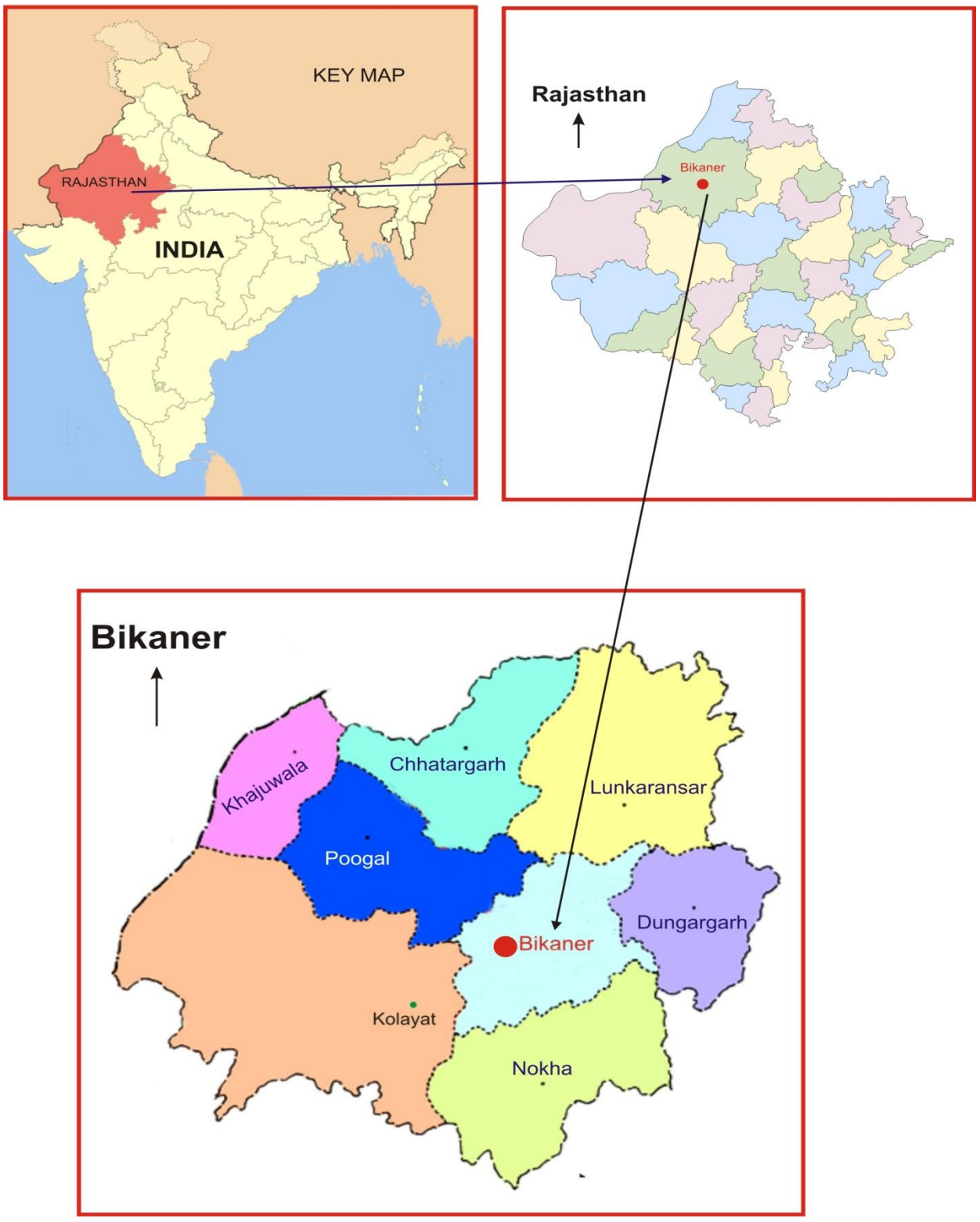


Fig. 3.2 Different location of villages selected for the study in Bikaner tehsil of Bikaner district

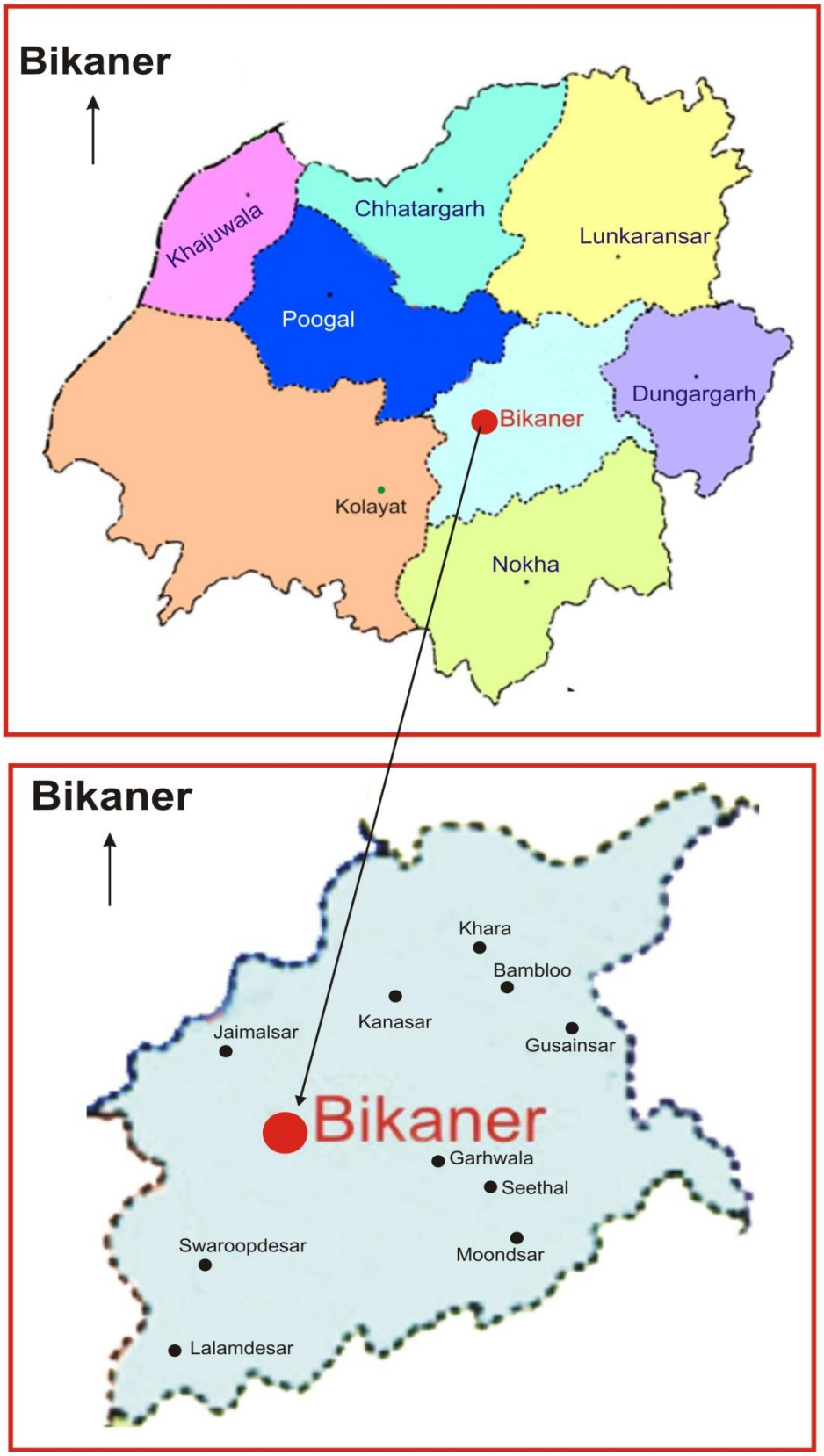


Table 3.1.ll Selected villages for investigation

S.NO.	Village	Total population
1.	Moondsar	6095
2.	Seethal	4550
3.	Bambloo	4480
4.	Gusainsar	4240
5.	Garhwala	4017
6.	Jaimalsar	3555
7.	Kanasar	3131
8.	Lalamdesar	3042
9.	Khara	2982
10.	Swaroopdesar	2808

Source: http://www.slbcrajasthan.com/area.htm

3.1.4 Selection of respondent

Since the present investigation it is a comparative study between KCC and Non- KCC holders. The KCC holders were those for the investigation who were benefited under the scheme during the period of 2003-04 to 2008-09. Prior to actual selection of targeted respondents, a comprehensive list of KCC holders and Non- KCC holders was prepared by the researcher for this purpose; a pre- survey of the study area was conducted by him. A total size of sample that constituted was 150 of respondents (75 beneficiaries and 75 non beneficiaries). The total number of farmers from the selected ten villages was 38900. Seventy five farmers were selected from selected ten villages on the basis of the probability proportionate to sample size for the study purpose.

Table 3.1.lll Selection of respondents:

S.No.	Village	Type of respondents	
		No. of Selected KCC holder	No. of Selected Non-KCC holder
1.	Moondsar	12	12
2.	Seethal	9	9
3.	Bambloo	9	9
4.	Gusainsar	8	8
5.	Garhwala	8	8
6.	Jaimalsar	7	7
7.	Kanasar	6	6
8.	Lalamdesar	6	6
9.	Khara	5	5
10.	Swaroopdesar	5	5
	Total	75	75

3.2 Construction of instruments

On the basis of objectives framed for the present study, a comprehensive interview schedule was developed consisting of general profile of the respondents, tools for measuring dependent and independent variables. Exhaustive review of literature was collected related to the present work. Necessary help and guidance was taken from the expert in the field of Extension Education working in the Department of Extension Education, Directorate of Extension Education, Bikaner including the member of advisory committee.

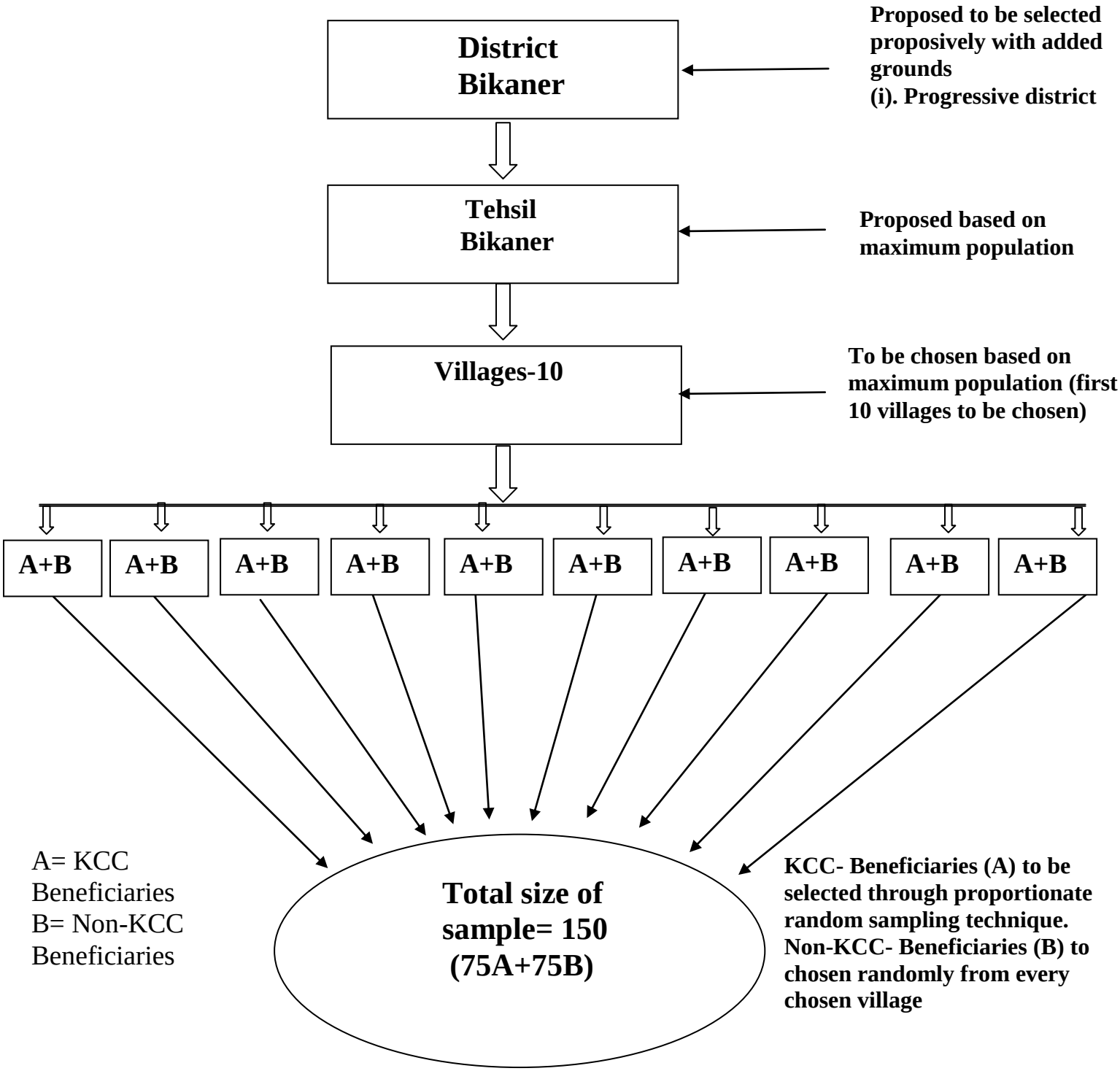


Fig:-Diagrammatic representation of sampling technique

3.2.1 Section I: General profile and Socio-economic status of Farmers

This portion dealt with the information regarding age, annual income, caste, occupation, education, size of land holding, house, family type, family size, social participation, economic motivation and socio-economic status of the respondents. On the basis of standard deviation and mean, the farmers were categories in above criteria. (Scale of G. Trivedi 1963 was adopted) (Appendix-I) and (Appendix-V).

3.2.2 Section II: Awareness among of farmers towards KCC scheme.

This portion of the schedule was constructed to measure the degree of awareness among KCC and Non-KCC holders about the scheme, specifically regarding registration prerequisites, loaning, repaying, purpose of credit and defaulter. The degree of awareness was weighed on three point continuum. These points were highly aware, aware, and not aware. The scores ranged from 2, 1and 0. Three major aspects of KCC scheme were further consisted of sub- questions.

3.2.3. Section III: Compare the productivity level of important crops between KCC holders & Non-KCC holders.

This portion of the schedule was prepared to compare the productivity level of important crops among the KCC and Non-KCC holders about the scheme, specifically moth, groundnut, cluster bean, wheat, mustard and gram. The level of productivity was weighed on quintal per hectare.

3.2.4. Section IV: Utilization pattern of the credit undertaken by KCC holders.

This portion of the interview schedule was prepared to measure the utilization pattern of the credit by the KCC farmers. The data collected for

this credit utilization pattern were in the form of percentage. The data collected for sources of information used for effective utilization of credit for various farm operation were obtained on four points continuous which were most often, often, some-time and never with the respective weightage of 3, 2, 1 and 0 for each statement.

3.2.5. Section V: Constraints being faced by the KCC farmers

This section of interview schedule was prepared to measure the level of constraints being faced by the KCC farmers. The degree of severity of constraints was measured on three points' continuum, these points were most severe, severe, and not severe with their scores 3, 2 and 1 respectively.

3.3 Measurement of study variables

This part of the chapter describes the procedures and methods followed in determining personal profile variables of the respondents and measurement of study variables. Details are given here under.

3.3.1 Measurement of independent variables

(a) Age: KCC and Non-KCC holders were classified into three age groups on the basis of mean and standard deviation (S.D.) to classify both the category of respondents

(i) Young - below to 45 years

(ii) Middle - 45 to 60 years

(iii) Old - Above 60 years

(b) Caste: KCC and Non-KCC holders were classified into following four categories according to their caste.

(i) Scheduled Tribe

(ii) Scheduled Caste

(iii) Other Backward Class

(iv) General Caste

(c) Education: KCC and Non-KCC holders were classified into following five educational categories according to their level of literacy.

(i) Illiterate
(ii) Upto primary
(iii) > Primary to middle
(iv) > Middle to 12^{th}
(v) Graduation and above

(d) Size of land holding: KCC and Non-KCC holders were categorized into following four categories on the basis of land holdings possessed by them.

(i) Marginal farmers	–	below 1hectare
(ii) Small farmers	-	1-2 hactare
(iii) Medium farmers	-	2.1-4 hactare
(iv) Big farmers	–	Above 4 hectare

(e) Occupation: KCC and Non-KCC were classified into following three categories on the basis of their occupation.

(i) Agriculture labour

(ii) Dairy/Agriculture

(iii) Agriculture and Business

(i) Family type: KCC and Non-KCC holders were categorized into two categories on the basis of family type as under

(i) Nuclear
(ii) Joint

(j) Family size: KCC and Non-KCC holders were categorized into two categories on the basis of family size as under:

(i) Small family – up to five members

(ii) Large family – More than five members

(l) Social participation: KCC and Non-KCC holders were categorized into three

categories on the basis of social participation as under:

(i) Not members of any organization

(ii) Members of any organization

(iii) Office bearer

(m) Income (annual): KCC and Non-KCC holders were classified into following three income groups on the basis of mean and standard deviation (S.D.) to classify both the category of respondents

(i) Low (below ` 3 lakhs in Rs.)

(ii) Medium (` 3 to `6 lakhs in Rs.)

(iii) High (above ` 6 lakhs in Rs.)

(n) Economic motivation: Economic motivation of the farmers was determined according to the scoring technique given in the ninths question of the interview schedule. Degree of agreement towards the motivation items was measured through five point scale. Out of six statements, one was negative and other five were positive. The three points on the scale ranged from strongly agree, agree and disagree. The scoring pattern for positive statements was 3, 2 and 1 with reversed pattern for negative statements. The score of every respondent was counted and through arbitrary method, they were put into three groups as shown below.

Economic motivation		Range of mean per cent score
(i)	Low	below 34
(ii)	Medium	34 to 66
(iii)	High	above 66

Frequency and percentage of the respondents were also competed under each category.

3.3.2 Measurement of study variables:

Measurements of study variables are described as below:

(Scale of G. Trivedi 1963 was adopted) was used in categorizing the respondents wherever needed**.**

(i) Awareness among KCC and non- KCC farmers:

To measure the degree of awareness among KCC and Non- KCC holders about the scheme, specifically regarding registration prerequisites, loaning, repaying, purpose of credit and defaulter. The degree of awareness was weighed on three point continuum. These points were

highly aware, aware, and not aware. The scores ranged from 2 for highly aware, 1 for aware and 0 for not aware.

To find out the degree of awareness, MPS of every respondent was calculated, and they were classified into below given three groups based on MPS.

	Degree of awareness	Range of MPS
(i)	Low	Up to 33
(ii)	Medium	34 to 66
(iii)	High	above 66

Here also, frequency and percentage of respondents in each category i.e., low; medium and high were too calculated.

Afterwards, to determine in depth awareness of respondents about each sub-aspect, MPS was worked out and were ranked accordingly.

(ii) Comparison of the productivity level of important crops

To measure the level of productivity among KCC and Non-KCC holders about the scheme, specifically moth, groundnut, cluster bean, wheat, mustard and gram. The level of productivity was weighed on quintal per hectare.

To find out the level of productivity, mean and standard deviation of every respondent was calculated.

To determine in level of productivity of respondents about each sub-aspect, mean and standard deviation was worked out. Besides, to find out the comparison of different level of productivity between both the categories of respondents, z-test was applied and conclusion was drawn accordingly.

(iii) Credit utilization pattern

To measure the utilization pattern by the KCC holders in the scheme. The data collected for this credit utilization pattern were in the form of percentage. The data collected for sources of information used for effective utilization of credit for various farm operation were obtained on four points continuous which were most often, often, some-time and never with the respective weightage of 3, 2, 1 and 0 for each statement.

To determine the level of credit utilization pattern, number for each sub-aspects was worked out and were ranked accordingly.

(iv) Constraints faced by the KCC farmers.

To measure the constraints faced by the KCC holders in the scheme. Their severity was measured on three point continuum. These points were most severe, severe, and not severe with their respective scores of 3, 2 and 1 respectively.

To determine the intensity of every constraint, MPS for each individual item was worked out and rank accordingly.

3.4 Collection of data

The data were collected by personal interview method. This was preferred over others because of its several added advantages. Interview provides a situation where face to face discussion can take place and the interviewer finds an opportunity to motivate the farmers to react, establish rapport with the farmers who in-turn can feel free to give answers. The attention was also given to the convenience of the farmers regarding clear understanding of the question.

3.5 Analysis of data and statistical method used

3.5.1 Analysis of data

The collected data were coded on coding sheet, processed and analyzed for statistical treatment in the light of objectives of the study. Various hypotheses were formulated and tested by using the appropriate statistics.

3.5.2 Statistical methods used

In order to ensure the answer of the research questions mentioned under hypotheses, and to achieve the objectives of the study, investigator was supposed to undertake appropriate statistical analysis. The following statistical methods were used in the present study.

3.5.2.1 Percentage and frequency

The percentage and frequency distributions of respondents were worked out for categorizing the respondents with regards to personal characteristics and study variables. It was also used in almost all the tables of the thesis..

3.5.2.2 Mean Score

It was obtained by total score of practice statement divided by the total number of farmers.

$$\textbf{M.S.} \quad \frac{1}{n} \sum_{i=1} Wi$$

Where,

M.S. = Mean score

Wi = Score given by i^{th} farmers

n = Number of farmers

3.5.2.3 Mean Percent Score (MPS)

Mean percent scores were obtained by multiplying total obtained score of the farmers by hundred and divided by the maximum obtainable score under each practices. Formula of MPS is given as under

$$MPS = \frac{\text{Total score obtained by the farmers}}{\text{Maximum obtainable score}} \text{ X } 100$$

3.5.2.4 Rank

Ranks were accorded in the descending order according to the mean per cent scores obtained. This was used to have in depth view of all the items related to the questions under consideration.

3.5.2.5 Standard deviation

Standard deviation was calculated to categories/ classifies the farmers.

$$S.D = \sqrt{\frac{\Sigma x_i^2}{N} \left(\frac{\Sigma x_i}{N} \right)^2}$$

Where,

S.D. = Standard deviation

N = Number of observations

x_i^2 = Sum of observations

x_i = Sum of square of observations

3.5.2.6 'Z'-Test

This test was used to find out comparison of the productivity level of important crops between KCC holders & Non-KCC holder. This test was used to observe significant difference between two sample mean for large sample. Formula for 'Z' test is under:

$$Z = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S1^2}{n_1} + \frac{S2^2}{n_2}}}$$

Where,

X_1 = Mean of the group of KCC holders

X_2 = Mean of the group of Non-KCC holders

S_1 = Standard deviation of first sample

S_2 = Standard deviation of second sample

n_1 = Size of the first sample

n_2 = Size of the second sample

This test is used when sample size is more than 30.

3.5.2.9 't' Test (student 't' test)

This test was used to observe significant difference between two sample mean for small sample. Formula 't' test is under :

$$t = \frac{\bar{X} - \bar{Y}}{\sqrt{Sp^2 \left(\frac{1}{n1} + \frac{1}{n2}\right)}}$$

$$Sp^2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$

Where,

X= $\overline{M}$ean of the group of beneficiary respondents

$\overline{Y}$= Mean of group of non-beneficiary respondents

S_1= Standard deviation of first sample

S_2= Standard deviation of second sample

n_1= Size of first sample

n_2= Size of second sample

d.f.= $n_1 + n_2 - 2$

This test is used when sample size is less than 30.

3.5.2.10 Spearman's Rank correlation (r_s):

This test was applied to determine the relationship between the ranks assigned by the two category of respondents.

$$r_s = 1 - \frac{6 \Sigma di^2}{n(n^2-1)}$$

Where,

di = different of rank of the beneficiary and non-beneficiary respondents

n = number of items/observations

For repeated value of an item the formula of r_s was used as given under :

$$r_s = 1- \frac{[6\ (\Sigma\ di^2) +1/12\ (t^3-t) + 1/12\ (t^3-t)}{n(n^2-1)}$$

Where,

t= number of items an item value was repeated, thus if measurement 'x' is repeated two items then the value of 't' will be 2. If repeated three times then the value of 't' will be 3.

The significance of correlation coefficient was tested by using following formula :

$$t = \frac{r \times \sqrt{(n-2)}}{\sqrt{(1-r^2)}}$$

The value of 'r' always lies between -1 to +1. Positive value of 'r' indicate attendance of 'x' and 'y' to increase together where 'y' for the test of significance 'r' tabulated is located at (n-2) degree of freedom.

3.7 Derivation of hypothesis (stated in null form)

To achieve the objectives, some hypotheses pertaining to the present investigation were developed and tested which are listed below:

H_{01}: There is no difference in the awareness between KCC and Non-KCC holders about the KCC scheme.

H_{02}: There is no compare the productivity level of important crops between KCC holders & Non-KCC holders.

4. RESULTS AND DISCUSSION

In view of the objectives of the study, necessary data were collected from the farmers. The findings of the study have been presented in this chapter in the form of analysis of data, interpretation of results and their discussion. The findings are being presented in the following heads:

1. Personal profile and socio-economic status of the Beneficiaries & Non-Beneficiaries of KCC.
2. Awareness of the respondents about the KCC scheme.
3. Compare the productivity level of important crops between KCC holders & Non-KCC holders.
4. Utilization pattern of the credit undertaken by KCC holders.
5. Constraints being faced by the KCC farmers.

4.1 Personal profile and socio-economic status of the Beneficiaries & Non-Beneficiaries of KCC.

In this section, results relating to personal profile (characteristics) of the respondents *viz.* age, caste, occupation, education, income level, family, farm implement, social participation, landholding and economic motivation have been studied. The results are being given in subsequent tables.

Table 4.1 Distribution of KCC and Non-KCC holders according to their personal characteristics

N=150

Sr. No.	Personal characteristics	KCC Holders (n=75)		Non-KCC Holders (n=75)		Overall (n=150)	
		f	%	f	%	F	%
1.	**AGE**						
(i)	Young (< 45 years)	28	37.33	25	33.33	53	35.33
(ii)	Middle (45-60 years)	29	38.67	27	36.00	56	37.33
(iii)	Old (> 60)	18	24.00	23	30.67	41	27.34
2.	**CASTE**						
(i)	ST	0	0	0	0	0	0
(ii)	SC	13	17.33	20	26.67	33	22.00
(iii)	OBC	44	58.67	34	45.33	78	52.00
(iv)	GENERAL	18	24.00	21	28.00	39	26.00
3.	**Education**						
(i)	Illiterate	5	6.67	13	17.33	18	12.00
(ii)	Upto primary	15	20.00	26	34.67	41	27.33
(iii)	>Primary to middle	34	45.33	19	25.33	53	35.33
(iv)	>Middle to 12th	13	17.33	11	14.67	24	16.00
(v)	Graduation and above	8	10.67	6	8.00	14	9.34
4.	**Size of land holding**						
(i)	Marginal (Less than 1 ha)	7	9.34	12	16.00	19	12.66
(ii)	Small (1-2 ha)	9	12.00	19	25.33	28	18.67
(iii)	Medium (2.1-4 ha)	19	25.33	15	20.00	34	22.67
(iv)	Big (More than 4 ha)	40	53.33	29	38.67	69	46.00
5.	**Occupation**						
(i)	Agriculture labour	9	12.00	5	6.66	14	9.34

(ii)	Dairy/Agriculture	51	68.00	50	66.67	101	67.33
(iii)	Agriculture and Business	15	20.00	20	26.67	35	23.33
6.	**Annual Income (Rs. In lakhs)**						
(i)	Low (below 3.0 lakhs)	18	24.00	27	36.00	45	30.00
(ii)	Medium (3-6 lakhs)	31	41.33	36	48.00	67	44.67
(iii)	High (above 6.0 lakhs)	26	34.67	12	16.00	38	25.33
6.	**Family Type**						
(i)	Nuclear	24	32.00	16	21.33	40	26.67
(ii)	Joint	51	68.00	59	78.67	110	73.33
7.	**Family Size**						
(i)	Small (Upto 5 members)	27	36.00	17	22.67	44	29.33
(ii)	Large (More than 5 members)	48	64.00	58	77.33	106	70.67
8.	**Social participation**						
(i)	No member of any organization	21	28.00	61	81.33	82	54.67
(ii)	Members of any organization	45	60.00	13	17.33	58	38.66
(iii)	Office bearer	9	12.00	1	1.34	10	6.67
9.	**Economic motivation**						
(i)	Low (below 34 MPS)	0	0.00	0	0.00	0	0.00
(ii)	Medium (34-66 MPS)	9	12.00	43	57.33	52	34.67
(iii)	High (above 66 MPS)	66	88.00	32	42.67	98	65.33

f = frequency, % = percentage, n = number of respondents

Age

The data in table 4.1 reveals that 38.67 per cent KCC holders and 36.00 per cent Non-KCC holders belonged to middle age group. On the other hand 37.33 per cent KCC holders and 33.33 per cent Non-KCC holders were in the young age group. Further, 24.00 per cent KCC holders

as well as 30.67 per cent of Non-KCC holders farmers belonged to old age group.

Table 4.1 further shows that KCC and Non-KCC holders belonged to middle age group i.e between 45-60 years of age. This age group constituted 37.33 per cent of the total sample. However about 35.33 percent and 27.33 percent farmers were young and old age groups, respectively.

Caste

Table 4.1 predicts that 58.67 per cent KCC and 45.33 per cent Non-KCC holders belonged to Other Backward Class. On the other hand, 24.00 percent KCC and 28.00 per cent Non-KCC holders were of General caste further, only 17.33 per cent KCC as well as 26.67 per cent Non-KCC holders belonged to Schedule Tribe Category.

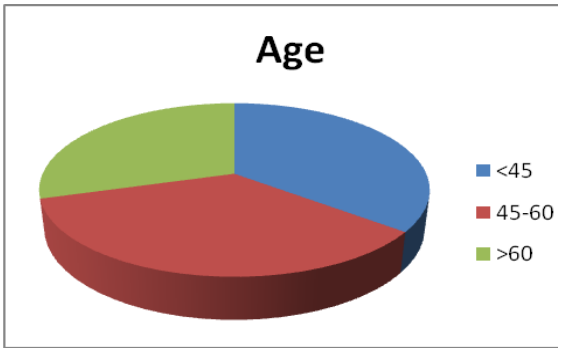
If we see the data irrespective of KCC and Non-KCC holders, data in the table revealed that majority of KCC and Non-KCC holders belonged to Other Backward Class. This caste group alone constituted 52.00 per cent of the total sample. This was followed bt General Caste i.e. 26.00 per cent, while Scheduled Caste/Scheduled Tribe farmers constituted only 22.00 per cent of the total farmers.

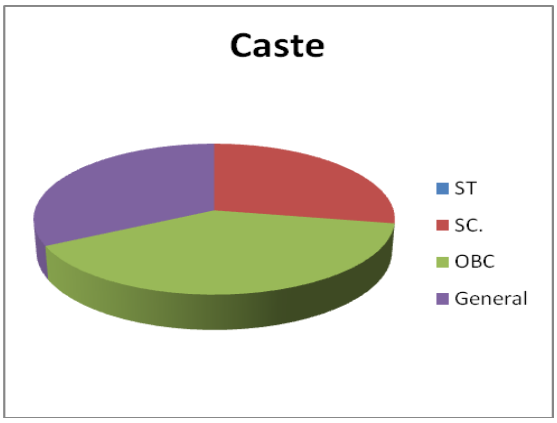
Education level

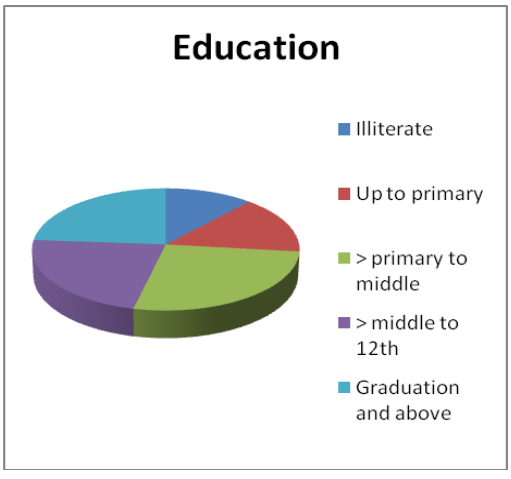
The data presented in the table, revealed that 6.67 per cent and 17.33 per cent Non-KCC holders were found illiterate. 45.33 per cent KCC and 25.33 per cent Non-KCC holders were educated more than primary to middle level. 20.00 per cent KCC and 34.67 per cent Non-KCC holders were educated up to primary level. KCC i.e 28.00 per cent and 22.67 per cent Non-KCC holders were educated above 12^{th} level.

Fig.No.4.1 Distribution of respondents according to their personal attributes

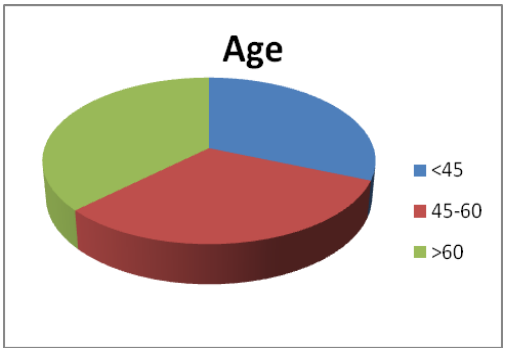
KCC holders

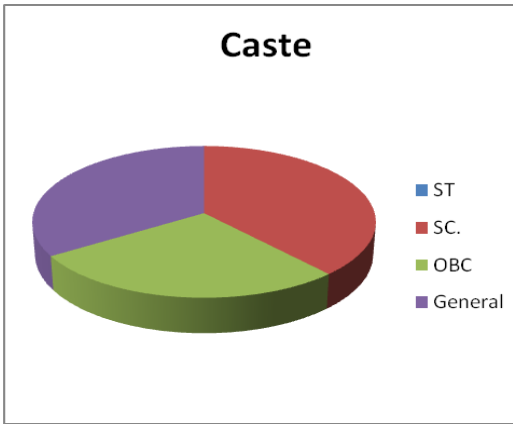


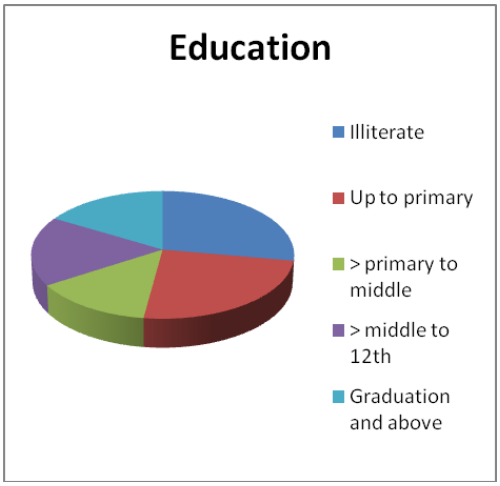




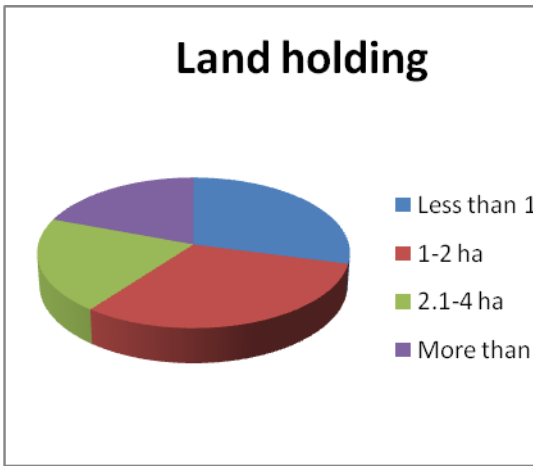
Non- KCC holders

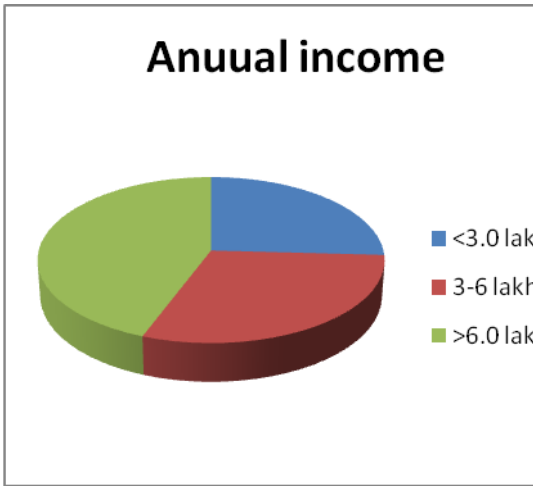


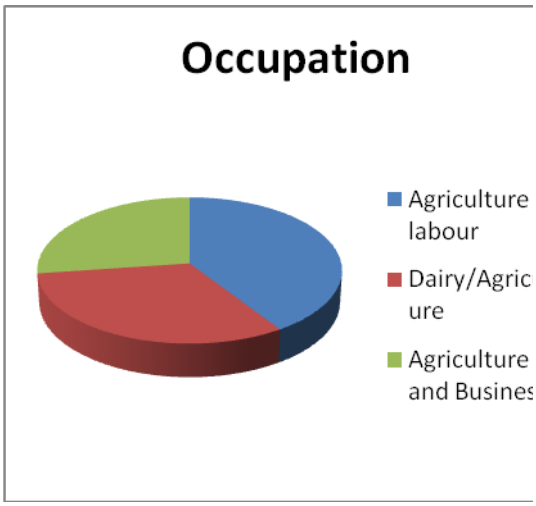




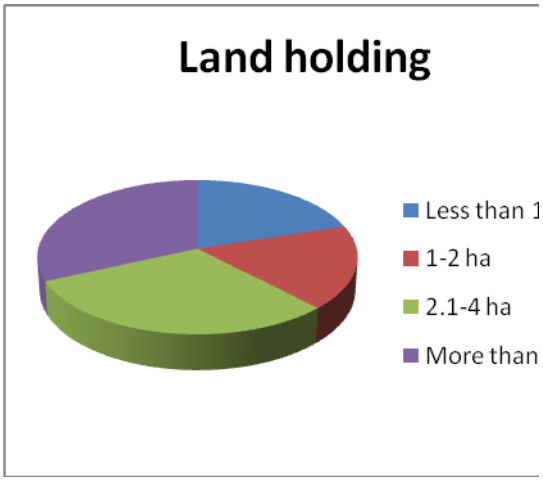
KCC holders

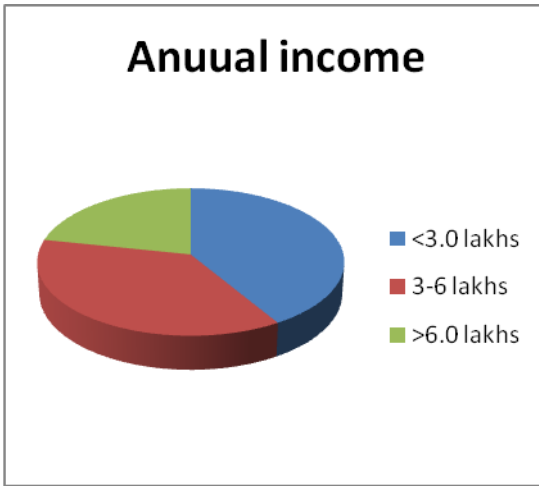


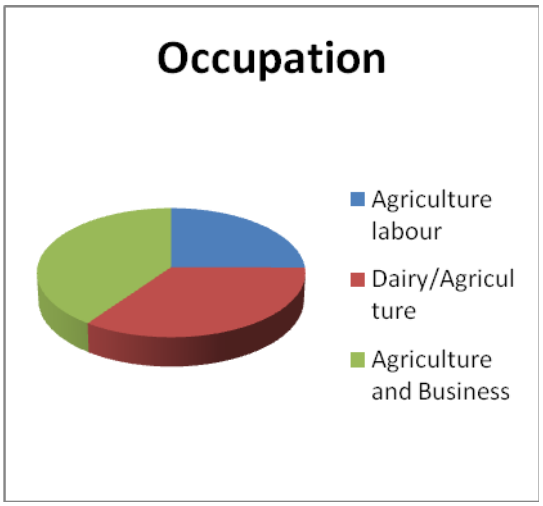




Non- KCC holders







The data in table 4.1 further shows that 18 (12.00%) of the total farmers were illiterate, 53 (35.33%) farmers were educated more than primary to middle level, 41 (27.33%) farmers were educated up to primary level, and rest 38 (25.34%) were educated above 12^{th} level.

Size of landholding:

The data in table 4.1 indicated that 53.33 per cent KCC and 38.67 per cent Non-KCC holders were fall in the big land holding category having more than 4 hactare land, 25.33 per cent KCC and 20.00 per cent Non-KCC holders were fall in the medium land holding category having 2.1- 4 hactare land, 12.00 per cent KCC and 25.33 Non-KCC holders were fall in the small land holding category having 1-2 hactare land. Further, 9.34 per cent KCC and 16.00 per cent Non-KCC belonged to marginal category of land holding possessing less than 1 hactare of land.

The data given in table 4.1 clearly depict that respondents 69 (46.00%) were observed under landholding of more than 4 ha. category, 34 (22.67%) farmers had 2.1-4 ha. and 28 (18.67%) farmers had 1-2 ha. land. land, While only, 19 (12.67 %) respondents had less than 1 ha. land.

Occupation

A comparative view of occupation of KCC and Non-KCC holderss highlights that majority of KCC holders 68.00 per cent and Non-KCC holders 66.67 per cent possessed dairy/agriculture occupation. Further, 20.00 per cent KCC and 26.67 per cent Non-KCC holders were agriculture and business occupation and 12.00 per cent KCC and 6.66 per cent Non-KCC were agriculture labour occupation.

The data given in Table 4.1 depicts that majority of total respondents 101 (67.33%) were observed under dairy/agriculture occupation. Category, 35 (23.33%) farmers were agriculture and business occupation and 14 (9.33 per cent) farmers were agriculture labour.

Income level:

With a view to classifying the KCC and Non-KCC holders on the basis of their annual income, three categories were formulated i.e. low, medium and high income group. It is evident from the Table 4.1 that 44.67 per cent of the total respondents were from medium income group (Rs. 3-6 lakhs per year). While 30.00 and 25.33 per cent respondents were observed in the low (less than Rs. 3 lakhs per year) and high (above Rs. 6 lakhs per year) income group respectively.

The close observation of data in Table 4.1 further shows that 41.33 per cent KCC and 48.00 per cent Non-KCC holders were noted in the income group of Rs. 3-6 lakh per year. Whereas, 24.00 per cent KCC and 36.00 per cent Non-KCC holders had income less than 3 lakhs per year from all the sources. It was interesting to note that 34.67 per cent KCC and 16.00 per cent Non-KCC holders possessed income above Rs. 6 lakhs per year.

Family type

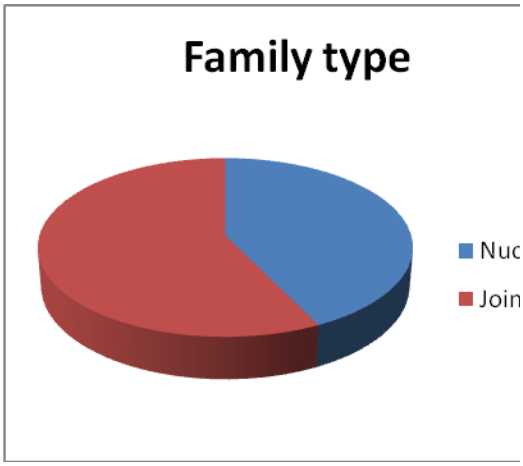
The data incorporated in table 4.1 also indicated that almost equal number of respondents had nuclear and Joint Family Type.

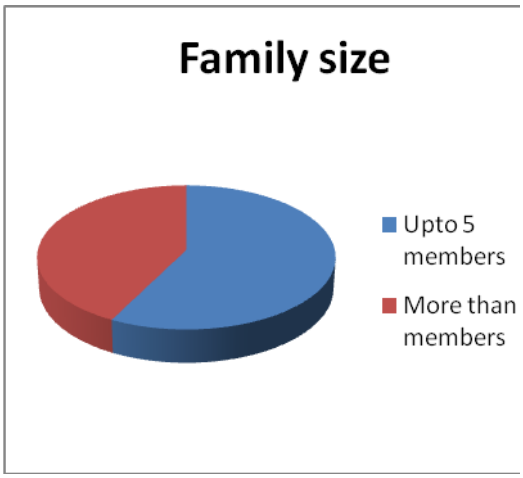
Data further showed that 51 (68.00%) KCC and 59 (78.67%) Non-KCC holders were belonged to joint family type. Further, 24 (32.00%) KCC and 16 (21.33%) Non-KCC were found in nuclear family type.

Family size

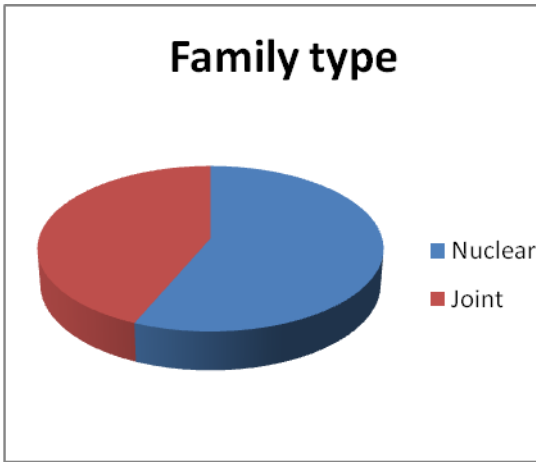
The data incorporated in table 4.1 clearly show that majority of the respondents i.e.,106 (70.67%) were from large family size, while 44(29.33%) respondents were found to be from small family size.

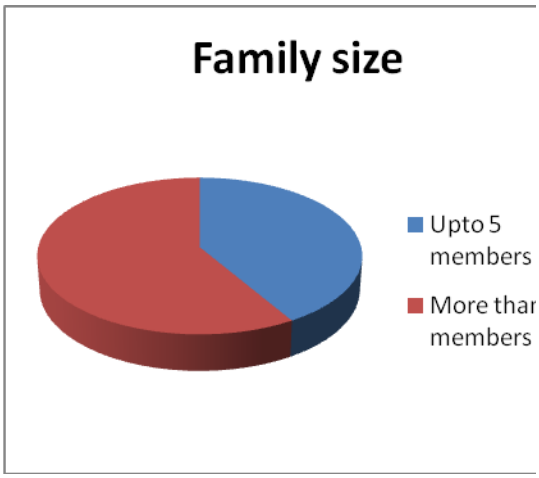
KCC holders



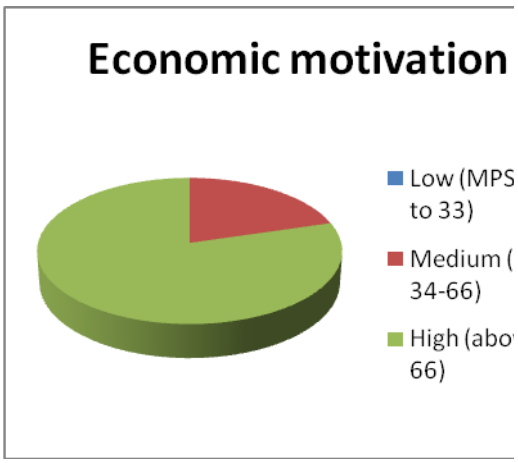


Non- KCC holders

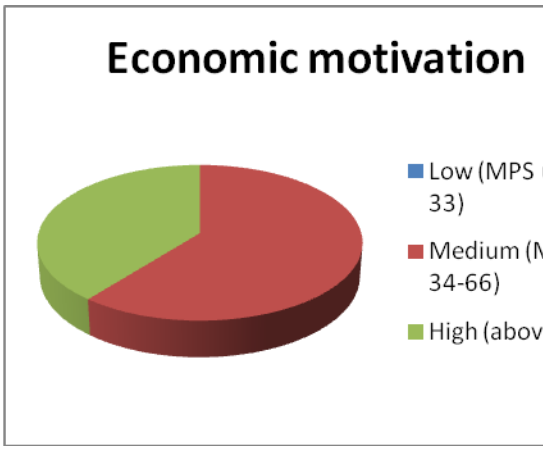




KCC holders



Non- KCC holders



Data further show that 48 (64.00%) KCC and 58 (77.33%) Non-KCC holders were belonged to large family size. Further, 27 (36.00%) KCC and 17 (22.67%) Non-KCC respondents were found in small family size.

Social participation

Critical analysis of table 4.1 shows that 60.00 per cent KCC and 17.33 per cent Non-KCC holders were member of any organization. It was also noted that 28.00 percent KCC and 81.33 per cent Non-KCC holders were not members of any organization and 12.00 per cent KCC and 1.34 per cent Non-KCC holders were office bearer in the social organization.

Data in table 4.1 show that majority of the KCC and Non-KCC holders in the study sample i.e. 82 (54.67%) were not member of any organization, whereas, 58 (38.66%) farmers were the member of any organization and 10 (6.67%) respondents possessed the position of office bearer in the social organization.

Economic motivation

On the basis of MPS of economic motivation of respondents, they were classified into three categories, i.e. low level of economic motivation (below 34 MPS), medium level of economic motivation (34 to 66 MPS) and high level of economic motivation (above 66 MPS). The results regarding economic motivation are presented in table 4.1.

A perusal of data presented in table 4.1 reveals that out of overall respondents, 98 (65.33%) were reported to be under high level of economic motivation and remaining 52 (34.67%) were reported to be of medium level of economic motivation.

Table 4.1 further indicates that 12.00 per cent and 57.33 per cent of KCC and Non-KCC holders were categorized under medium level of

economic motivation respectively. While, nobody of farmers from both the groups were placed under low level of economic motivation respectively. The representation of KCC and Non-KCC holders were found under the high level of economic motivation was 88.00 per cent and 42.67 per cent respectively. It means that, majority of the farmers were under high economic motivation.

These finding are in conformity with the finding of Bevinahalli (2005), Dolli (2006), Sahu (2012), Shashidhara (2003), Sonkamble (2000) Sandesh (2004), found that 70.33 per cent were middle aged while 28.33 per cent were of young age and remaining (1.33 per cent) were old, large land- holding (7.85 acres), middle school and primary school level educated, medium level of income (Rs. 1-2 lakh), 90.00 per cent had no social participation and 20.00 percent of the respondents belonged to high and low level of economic motivation categories

On the basis of findings of table 4.1 it could be concluded that:

1. In case of KCC holders, majority (38.67%) of the KCC scheme belonged to middle age group and 58.67 per cent of them were from Other Backward Class, 45.33 per cent were educate more than primary to middle and 53.33 per cent fell in the category of big land holding, 68.00 per cent of them were the dairy/agriculture occupation, 41.33 per cent of the KCC scheme belonged to the medium annual income, 68.00 per cent were joint family type and 64.00 per cent of the KCC holders large family size and 60.00 per cent of them were member of one organization. Further, 38.00 per cent of them were high level of economic motivation.
2. It was also found that 36.00 per cent of the Non-KCC holders belonged to middle age group, 45.33 per cent of them were from Other Backward Class, 25.33 per cent of them were educate more than primary to middle and 38.67per cent fell in the category of big land holding, 66.67 per cent of them were the dairy/agriculture

occupation, 48.00 per cent of the Non-KCC holders belonged to the medium annual income, 78.67 per cent were joint family type and 77.33 per cent of the Non-KCC holders large family size and 81.33 per cent of them were no member of any organization. Further, 57.33 per cent of them were high level of economic motivation.

3. The majority of the mustard growers of the sample area 37.33 per cent belonged to middle age group, 52.00 per cent of them were of Other Backward Class, 35.33 per cent of them were of more than primary to middle, 46.00 per cent of them belonged to the category of big land holding, 67.33 per cent of them belonged to the category of occupation, 44.67 per cent of them 3-6 lakh rs. In medium level of annual income,73.33 per cent were joint family type, 70.67 per cent were large family size and only 54.60 per cent of the farmers were no member of any organization. Further, 65.33 per cent of them were high level of economic motivation.

4.2 Awareness among KCC and Non-KCC holders about the scheme

Awareness is the state or ability to perceive, to feel, or to be conscious of events, objects or sensory patterns, it is one of the important components of access and plays an important role to utilize innovations or new schemes. In order to measure the level of awareness about the KCC scheme among the respondents, it was imperative to examine the existing level of awareness of the respondents about various major aspects *viz.,* registration, loaning, repaying, purpose of credit and defaulter. The present investigation, therefore, was carried out with one of the objectives, to study the “Awareness of the respondents about the KCC scheme.” The level of awareness possessed by respondents is being discussed aspect wise.

4.2.1 Extent of awareness of the KCC and Non-KCC holders regarding registration prerequisites

It is evident from table 4.2.l that KCC and Non-KCC holders were highly aware about “copy of jamabandi” with 76.00 and 27.33 mean per cent score respectively. This aspect was ranked first by farmers of the both groups.

Findings of table 4.2.l show that in case of awareness about registration, beneficiaries of KCC were considerably aware about “copy of jamabandi”, “search report from bank nominated advocate”, passport size photograph & ID proof”, “two witnesses to open the account”, “land certificate,” and “map of field”. The mean per cent scores of these aspects were 51.67, 41.33, 35.67, 28.33, 25.67 and 19.00 per cent respectively. Least awareness was found about map of field.

Non-KCC holders were not much similar the KCC holders but somewhat substantial awareness of all the aspects of registration prerequisites was observed. This may be due to close contact of Non-KCC with KCC holders and they have bank accounts and they know about land ownership. It is concluded that KCC were highly aware than Non-KCC holders about registration details.

Fig.No.4.2 Extent of awareness of the KCC and Non-KCC holders regarding registration prerequisites

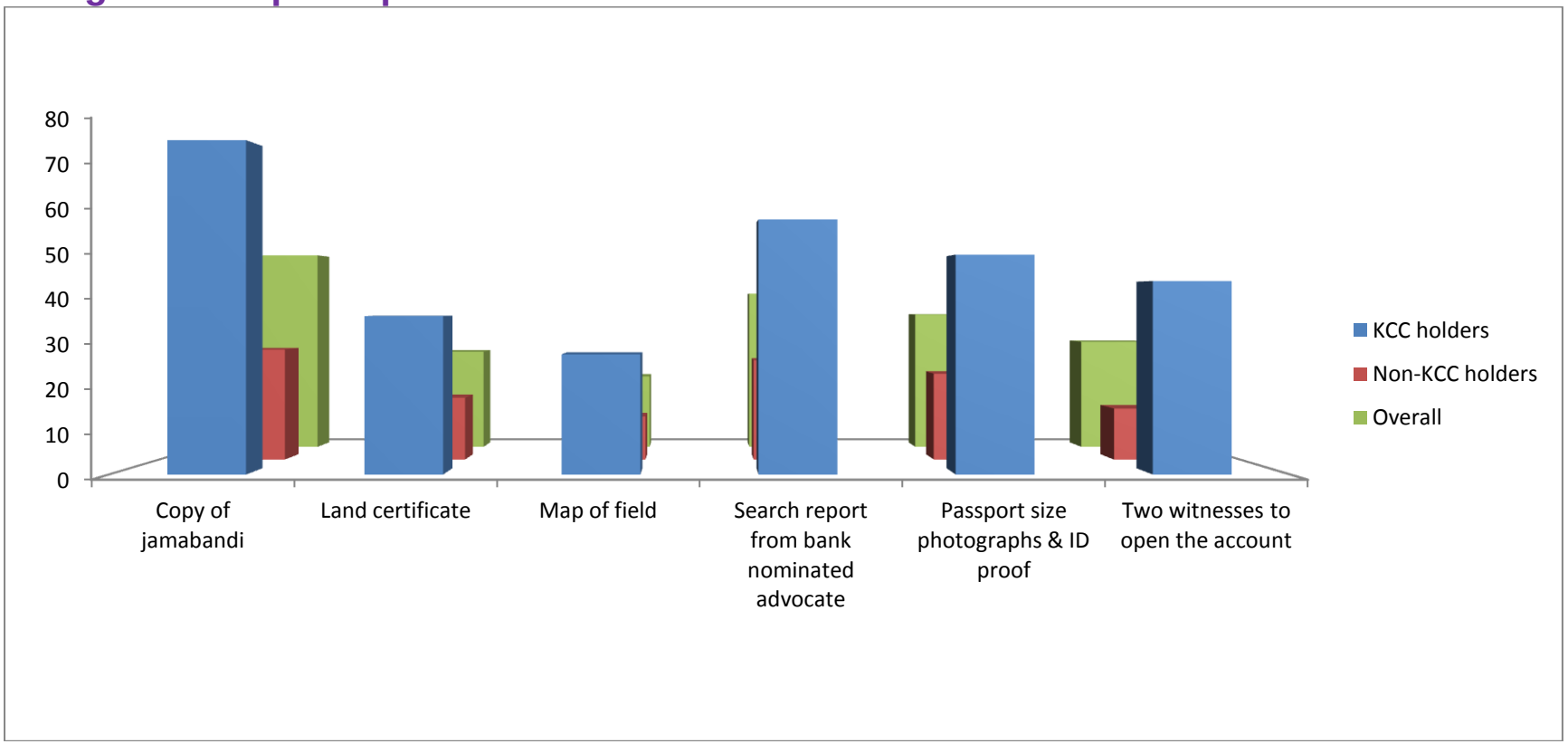


Table 4.2.l Extent of awareness of the KCC and Non-KCC holders regarding registration prerequisites

N =150

S. No.	Item	KCC holders		Non-KCC holders		Overall	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Copy of jamabandi	76.00	I	27.33	I	51.67	I
2.	Land certificate	36.00	V	15.33	IV	25.67	V
3.	Map of field	27.33	VI	10.67	VI	19.00	VI
4.	Search report from bank nominated advocate	58.00	II	24.67	II	41.33	II
5.	Passport size photographs & ID proof	50.00	III	21.33	III	35.67	III
6.	Two witnesses to open the account	44.00	IV	12.67	V	28.33	IV
		48.55		18.67		33.61	

rs= 0.943**
t=4.90

rs= rank correlation, ** significant at 1 percent level

The overall awareness level for registration prerequisites by the KCC and Non-KCC holders were 48.55 and 18.67 MPS, respectively.

An effort was also made to find out the correlation between existing awareness of registration prerequisites of both categories i.e. KCC and Non-KCC holders. The value of rank order correlation (rs) was 0.943 which shows positive correlation, the significance of rs was tested by ‘t’ test and it was observed that ‘t’ value calculated (4.90) was higher than it’s

table value. This leads to conclusion that there is correlation in ranking of awareness possessed by KCC and Non-KCC holders about registration prerequisites, though there was difference in magnitude of Mean Percent Score of KCC and Non-KCC holders.

The outcomes are supported by the findings of Adinya *et. al.* (2008).

4.2.2 Extent of awareness of the KCC and Non-KCC holders regarding loaning.

It is obvious from table 4.2.ll that KCC and Non-KCC holders possessed maximum awareness about “credit limit under the card” and “rate of interest” (near about 3 to 13 per cent) with 63.33 and 13.33 per cent respectively. This aspect was ranked first by farmers of the both categories followed by “under Rs 3 lakhs, provision of four per cent subsidy”.

Overall findings show that farmers of both the groups possessed highest awareness about “credit limit under the card”, followed by “under Rs 3 lakhs, provision of four per cent subsidy” and “rate of interest” (near about 3 to 13 per cent) with respect to their aspect wise MPS, 39.00, 34.00 and 31.33 per cent.

Fig.No.4.3 Extent of awareness of the KCC and Non-KCC holders regarding loaning

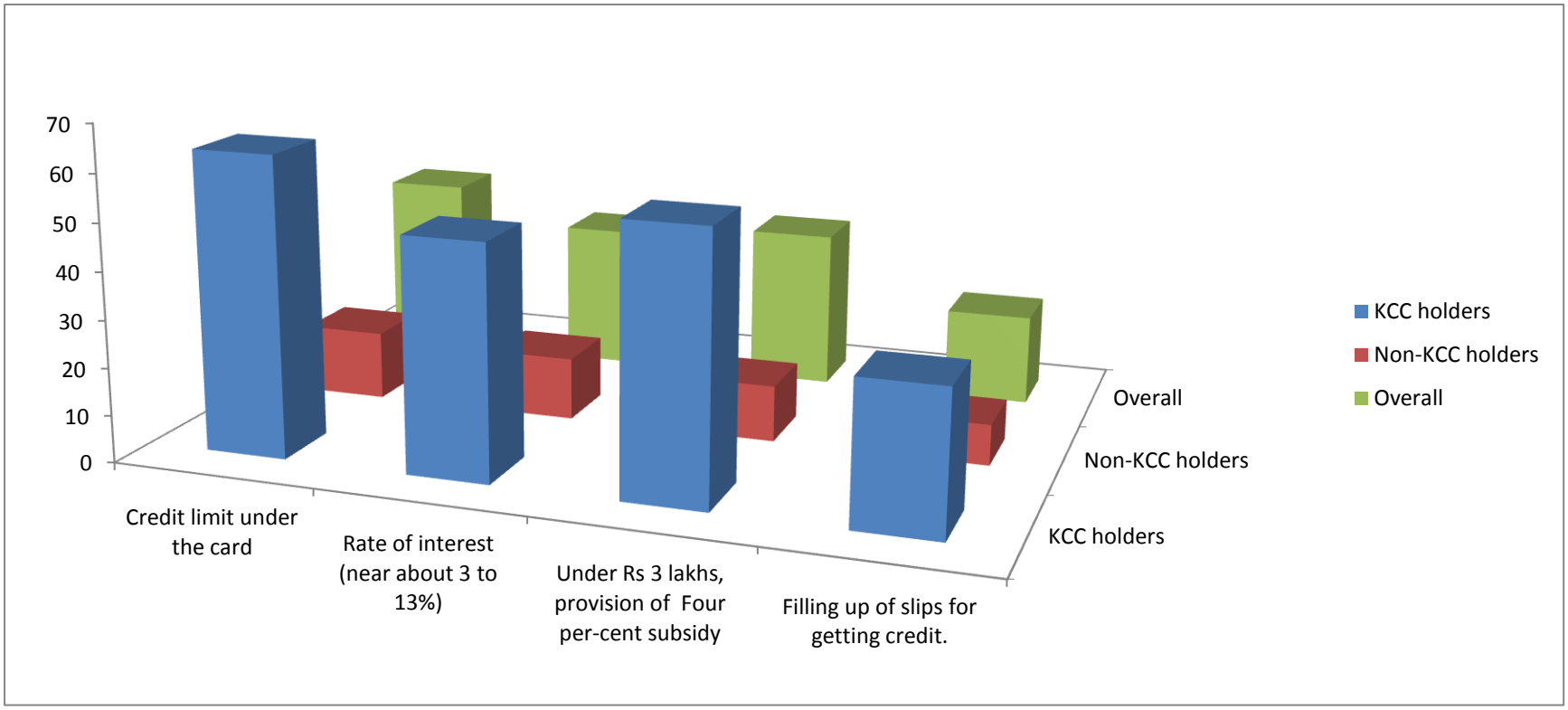


Table 4.2.II Extent of awareness of the KCC and Non-KCC holders regarding loaning

N = 150

S. No.	Item	KCC holders		Non-KCC holders		Overall	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Credit limit under the card	63.33	I	14.67	I	39.00	I
2.	Rate of interest (near about 3 to 13%)	49.33	III	13.33	II	31.33	III
3.	Under Rs 3 lakhs, provision of Four per-cent subsidy	56.00	II	12.00	III	34.00	II
4.	Filling up of slips for getting credit.	30.00	IV	8.67	IV	19.33	IV
		49.66		12.17		30.91	

rs= rank correlation NS= Non significant

rs= 0.800NS
t=2.31

An effort was also made to find out the correlation between existing awareness of loaning of both categories of respondents. The value of rank order correlation (r_s) was 0.80. The non-significant of r_s was tested by 't' test and it was observed that calculated value of 't' (2.31) was lower than its tabulated value. This leads to conclusion that there was no similarity in ranking of various aspect of awareness of loaning by KCC and Non- KCC holders it means both categories of respondents vary in having awareness different aspects of loaning.

The present findings are contradictory with the findings of Adinya *et. al.* (2008).

4.2.3 Extent of awareness of the KCC and Non-KCC holders regarding repaying

Table 4.2.lll disclosed that KCC and Non-KCC holders possessed highest awareness about “Time clashes with harvesting of crops” with 77.33 and 17.33 per cent respectively. This aspect was ranked first by farmers of the both groups specially followed by “rescheduling of credit” (if bad crop season) with 65.33 and 15.33 percent and “Withdrawals and repayment limits” with MPS 50.67 and 10.67 per cent respectively.

Pooled data show that farmers of both the groups had highest awareness about “Time clashes with harvesting of crops” with 47.33 per cent respectively. This aspect was ranked first by farmers of the both categories followed by “rescheduling of credit” (if bad crop season) and “Withdrawals and repayment limits” with their respective MPS 40.33 and 30.67 per cent.

Fig.No.4.4 Extent of awareness of the KCC and Non-KCC holders regarding repaying

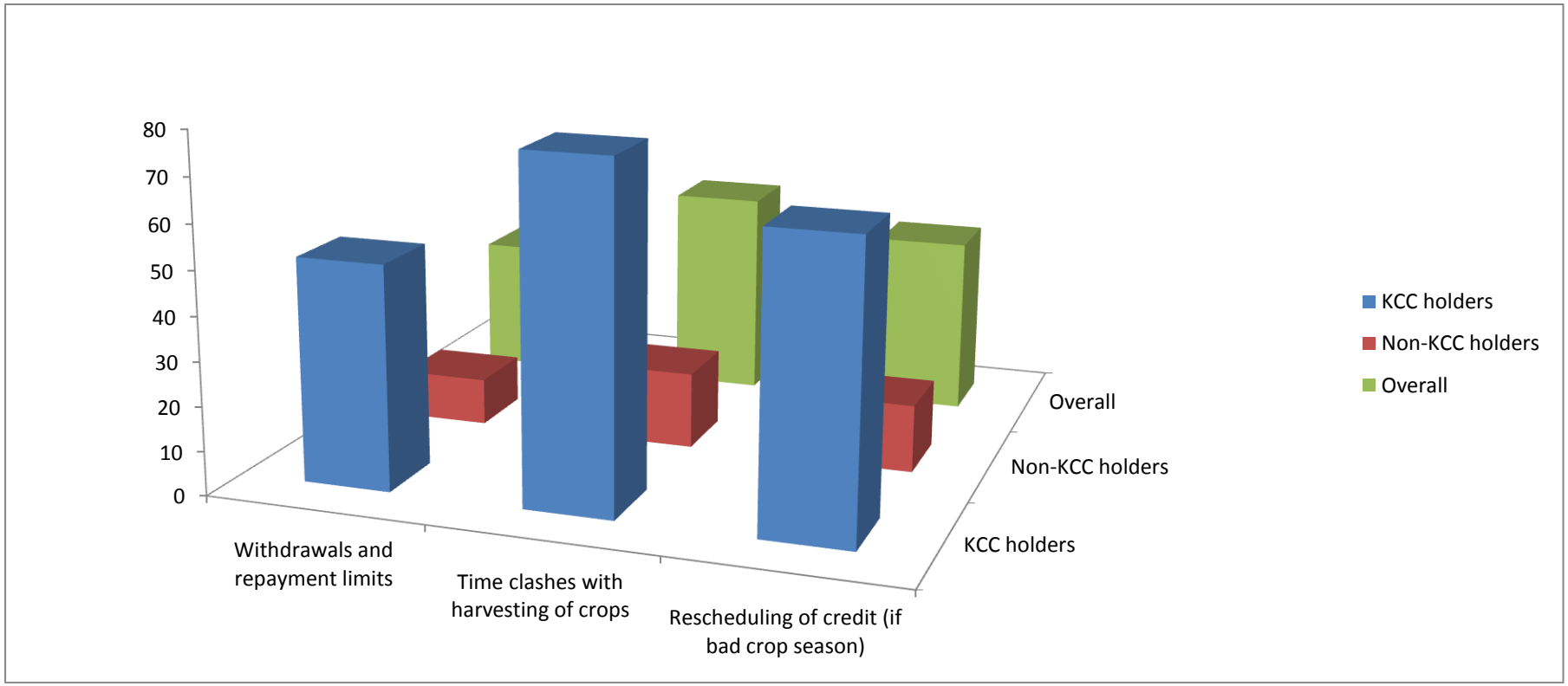


Table 4.2.lll Extent of awareness of the KCC and Non-KCC holders regarding repaying

N =150

S. No.	Item	KCC holders		Non-KCC holders		Overall	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Withdrawals and repayment limits	50.67	lll	10.67	lll	30.67	lll
2.	Time clashes with harvesting of crops	77.33	l	17.33	l	47.33	l
3.	Rescheduling of credit (if bad crop season)	65.33	ll	15.33	ll	40.33	ll
		64.44		14.44		39.44	

rs= rank correlation, ** Significant at 1 per cent rs= 1.00**

The value of calculated rank order correlation (r_s) was 1.00 which is positive and highly significant leading to conclusion that there was similarity in ranking of extent of awareness of repaying by the KCC and Non-KCC holders though there was difference in magnitude of awareness level by KCC and Non-KCC holders of KCC scheme.

4.2.4 Extent of awareness of the KCC and Non-KCC holders regarding purpose of credit

Table 4.2.lV reveals that KCC and Non-KCC holders possessed maximum awareness about “only for the needs of cultivation” and “repairing of machineries” with 74.67 and 34.67 per cent respectively. This aspect was ranked first by farmers of the both the categories.

Data also show that farmers of both the groups possessed highest awareness about "only for the needs of cultivation" with 51.67 MPS, "repairing of machineries" "other Farm and Non-Farm activities" and "marriage and home needs" were following with respect to MPS of their aspect wise, 51.00, 35.33, and 31.67.

Table 4.2.IV Extent of awareness of the KCC and Non-KCC holders regarding purpose of credit

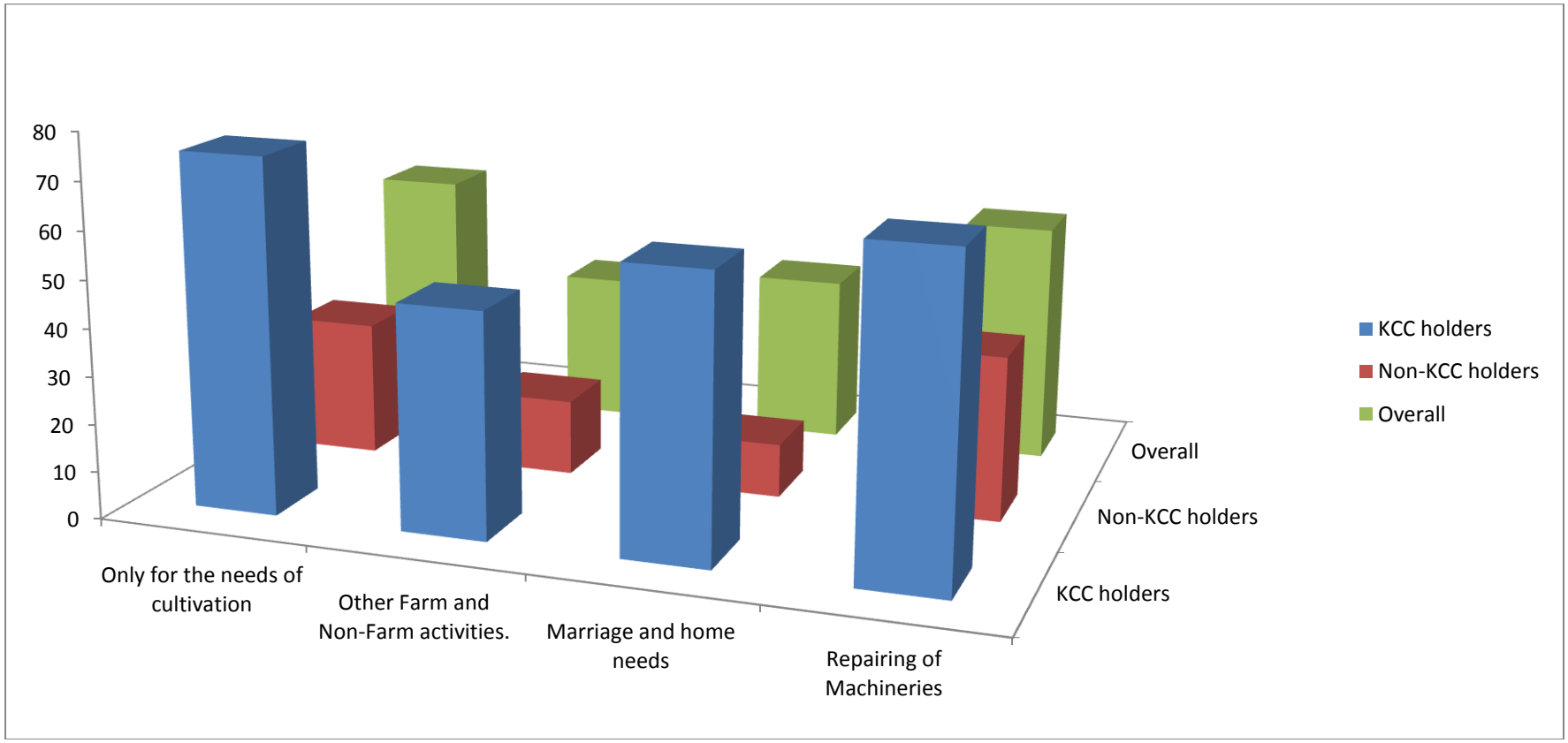
N =150

S. No.	Item	KCC holders		Non-KCC holders		Overall	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Only for the needs of cultivation	74.67	I	28.67	II	51.67	I
2.	Other Farm and Non-Farm activities.	47.33	IV	16.00	III	31.67	IV
3.	Marriage and home needs	59.33	III	11.33	IV	35.33	III
4.	Repairing of Machineries	67.33	II	34.67	I	51.00	II
		62.16		22.67		42.41	

rs= 0.600NS
t=1.29

rs= rank correlation NS= Non significant

Fig.No.4.5 Extent of awareness of the KCC and Non-KCC holders regarding purpose of credit



An effort was also made to find out the correlation between existing awareness of purpose of credit of both categories of respondents. The value of rank order correlation (r_s) was 0.60. The non-significant of r_s was tested by 't' test and it was observed that calculated value of 't' (1.29) was lower than its tabulated value. This leads to conclusion that there was no similarity in ranking of various aspect of awareness of purpose of credit by KCC and Non-KCC holders it means both categories of respondents vary in having awareness different aspects of purpose of credit.

4.2.5 Extent of awareness of the KCC and Non-KCC holders regarding defaulter.

Table 4.2.V reveals that KCC and Non-KCC holders had maximum awareness about " More credit than decided limit" and "consequences of crossing time limit of maximum 3 years" with 83.33 and 26.67 per cent respectively. This aspect was ranked as first by farmers of the both the categories.

Table further sow that farmers of both the groups possessed maximum awareness about "consequences of crossing time limit of maximum 3 years" with 49.67 per cent, followed by "more credit than decided limit" and "repayment in cropping season" with MPS of 49.00 and 38.67 respectively.

Table 4.2.V Extent of awareness of the KCC and Non-KCC holders regarding defaulter

N =150

S. No.	Items	KCC holders		Non-KCC holders		Overall	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Repayment in cropping season	63.33	lll	14.00	lll	38.67	lll
2.	More credit than decided limit	83.33	I	14.67	ll	49.00	ll
3.	Consequences of crossing time limit of maximum 3 years	72.67	ll	26.67	I	49.67	I
		73.11		18.45		45.78	

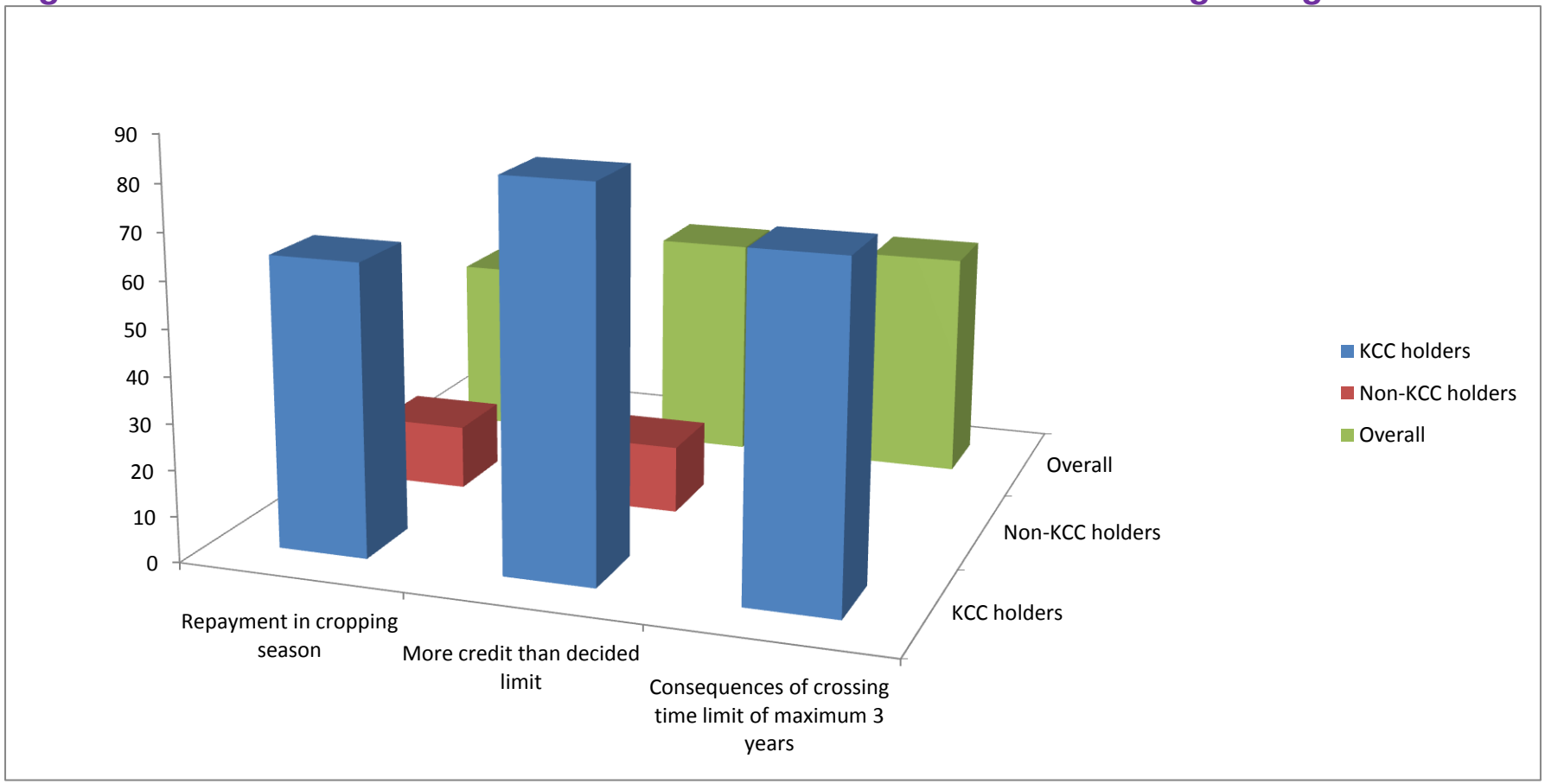
rs= .500NS
t=1.00

rs= Rank correlation, ** Significant at 1 per cent level

An effort was also made to find out the correlation between existing awareness of defaulter of both categories of respondents. The value of rank order correlation (r_s) was 0.50. The non-significant of r_s was tested by 't' test and it was observed that calculated value of 't' (1.00) was lower than its tabulated value. This leads to conclusion that there was no similarity in ranking of various aspect of awareness of defaulter by KCC and Non-KCC holders it means both categories of respondents vary in having awareness different aspects of defaulter.

These findings are partially supported by the findings of Rawat *et. al.* (2009).

Fig.No.4.6 Extent of awareness of the KCC and Non-KCC holders regarding defaulter



4.2.6 Overall aspects wise awareness of the KCC and Non-KCC holders regarding KCC scheme

The ranking pattern of table 4.2.Vl indicate that that KCC holders and Non-KCC holders were highly aware of about “defaulter” with 73.11 and 18.44 MPS respectively. These aspects were ranked first by KCC and Non-KCC holders.

Pooled data show that farmers of both the groups were highly aware of defaulter, repaying, registration prerequisities with respective MPS of 45.78, 39.44 and 33.61.

Conclusion could be drawn from table 4.2.Vl that KCC farmers were almost aware twice than Non-KCC with regards to five different aspects of KCC.

Table 4.2.Vl Overall aspects wise awareness of the KCC and Non-KCC holders regarding KCC scheme

N =150

S. No.	Items	KCC holders		Non-KCC holders		Overall	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Registration prerequisites	48.56	lV	18.67	ll	33.61	lll
2.	Loaning	49.67	lll	12.17	V	30.92	V
3.	Repaying	64.44	ll	14.44	lV	39.44	ll
4.	Purpose for credit	41.44	V	22.67	l	32.06	lV
5.	Defaulter	73.11	l	18.44	lll	45.78	l
		55.44		17.28		36.36	

rs= .600NS
t=1.30

rs= Rank correlation, ** Significant at 1 per cent level

The value of rank order correlation (rs) was .60. The non-significant of r_s was tested by 't' test and it was observed that calculated value of 't' (1.30) was lower than its tabulated value. This leads to conclusion that there was no similarity in ranking of overall aspect wise awareness of KCC and Non-KCC holders regarding KCC scheme it means both categories of respondents vary in having awareness different overall aspects of KCC scheme.

The present findings are contradictory with the findings of Adinya *et. al.* (2008). Hence, it is proved that KCC had definite positive impact on the beneficiaries.

4.2.7 Difference between KCC holders and Non-KCC holders with regards to their awareness about the scheme.

Table 4.2.Vll Difference between KCC holders and Non-KCC holders with regards to their awareness about the scheme

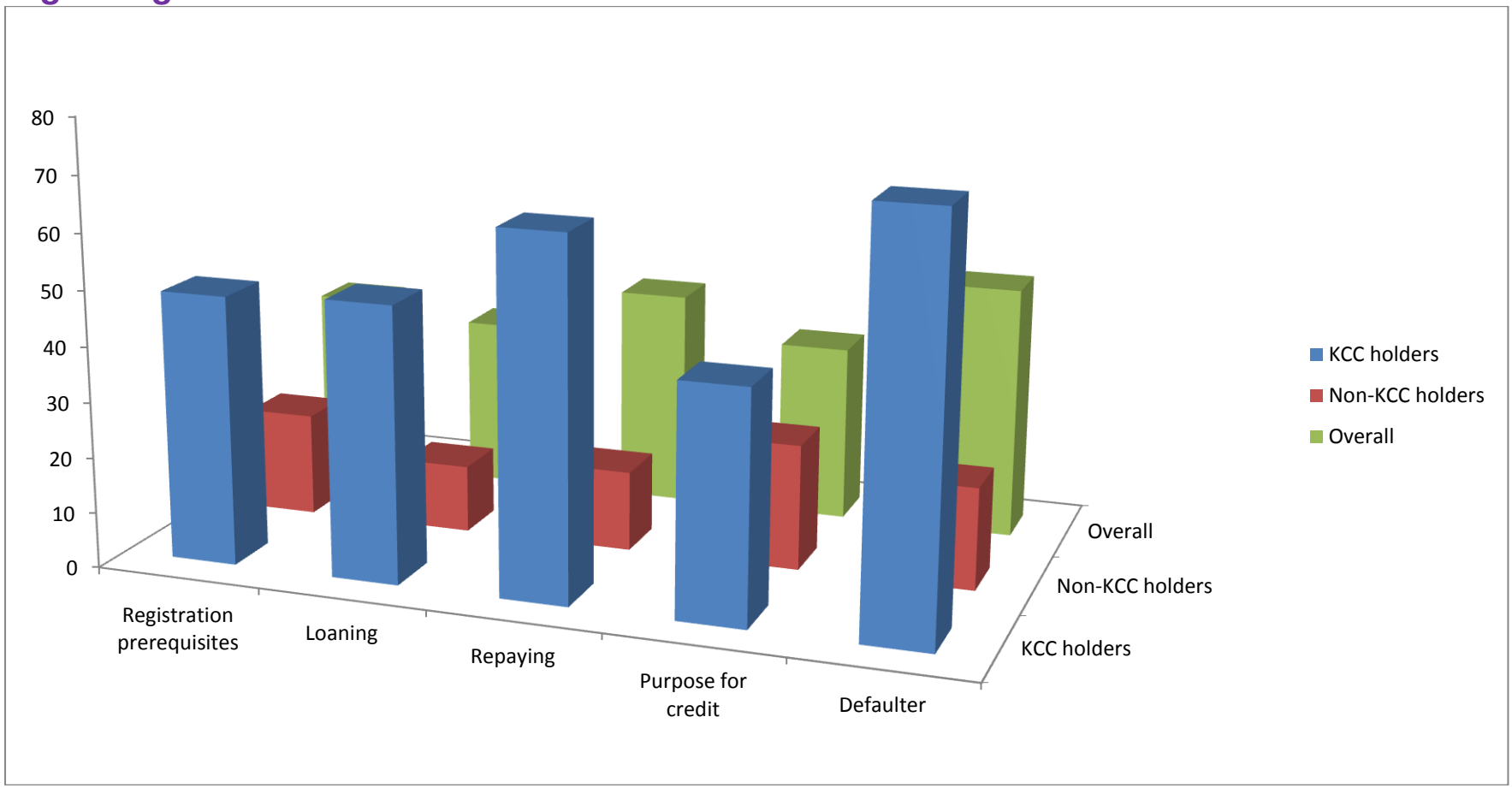
N=150

S. No.	Items	KCC holders		Non-KCC holders		t- test
		Mean	S.D.±	Mean	S.D.±	
1.	Registration prerequisites	5.83	2.43	2.24	3.21	6.30**
2.	Loaning	3.97	1.83	0.97	1.07	9.99**
3.	Repaying	3.87	1.47	0.87	1.38	10.51**
4.	Purpose for credit	4.97	1.58	1.81	1.16	11.38**
5.	Defaulter	4.39	1.11	1.11	0.99	15.64**
	Total awareness	4.61	1.16	1.40	1.15	13.90**

** Significant at 1 per cent level

In order to be more clear about the results, student 't'-test was applied which enabled the researcher to see the significance of difference,

Fig.No.4.7 Overall aspects wise awareness of the KCC and Non-KCC holders regarding KCC scheme



if any, between KCC and Non-KCC with regards to their awareness about kisan credit card scheme under study.

The results of table 4.2.Vll indicate highly significant difference between KCC and Non-KCC holders in the context of their awareness about registration ('t' –test 6.30), loaning, ('t' = 9.99), repaying ('t' = 10.51), purpose of credit ('t' = 11.38) and defaulter ('t' = 15.64) at 1 per cent level of significance.

It meant that the KCC farmers owned more awareness about the scheme than those of Non-KCC with regards to registration, loaning, repaying, purpose of credit and defaulter

4.3.1 Comparison of the productivity level of important crops between KCC holders & Non-KCC holders.

The data related to productivity level of Kharif and Rabi crops of both KCC holders and Non-KCC holders farmers incorporated in the table 4.3.l show that calculated 'Z' value was higher than the tabulated value at 1 per cent level of significance in six important crops of Kharif and Rabi. This showed that in six crops of Kharif and Rabi crops, KCC and Non-KCC holders had wide difference in their productivity level. It means that KCC holders possessed more productivity as compared to the Non-KCC holders in the above mentioned six important crops as well as overall productivity of KCC and Non-KCC holders regarding Kharif and Rabi crops.

The higher productivity level of important crops of among the KCC holders in comparison to the Non-KCC holders might be due to the fact that KCC holders had been technical guidance provided by the technical staff of the bank . This might have resulted in higher level of productivity of KCC holders than that of the Non-KCC holders.

Table 4.3.l Comparison of the productivity level of important crops crops between KCC holders & Non-KCC holders.

N =150

Crop	KCC (n_1)		Non-KCC (n_2)		Z-value
	Mean (q ha^{-1})	S.D.	Mean (q ha^{-1})	S.D.	
***Kharif* crops**					
Moth	2.14	0.38	1.72	0.26	5.66**
Groundnut	23.99	2.0	20.65	2.2	6.90**
Clusterbean	4.56	0.4	3.78	0.5	7.52**
***Rabi* crops**					
Wheat	24.03	2.6	21.78	1.8	4.38**
Mustard	11.12	1.9	9.59	1.1	4.41**
Gram	6.09	0.7	5.14	0.9	4.99**

****** Significant at 1% level of significance

The results of table 4.3.ll indicate highly significant difference between KCC and Non-KCC holders in the context of their productivity of moth ('z' = test 5.66), in groundnut ('z' = 6.90), in clusterbean ('z' = 7.52), in wheat ('z' = 4.38) and in mustard ('z' = 4.41) and in gram ('z' = 4.99) at 1 per cent level of significance.

It meant that the KCC farmers owned more productivity about the scheme compare than Non-KCC holders.

These findings are in conformity with the findings of Samantara (2010).

4.4.1 Utilization pattern of the credit undertaken by KCC holders

On the basis of utilization pattern of the credit undertaken by KCC holders were asked to state the purposes in which they utilized of the obtained loan, reply of the farmers presented in Table 4.4.l.

The table shows that 51 KCC holders out of 75 KCC holders utilized the bank loan for which they had applied. Out of these 51 KCC holders 18(24.00 percent) KCC holders utilized loan for purchase of fodder for their cattle, 11(14.67 percent) purchased fodder and inputs for production of crops. Whereas, 13(17.33 percent) KCC holders utilized the loan amount only for production of crops for their own and cattle purpose. 9(12.00 percent) KCC holders utilized this amount for purchase of pumpset

Seventeen KCC holders partially utilized the loan for the purpose for which they were granted the loan and partially utilized for other purposes. Only 7 KCC holders did not utilized a single coin for the purposes for which they had asked for the loan and out of them 3(4.00 percent) purchased fodder, only 1(1.33 percent) purchased fodder and input for crop production and 3(4.00 percent) KCC holders utilized their full disbursed loan for production of crop.

Table 4.4.l Distribution of KCC holders on the basis of credit utilization pattern

S.No.	Type of loan	No. of loanee	Out of these respondents received laon for the purpose (N=75)
1.	Who fully utilized for which they have got loan	51	18 (24.00%) Fodder loan
			13 (17.33%) Crop loan
			11 (14.67%) Fodder and crop loan
			9 (12.00%) Pump set
2.	Who partially utilized for which they have got loan	17	7 (9.33%) Crop loan
			4 (5.33%) Fodder loan
			6 (8.00%) Fodder and crop loan
3.	Who did not utilized for which they have got loan	7	3 (4.00%) Crop loan
			3 (4.00%) Fodder loan
			1 (1.33%) Fodder and crop loan

4.4.2 Distribution of KCC holders on the basis of loan utilized partially for other purpose than they have got loan

The table 4.4.ll shows that out 75 KCC holders 15 KCC holders paid a fraction in clearance. Out of 15, 5 KCC holders utilized 50 percent, 4 utilized 30 percent, 3 utilized 40 per cent and 3 utilized 20 percent of the disbursed loan in clearance of old debt. Total 11 KCC holders utilized loan for crop growing purpose out of these 11 KCC holders 4 farmers utilized 40 per cent, 3 utilized 30 percent, 2 utilized 70 percent and 2 utilized 20 percent for crop growing purposes. 8 KCC holders utilized some loaned amount for purchase of fodder out of these 8 KCC holders 2 KCC holders utilized 70 percent and 2 KCC holders 50 percent, 2 KCC holders utilized

40 percent, where as 1 KCC holders each 60 and 30 percent utilized for purchase of fodder.

Table 4.4.ll also express that 7 KCC holders utilized a part of loan in social obligations out of which 4 KCC holders utilized 20 percent, 2 KCC holders 50 percent and 1 KCC holders 30 percent in social obligations. 5 KCC holders also utilized a fraction of loan amount in depending of existing well out of which 2 KCC holders utilized 50 percent, 2 KCC holders utilized 40 percent and 1 KCC holders utilized 30 percent in said purpose. 5 KCC holders used some asked amount in purchase of needful items out of which 2 KCC holders utilized 20 percent and 3 KCC holders utilized 30 percent in needful item purposes. 3 KCC holders in purchase of luxurious items out of which 2 KCC holders utilized 30 percent and one KCC holders utilized 15 percent in luxurious items purpose. 7 KCC holders utilized a part of loan in family consumption out of which 3 KCC holders utilized 50 percent, 2 KCC holders utilized 40 percent and 2 KCC holders utilized 30 percent in family consumption. 5 KCC holders utilized in medical aid purposes out of which 2 KCC holders utilized 30 percent, 2 KCC holders utilized 20 percent and only 1 KCC holders utilized 10 percent in medical aid. Lastly 4 KCC holders utilized in growing fodders out of which 2 KCC holders utilized 40 percent and 2 KCC holders utilized 50 percent in said purposes.

Table 4.4.ll Distribution of KCC holders on the basis of loan utilized partially for other purpose than they have got loan

S.No.	Purposes	No. of KCC holders	Per cent utilized
1.	Social obligations	4	20
		1	30
		2	50
	Total	7	100
2.	Needful items	2	20
		3	30
	Total	5	50
3.	Luxurious items	1	30
		2	15
	Total	3	45
4.	Payment of debt	5	50
		3	40
		4	30
		3	20
	Total	15	140
5.	Crop loan	4	40
		2	70
		3	30
		2	20
	Total	11	160
6.	Growing of fodder	2	40
		2	50
	Total	4	90
7.	Purchasing of fodder	2	70
		1	60
		2	50
		2	40
		1	30
	Total	8	250
8.	Deepening of existing well	2	50
		2	40
		1	30
	Total	5	120
9.	Family consumption	3	50

		2	40
		2	30
	Total	7	120
10.	Medical aid	2	30
		2	20
		1	10
	Total	5	60

4.4.3 : Distribution of KCC holders according to source of information used for effective utilization of credit

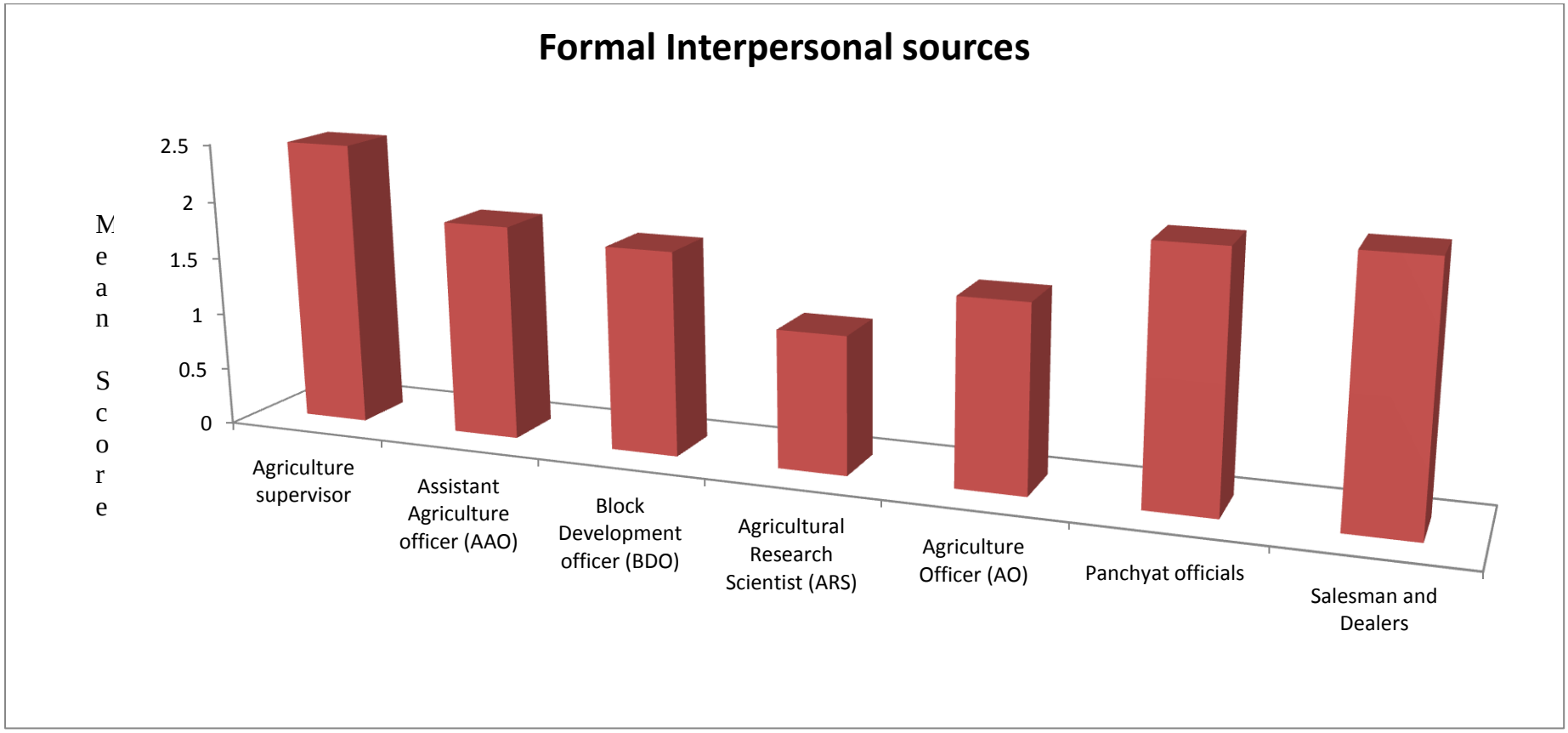
The utilization of credit is viewed as a process and it requires some sort of information at different stages. There are many sources, which people may use to get information about new recommended technology. The sources of information in the present study have been divided into three groups viz., (i) formal sources, (ii) informal sources and (iii) mass media. The responses obtained against each source were tabulated and data in this respect are presented in table 4.4.lll

It is evident from the Table 4.4.lll that almost all the enlisted sources had been utilized by the credit. However, the sources *viz*., neighbours with a mean score 2.53 was ranked first followed by agriculture supervisor (2.48 mean score), relatives and friends (2.45 mean score) and radio (2.44 mean score) and were ranked 2^{nd}, 3^{rd} and 4^{th}, respectively. The KCC holders assigned 5^{th}, 6^{th}, 7^{th} and 8^{th} ranks to the sources viz., progressive farmers (2.35 mean score), salesman and dealer (2.20 mean score), panchayat official (2.16 mean score) and assistant agriculture officer (AAO) (1.87 mean score), respectively. Further, the respondents assigned 9^{th} and 10^{th} ranks to sources viz., tv/film (1.84 mean score) and block development officer (BDO) (1.77 mean score), respectively.

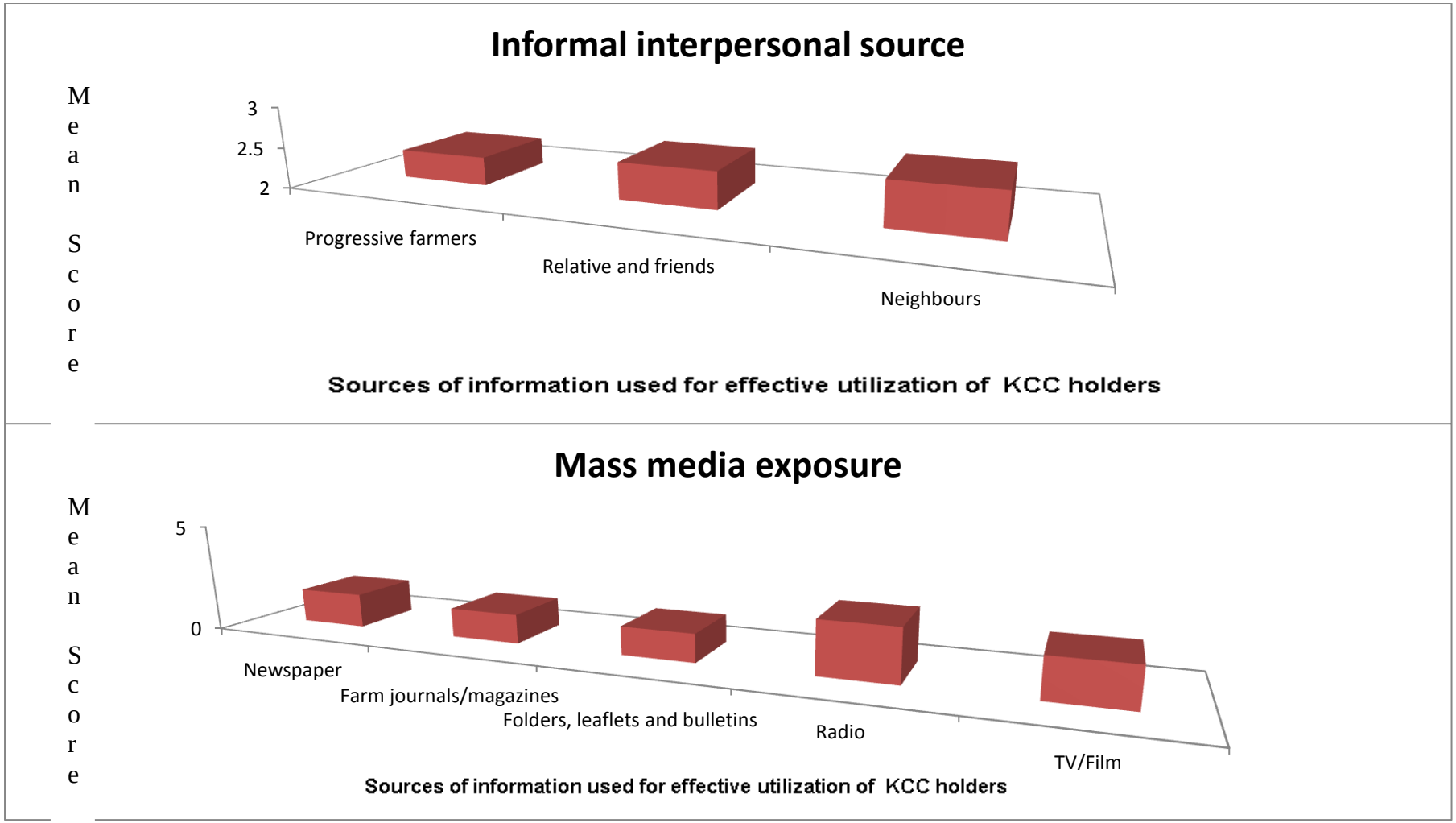
Table 4.4.lll Distribution of KCC holders according to sources of information used for effective utilization of credit

S. No.	Sources of information utilized	Total score	Mean score	MPS	Rank
A.	**Formal Interpersonal sources**				
1.	Agriculture supervisor	186	2.48	61.33	II
2.	Assistant Agriculture officer (AAO)	140	1.87	72.00	VIII
3.	Block Development officer (BDO)	133	1.77	84.44	X
4.	Agricultural Research Scientist (ARS)	89	1.19	81.33	XV
5.	Agriculture Officer (AO)	120	1.60	78.22	XI
6.	Panchyat officials	162	2.16	53.33	VII
7.	Salesman and Dealers	165	2.20	82.67	VI
B.	**Informal interpersonal source**				
1.	Progressive farmers	176	2.35	52.89	V
2.	Relative and friends	184	2.45	73.33	III
3.	Neighbours	190	2.53	45.33	I
C.	**Mass media exposure**				
1.	Newspaper	119	1.59	59.11	XII
2.	Farm journals/magazines	102	1.36	39.56	XIII
3.	Folders, leaflets and bulletins	98	1.31	81.78	XIV
4.	Radio	183	2.44	43.50	IV
5.	TV/Film	138	1.84	62.22	IX

Fig.No.4.8 Distribution of KCC holders according to sources of information used for effective utilization of credit



Sources of information used for effective utilization of KCC holders


Informal interpersonal source
Mean Score
3
2.5
2
Progressive farmers
Relative and friends
Neighbours
Sources of information used for effective utilization of KCC holders
Mass media exposure
Mean Score
5
0
Newspaper
Farm journals/magazines
Folders, leaflets and bulletins
Radio
TV/Film
Sources of information used for effective utilization of KCC holders

The sources *viz*., agriculture officer (1.60 mean score), newspaper (1.59 mean score) and farm journals/magazines (1.36 mean score) were ranked 11th, 12th and 13th, respectively.

Remaining sources were utilized by less number of farmers or have been utilized occasionally and hence their mean score was observed folders (1.31 mean score) and agricultural research scientist (ARS) were ranked 14th and 15th.

This finding is partly supported by Gunawardana (2005).

4.4.4 : Distribution of KCC holders according to types of technical guidance taken from bank employee

Table 4.4.lV shows that out of 75 KCC holders, who said the bank employees of technical staff of bank provide information for better credit utilization were again classified are presented in table 4.4.lV, which shows the type of technical guidance obtained by these officers 30(40.00 percent) KCC holders stated that bank personnel told us to repayment of loan and 17(22.67 percent) KCC holders stated that bank personnel told us to purchase hybrid seeds, 14(18.67 percent) KCC holders said these personnel told us to purchase of better quality seeds, similarly 7(9.33 percent) KCC holders said the bank officer's guided them about control of insect pest of their crops whereas 7(9.33 percent) KCC holders said that bank officers told him to purchase the pump set of a reliable company.

The KCC holders were also asked to state type of bank credit they need. It was observed that 64 KCC holders were interested to get the credit in the form of cash, whereas, 11 KCC holders said that they are interested to get the bank credit in the form of cash and kind and not a single KCC holders was interested to get the loan in the form of kind.

Out of 64 KCC holders who were interested to get the loan in the form of cash, 52 said that they needed cash so that they could purchase good and cheap material

available at any place 7 said that they were interested so utilize this cash according to their need.

Table 4.4.IV. Distribution of KCC holders according to types of technical guidance taken from bank employee

S.No.	Type of technical guidance	Number of KCC holders taken	
		Frequency	Percentage
1.	About use of hybrid seeds	17	22.67
2.	About control of insect and pests	7	9.33
3.	Repayment of loan	30	40.00
4.	Purchase of better quality seed	14	18.67
5.	About make of pumpset	7	9.33

4.5 Constraints being facedby the KCC farmers

Adoption of a scheme or a new technology depends on various factors, which may either accelerate or retard its adoption, it is important on the part of extension functionaries to identify such factors so as to make the dissemination of technologies in line with the farmers' perception and need. Considering the crucial importance of constraints which hinder the adoption of KCC scheme among the farmers in the study area, the researcher made efforts and collected data in this regard and the data and present in following uses.

Various constraints with their respective intensities have been presented under the KCC following tables.

Fig.No.4.9 Distribution of KCC holders according to types of technical guidance taken from bank employee

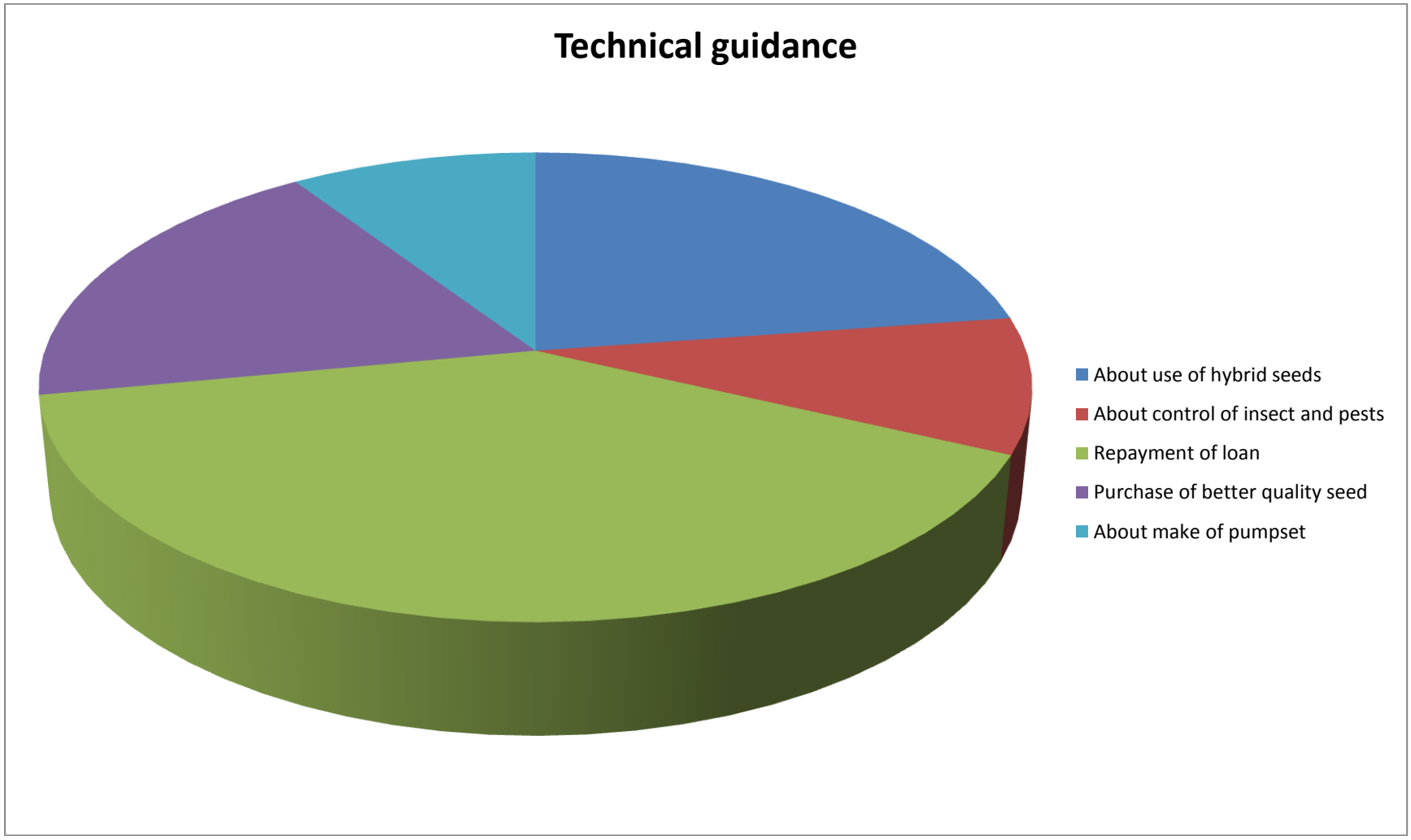
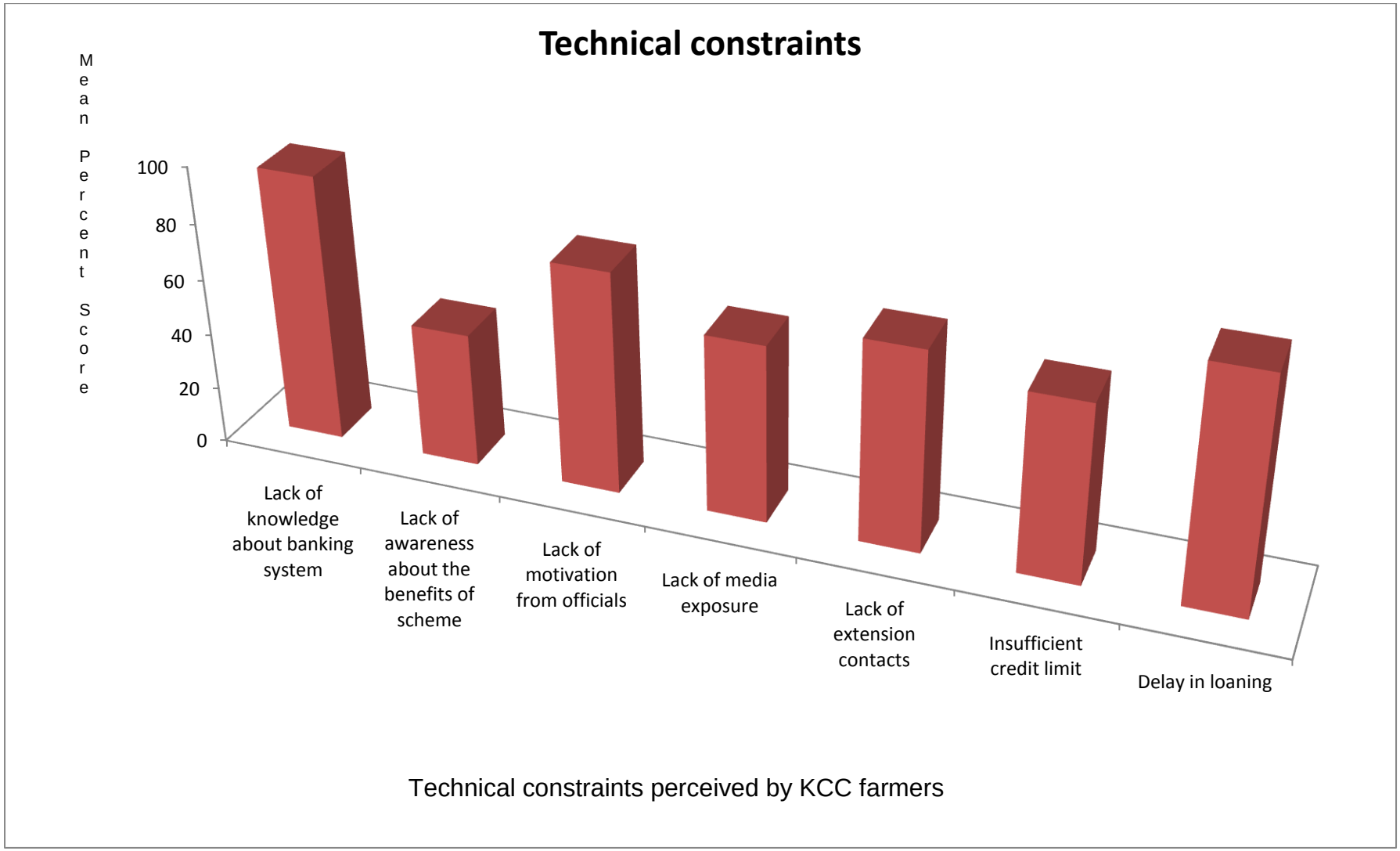


Fig.No.4.10 Level of technical constraints perceived by KCC farmers



Technical constraints perceived by KCC farmers

4.5.1 Level of technical constraints perceived by KCC farmers

The data incorporated in table 4.5.l reveals that “lack of knowledge about banking system” and “Delay in loaning” were the most severe constraints expressed by all of the KCC farmers which were assigned first and second rank with 95.6 and 84.0 MPS respectively.

Table 4.5.l Level of technical constraints perceived by KCC farmers

N = 75

S. No.	Aspect	MPS	Rank
1.	Lack of knowledge about banking system	95.6	I
2.	Lack of awareness about the benefits of scheme	48.0	VII
3.	Lack of motivation from officials	79.6	III
4.	Lack of media exposure	63.6	VI
5.	Lack of extension contacts	72.0	IV
6.	Insufficient credit limit	64.0	V
7.	Delay in loaning	84.0	II

MPS=Mean per cent score, n=Size of sample for beneficiaries

Lack of motivation from officials, lack of extension contacts and insufficient credit limit were next three severe constraints ranked as III, IV and V with their respective MPS 79.6, 72 and 64.

The study recommended constraints related to banking system, delay in loaning them go for KCC, lack of motivation, lack of extension contacts and insufficient credit limit must be minimized.

The present findings are conformity with the findings of Kumar and Kapoor (2007).

4.5.2 Level of economical constraints perceived by KCC farmers

The data incorporated in table 4.5.ll reveal that “Fragmentation of landholdings” and “Depend upon the money leader irrespective of their high interest charges” were the most severe constraints expressed by KCC farmers which were assigned first and second rank with MPS 96.9 and 88.9 respectively.

Table also shows that “High and exorbitant interest rate” was perceived to be less severe constraint perceived by farmers, as it was placed at the last rank with its total MPS 49.8.

Table 4.5.ll Aspects wise economical constraints perceived by KCC farmers

N = 75

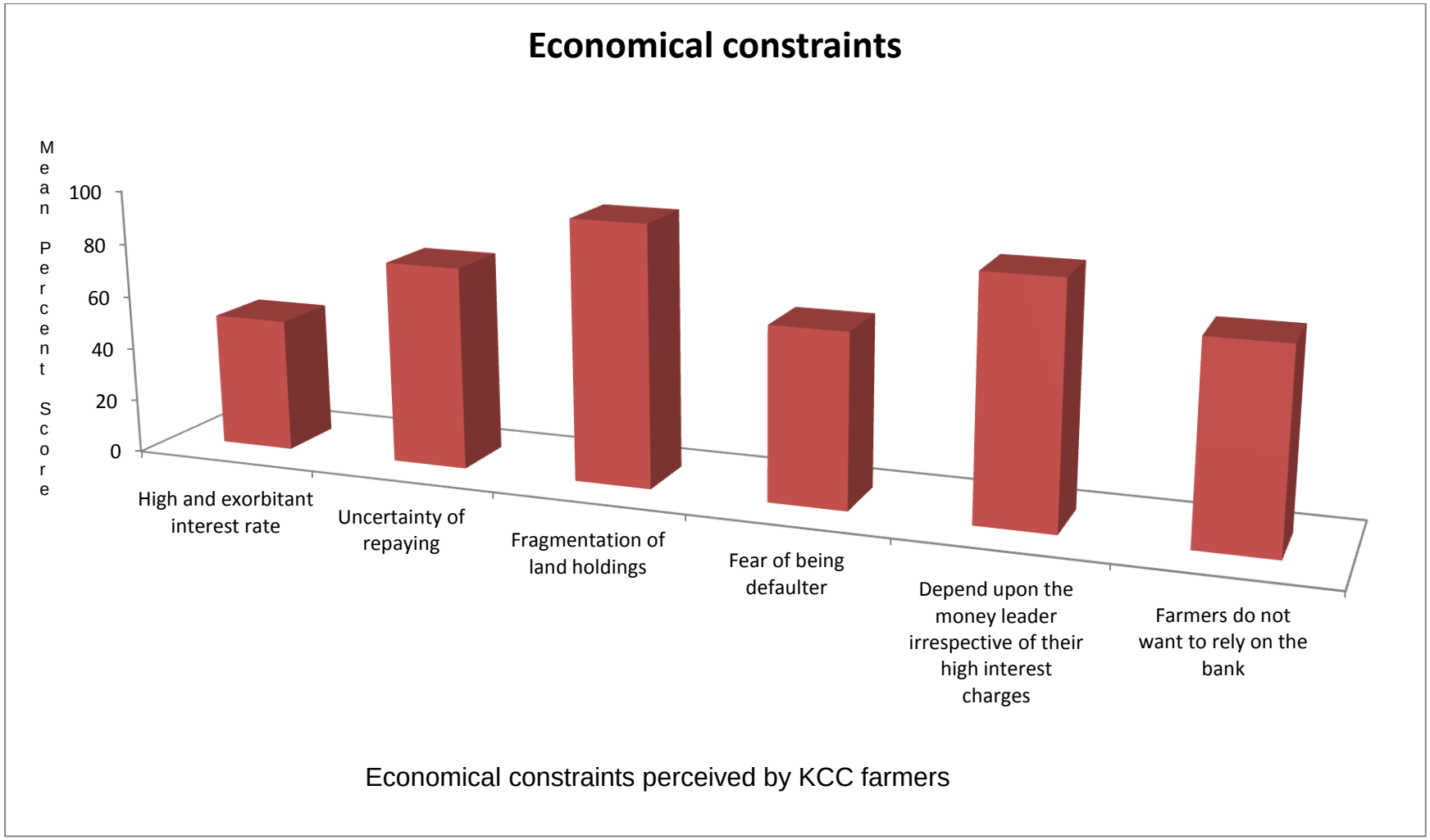
S. No.	Aspect	MPS	Rank
1.	High and exorbitant interest rate	49.8	VI
2.	Uncertainty of repaying	75.6	III
3.	Fragmentation of land holdings	96.9	I
4.	Fear of being defaulter	64.4	V
5.	Depend upon the money leader irrespective of their high interest charges	88.9	II
6.	Farmers do not want to rely on the bank	72.9	IV

MPS=Mean per cent score, n=Size of sample for beneficiaries

It is strongly recommended that cooperative farming be encouraged, money leader must be removed and certainty of repaying of credits be ensured in the study area.

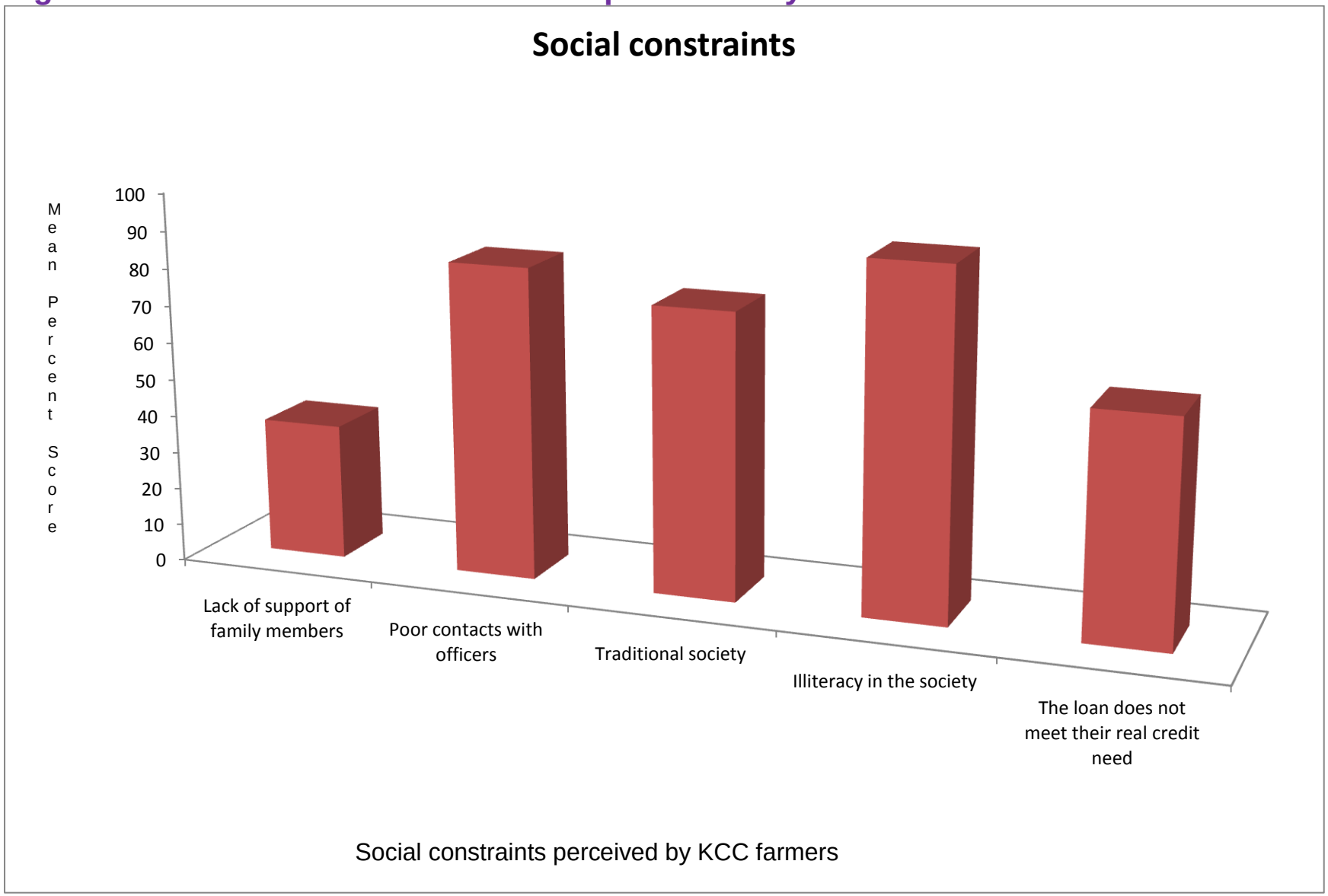
The findings are supported by the findings of Mohan (2006).

Fig.No.4.11 Level of economical constraints perceived by KCC farmers



Economical constraints perceived by KCC farmers

Fig.No.4.12 Level of social constraints perceived by KCC farmers



4.5.3 Level of social constraints perceived by KCC farmers

A perusal of data incorporated in table 4.5.lll reveal that “illiteracy in the society”, “Poor contacts with officers” and “Traditional society” were expressed as the most severe constraints felt by the respondents which were placed at 1, 2, and 3 ranks with their MPS 92.4, 83.6, and 76.4 respectively.

Table 4.5.lll Level of social constraints perceived by KCC farmers

N = 75

S. No.	Aspect	MPS	Rank
1.	Lack of support of family members	36.4	V
2.	Poor contacts with officers	83.6	II
3.	Traditional society	76.4	III
4.	Illiteracy in the society	92.4	I
5.	The loan does not meet their real credit need	59.6	IV

MPS=Mean per cent score, n=Size of sample for beneficiaries

“The loan does not meet their real credit need” and “lack of support of family members” were less severe constraints perceived by the respondents and ranked 4, and 5 with their MPS 59.6 and 36.4 respectively.

Study recommended that farmers should be trained about the scheme so they can change the mindset-up of illiterate, traditional society and they can establish strong contacts with officers.

The findings are partially supported by the findings of Sidhu and Gill (2006).

4.5.4 Level of miscellaneous constraints perceived by KCC farmers.

A perusal of data incorporated in Table 4.5.lV recommended that the following most severe constraints perceived by the KCC farmers under scheme must be looked in to seriously. (I) lengthy paper work, (II) Illiteracy of farmers leads to various difficulties in understanding of KCC scheme, (III) Unavailability of communication network, (IV) Upgraded to an ATM kisan card

Table 4.5.lV Level of miscellaneous constraints perceived by KCC farmers

N = 75

S. No.	Aspect	MPS	Rank
1.	Lengthy paper work	97.8	I
2.	Unavailability of communication network	79.1	III
3.	Difficulty in opening bank account	67.6	V
4.	Upgraded to an ATM kisan card	73.3	IV
5.	Illiteracy of farmers leads to various difficulties in understanding of KCC scheme	83.1	II
6.	Villages are not getting any bankbranch in near by area	58.2	VI

MPS=Mean per cent score, n=Size of sample for beneficiaries

“Difficulty in opening bank account” and “Villages are not getting any bankbranch in near by area” were less severe constraints perceived by the respondents and ranked V, and VI with 67.6 and 58.2 MPS, respectively by them.

Fig.No.4.13 Level of miscellaneous constraints perceived by KCC farmers

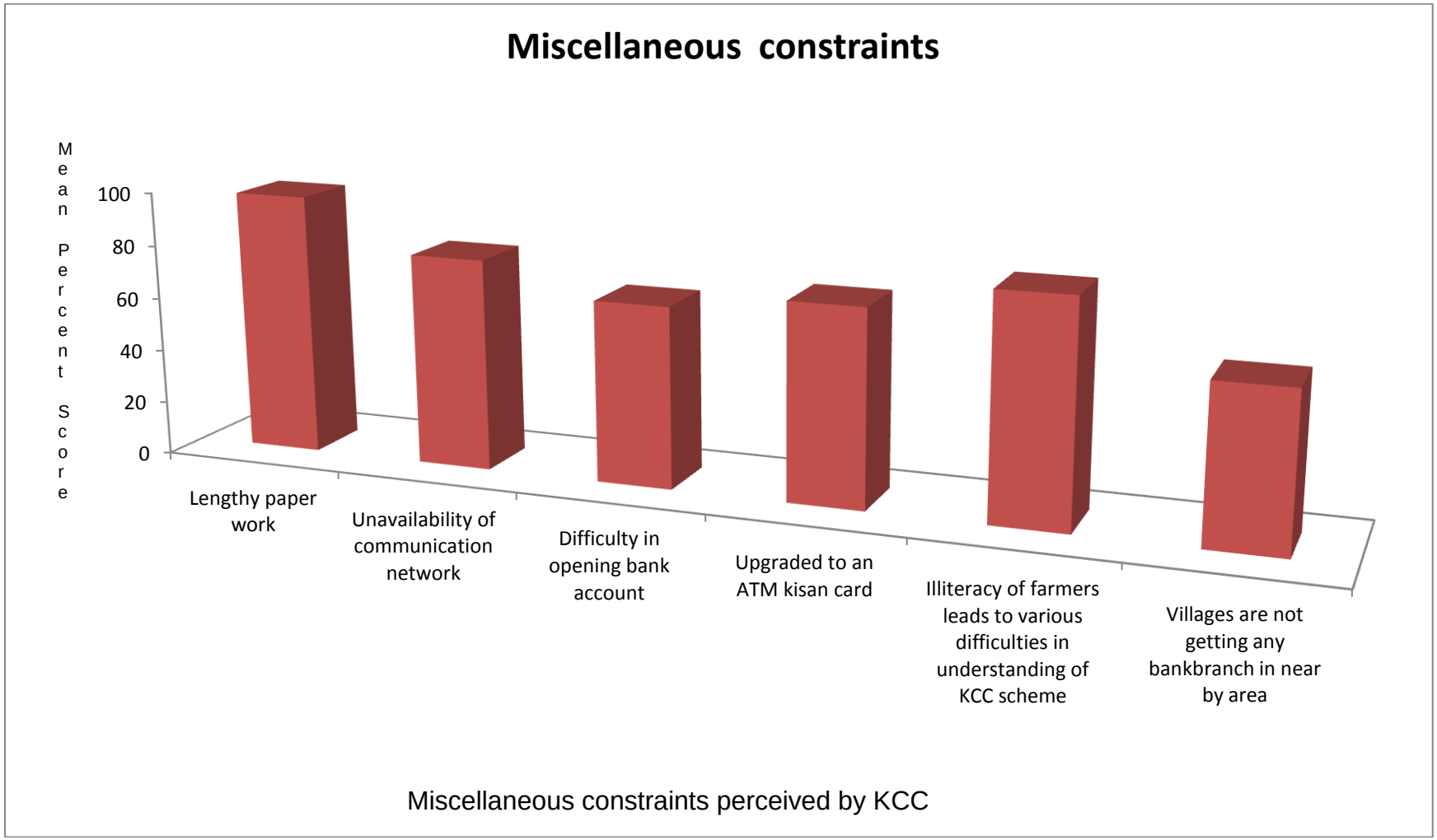
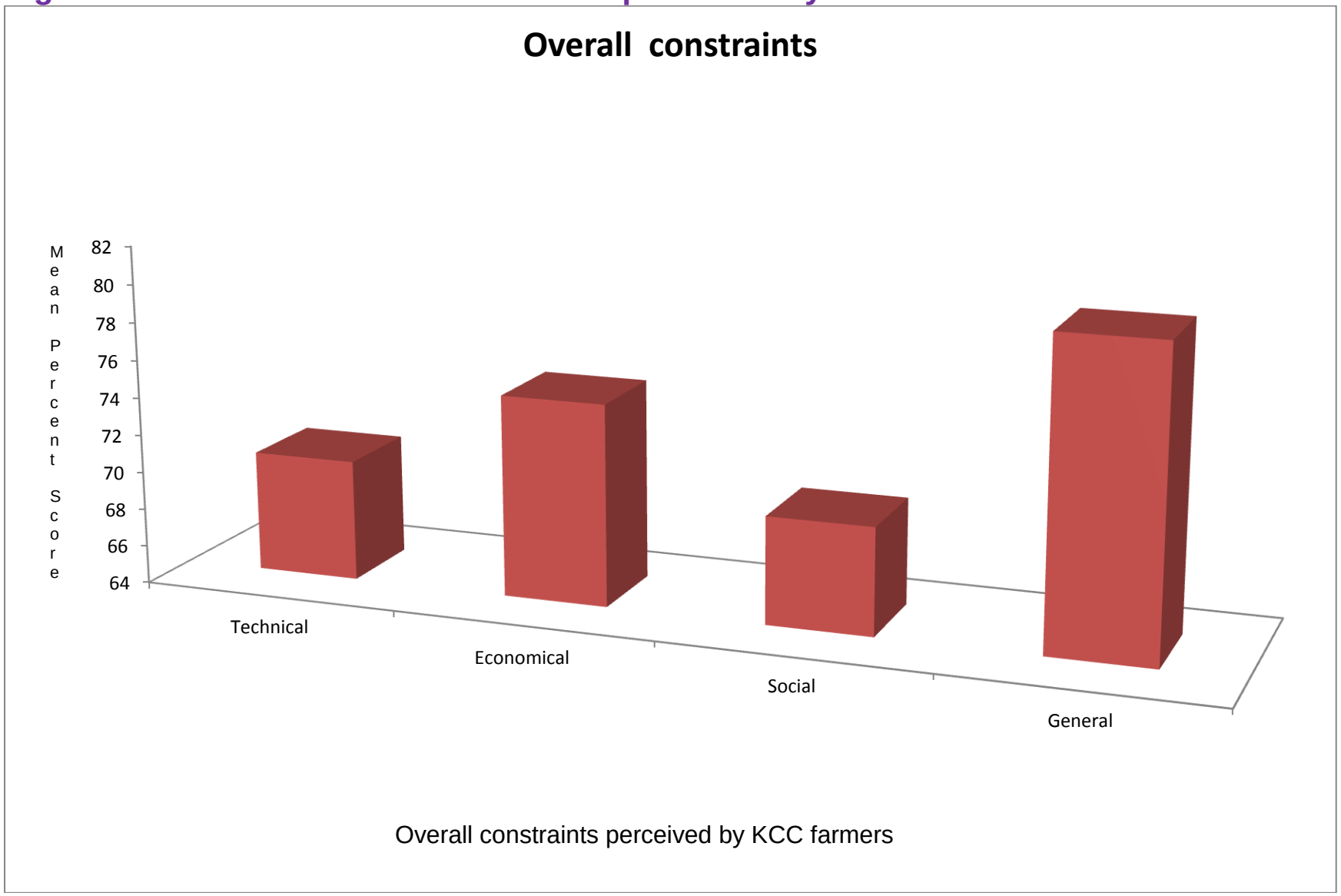


Fig.No.4.14 Level of overall constraints perceived by KCC farmers



Overall constraints perceived by KCC farmers

4.5.5 Level of overall constraints perceived by KCC farmers

To get an overview of the level of constraints, the constraints were divided into two categories. These categories were formed on the basis of calculated mean per cent score and rank given to the constraints by the respondents. The results of the same have been given in Table 4.5.V.

Table 4.5.V Overall constraints being faced by the KCC farmers

N = 75

S.No.	Constraints	MPS	Rank
1.	Technical	70.4	lll
2.	Economical	74.7	ll
3.	Social	69.7	lV
4.	General	80.2	l

MPS= Mean per cent score, figure within the parentheses are percentage to the total, n = total size of sample

Perusal data in table 4.5.V reveal that majority of respondents 80.2 MPS were having first rank in general constraints, while 74.7 MPS were have second rank in economical constraints.

Regarding of technical constraints the proportion of respondents recorded with 70.4 MPS were have third rank.

Table 4.5.V continually exposes the next and last major constraint that is social. Majority of the total respondents 69.7 MPS were have forth rank observed from most severe category.

5. SUMMARY AND CONCLUSION

The inferences of the present study “Impact of Kisan Credit Card (KCC) on socio-economic status of the farmers of Bikaner District, Rajasthan” are presented in the form of summary and conclusion in this chapter.

5.1 INTRODUCTION

Agriculture is the backbone of our economy. The share of agriculture is the Gross Domestic Product (GDP) is 14 percent which provides employment to nearly 66 percent of population in the country. Agricultural credit, Kisan Credit Card (KCC) is an instrument which played a very important role in development of agricultural sector. It enabled the farmer to go for short-term credit which is used by the famers for purchase of inputs and other services. Farmers prefer short-term loans and medium-term loans while some large farmers are used to long-term credit for completing their needs those are related to agricultural inputs, raw materials other agricultural allied activities also. The Green Revolution of Indian agriculture is a good example to a large extent which depends on financial institutions for the support to agricultural sector in terms of expansion in inputs like fertilizers, irrigation, pesticides, chemicals, capital, etc.

The KCC was started by the GOI in consultation with the RBI and NABARD in 1998-99.This was implemented throughout the country by public sector commercial banks, RRBs and cooperative banks. The target groups of beneficiaries for KCCs are all categories of farmers, vulnerable groups like defaulters- farmers, oral lessees, tenant farmers, share croppers and others who have been left outside the fold of KCC Schemes for any reasons etc.

The present KCC scheme aims at providing adequate and timely support from the banking system to the farmers for the short term cultivation needs for the cultivation of crops. The scheme avoids long time consuming process in securing the credits from the banks. The KCC emphasizes on insurance coverage and financial support to the farmers in the event of failure of crops due to any of the causes, to increase the

adoption of progressive farming practices to help farmers in stabilizing the farm income during disaster years and to support and stimulate production of food crops and oilseeds. There are a good number of attractive features of the present KCC scheme. There are very few studies that have been conducted by the researchers in order to ascertain its impact on the farmers.

With this backdrop, the present investigation titled “Impact of Kisan Credit Card (KCC) on socio-economic status of the farmers of Bikaner District, Rajasthan” was thought to be undertaken along with the specific objectives delineated here under.

5.2 SPECIFIC OBJECTIVES OF THE STUDY:

1. To study the personal profile and socio-economic status of the Beneficiaries & Non-Beneficiaries of KCC.

2. To find the awareness of the respondents about the KCC scheme.

3. To compare the productivity level of important crops between KCC holders & Non-KCC holders.

4. To find out the utilization pattern of the credit undertaken by KCC holders.

5. To identify the constraints being faced by the KCC farmers. It was found that local leader served as most important source of information followed by bank employees for better utilization of bank credit.

5.3 Research Methodology: -

(A) Selection of district

The present study was conducted in Bikaner district of Rajasthan. The Bikaner district was selected due to the following reasons i.e. no study had been designed and undertaken in Bikaner district of Rajasthan undertaken Impact of Kisan Credit Card

(KCC) on socio-economic status of the farmers under KCC scheme and the investigator studying in Bikaner District, which facilitated in collection of data using local dialect.

(B) Selection of Tehsil

Out of eight Tehsils viz., Bikaner, Lunkaransar, Sri Dungargarh, Nokha, Kolayat, Pugal, Chhatargarh, Khajuwala, Tehsil Bikaner were selected due to its maximum population.

(C) Selection of villages

Of one hundred and twenty seven villages in Bikaner Tehsil, ten villages Complete list of villages was prepaired with names along with their total population. The villages were arranged in descending order based on total population, first ten villages (Moondsar, Seethal, Bambloo, Gusainsar, Garhwala, Kanasar, Lalamdesar, Khara, Swaroopdesar based on highest population were drawn up and included for the investigation

(D) Selection of respondents

As many as 150 farmers (75 KCC holders and 75 Non-KCC holders) were selected from each of the selected villages through probability proportionate procedure (in case of KCC holders, and similar number of Non- KCC holders from each village).

5.4 CONSTRUCTION OF INTERVIEW SCHEDULE

The interview schedule comprising five parts (Appx. I) was constructed by the student researcher himself.

5.5 Collection of Data

A interview schedule consisting of measuring devices for dependent and independent variables along with face data of the respondent was developed for the

investigation purpose and was personally introduced to the respondents following the principles of interviewing.

5.6 Statistical Analysis of Data

The data so collected were tabulated and analyzed. Interpretations were drawn after subjecting the data to statistical analysis viz. mean, mean percentage score, standard deviation, 'z' test and t' test which led to the following findings.

5.7 MAJOR FINDINGS

The important findings emanated out of the study, have been presented under the following heads.

5.7.1 Personal profile of beneficiaries and non- beneficiaries under KCC.

- The majority of respondents belonged to the middle age group i.e. between 45-60 years, it was further found that 58.67 per cent KCC holders and 45.33 per cent Non-KCC holders belonged to the OBC category of caste.
- The majority of KCC holders were less than primary to middle followed by educated above up to primary and less than middle to 12^{th}. It was also found that

  53.33 per cent KCC holders and 38.67 per cent Non-KCC holders belonged to the big farm size (more than 4) land of land holding, 44.67 per cent of them belonged to medium (3-6 rs. lakh) annual income group, majority of KCC holders were 67.33 percent dairy/agriculture occupation.

- The majority of respondents belonged to the joint family 73.33 per cent followed by nuclear family 26.67 per cent, and the majority of respondents belonged to the more than 5 members 70.67 percent followed by up to 5 members 29.33 percent.
- Social participation among total 54.67 percent of farmers was negligible followed by being member of one organization, as expressed by 38.67 percent, economic motivation among the KCC holders was found to be comparatively higher than non- beneficiaries.

5.7.2 Awareness among KCC and non- KCC farmers about the Scheme.

- More number of total farmers reported from medium level of awareness with regards five components of the scheme, these were registration. Loaning, repaying, purpose of credit and consequences of defaulter, comparatively higher number of farmers of KCC were found to be more aware of the scheme.
- Detailed view of the findings revealed that KCC and Non-KCC holders were aware of consequences of defaulter, purpose of credit, necessity of copy of jamabandi, requirement of search report of patwari, credit limit under the card, rate of interest (3 to 13 per cent), limit of subsidy, purpose of credit and consequences of crossing time limit in repayment.
- The results of student 't'- test revealed highly significant difference between beneficiaries and non- beneficiaries in relation to five major components of KCC scheme (registration, loaning, repaying, purpose of credit and defaulter).

5.7.3 Comparison of the productivity level of important crops

- The results of 'z'- test revealed highly significant comparison of the productivity level between KCC and Non-KCC holders in relation to six major important crops of Kharif and Rabi season of KCC scheme (moth, groundnut, cluster bean, wheat, mustard and gram).

5.7.4 Utilization pattern of the credit undertaken by KCC holders

- It was found that 51 KCC holders out of total 75 KCC holders utilized the bank loan for which they applied, while 17 KCC holders utilized partially and 7 KCC holders did not utilize the loan for which they applied.
- It was observed that out of 75 KCC holders, 64 were interested to get the credit in the form of cash, 11 KCC holders in the form of both cash and kind while not a single KCC holders was interested to get the loan in the form of kind only.

- It was found that local leader served as most important source of information followed by bank employees for better utilization of bank credit.

5.7.5 CONSTRAINTS BEING FACED BY THE KCC FARMERS

- The general constraints in deriving the benefits of KCC were the major constraints as felt by 80.2 MPS of KCC holders followed by economical, technical and social constraints, particularly low knowledge of banking system, sub- division and fragmentation of landholding, illiteracy in the society and lengthy paper work were the severest constraints confronted by the KCC holders in having the benefits of the scheme.
- With regards to suggestions for making the KCC scheme more effective, it has been suggested that loan amount must be raised from 3 lakhs to 6 lakhs at 4 per cent rate of interest, facility of drawing cash at any branch in the district, the KCC must be provided to all the farmers, it must be 1st choice for small and marginal farmer and other scheme must be merged in KCC.
- As far as the future prospects of KCC was concerned, the KCC scheme would be 1st choice to the farmers in future time to come, subsidy, even the credit taken from private agency provided to the farmers, the loan amount will be raised from the existing amount, the other schemes would be merged in KCC in future, the present form of KCC would be converted into ATMs, the rate of interest under the scheme for small and marginal farmers would be comparatively low and there would be no need of guarantor to open the accounts in banks.

5.8 RECOMMENDATIONS

On the basis of finding of the present investigation the following recommendation are as summarized.

1. The most of the farmers fall into middle age group i.e 45 to 60 years. who have more than the primary to middle education status and having done income, poor social participation and not having technical knowledge about KCC. So it must be provided by the bankers to technical guidance and motivation for improvement

their agriculture and livelihood so the farmers involved in KCC and other such credit programmes.

2. Most of the farmers were having low knowledge about banking system, lack of awareness about the benefit of the scheme and farmers feeling the delay in loaning and insufficient credit limit. So it must be provided the proper knowledge about the banking system of KCC benefit scheme and loaning disbursement system should be easy and services should be fast through the banking system.
3. Awareness of farmers should be strengthened, loans be utilized only for productive purpose.
4. Co-operative farming should be encouraged by the farmers and money lenders must be removed as well as not should be any middle man between the farmers and bankers.
5. Proper contact of bankers with farmers and clearly define the objective of the KCC scheme. by the bankers for disbursement of loan so the farmers get enable to proper information of KCC scheme and the mind setup for proper utilization the loaning amount.
6. The bankers should be motivated to be equally flexible for all the customers either living in vicinity or far away from the branch.
7. All the farmers should be trained about the KCC scheme so that they can change the mind setup of the illiterate or non beneficiary farmers in the society they can strong contact with bank officers.
8. The bankers should be reduced the lengthy paper work and many typing formalities which the farmers feel difficult to provide them.
9. Irrigation facilities can be encouraged by the farmers to grow more valuable and commercial crops which will help in strengthening the repaying capacity.
10. Social constraints followed by general constraints being faced by the farmers in deriving the benefits of KCC are to be reduced.
11. Specific constraints to be minimized are:

(A) Technical constraints:

(i) Lack of knowledge about banking system.

(ii) Lack of motivation from officials.

(iii) Delay in loaning.

(B) Economical constraints:

(i) Fragmentation of land holdings.

(ii) High and exorbitant interest rate.

(iii) Uncertainty of repaying.

(C) Social constraints:

(i) Illiteracy in the society.

(ii) Poor contacts with officers.

(iii) Traditionalism in society.

(D) General constraints:

(i) Lengthy paper work.

(ii) Upgraded to an ATM Kisan Card.

(iii) Unavailability of communication network.

5.9 SUGGESTED FUTURE ASPECTS OF RESEARCH ABOUT KCC SCHEME:

Future research studies could be conducted on following possible areas or topics.

1. Similar study may be conducted on a larger scale covering 3-4 districts to facilitate more generalization about entire Rajasthan state..
2. A similar study can be conducted in tribal areas of Rajasthan.
3. Problems and prospects of KCC scheme at other places than Rajasthan state can be studied.

4. Participatory research about effectiveness of KCC for sustainable progress in agriculture.
5. The results of the present study were drawn on the basis of verbal response of respondents. Participatory investigation can be conducted, for verifying and better accuracy of results.

LITERATURE CITED

Abu, G. A. (2012), “Comparative productivity under special crop programme in Benue State, Nigeria: a case of participant and non-participant soybean growers”. *Journal of Cereals and Oilseeds,* 3(4):48-55.

Adinya, I. B., Idio, A. D. and Kuye, O. O. (2008). “Farmers Awareness of sources of credit for improved farm practices in Cross River State, Nigeria”. *Global Journal of Social Sciences,* **7**: 5-8.

Bashir, M. K. and Hassan,Yasir Mehmood Sarfraz (2010). “Impact of agricultural credit on productivity of wheat crop: evidence from Lahore, Punjab, Pakistan”.*Pakistan Journal of Agricultural Sciences,* 47(4):405-409.

Bevinahalli, A. (2005). A critical analysis of Swa-Shakti programme in Karnataka. M.Sc.(Agri.)Thesis submitted to University of Agricultural Sciences, Dharwad.

Bhagat, G.R.; Nain, M.S. and Narda, R. (2004). “Information sources for agricultural technology”. *Indian Journal of Extension Education,* 40 (1&2) : 111-112.

Bheemappa, (2006). A study on knowledge level of Gram panchayat members about Sampoorna Grameena Rozgar Yojana in Raichur district of Karnataka. M.Sc.(Agri.) Thesis submitted to University of Agricultural Sciences, Dharwad.

Bishnoi, Indira and Singh, Vibha (2007). “Awareness of DWCRA programme among rural women”. *International Journal of Rural Studies,*14(1):22-24.

Bortamuly D. and Khuhly B.L. (2013). “Constraints faced by Block Level Extension Functionaries in facilitating Commodity Interest Groups and Farm Schools under ATMA in NE Indian states”. *Journal of Academia and Industrial Research (JAIR)* 2(5):291-294.

Chandra V. (2005). Profile of sujala watershed project beneficiary farmers in Dharwad district. M.Sc.(Agri.) Thesis submitted to University of Agricultural Sciences, Dharwad.

Chavai, A.M. (2000). A comparative study of TRYSEM beneficiaries and non-beneficiaries in Kagal taluka of Kolhapur district. M.Sc.(Agri.) Thesis submitted to Mahatma Phule Krishi Vidyapeth, Rahuri, Maharashtra.

Das, R.M. (2004). Micro finance through SHGs: A boon for rural poor. Kurukshetra.52(4):25.

Desai, M. D., Biradar, N., Manjunath, L., Doddamani, M. T., Mulla, T. A. and Kataraki P.A. (2012). "Livelihood profile of farmers in western region of Maharashtra". *Karnataka Journal Agricultural Science,* Vol. 25(2):217-220.

Devalatha, C.M., (2005). Profile study of women SHGs in Gadag district of northern Karnataka.M.Sc.(Agri.) Thesis submitted to University of Agricultural Sciences, Dharwad.

Dhanabhakyam, M. and Malarvizhi, J. (2012). "A study on the awareness, utilization and problems of using Kisan Credit Card of canara bank [with special refrence to coimbatore district". *International journal of marketing, financial services & management research,* Vol.1(10):113-119.

Dolli, S. S., (2006). "Sustainability of natural resources management in watershed development in Karnataka". M.Sc.(Agri.) Thesis submitted to University of Agricultural Sciences, Dharwad.

Diagne, A. (2002). "Impact of access to credit on maize and tobacco productivity in Malawi". The triangle of microfinance: financial sustainability, outreach, and impact: 241-265.

Dubey, Y., (2006). Access to Kisan Credit Card in Uttar Pradesh by different social groups in different regions*. Indian Journal of Agricultural Economics* **53**: 386-87.

George, A. Rajkamal, P. J. Jiji, R. S. (2011). "Comparative analysis of the awareness of self help group members and non-members on the procedures of Panchayati Raj Institutions". *Journal of Indian Veterinary Association, Kerala (JIVA)* 9(3):15-18.

Garg, S. K. Badodiya, S. K. and Shakya, S. K. (2010). "Credit utilization through farmers' service society". *Annals of Biology,* 26(2):183-186.

Gunawardana, A.M.A.P.G. (2005). "Communication behaviour of farmers on improved farm practices on Udaipur district of Rajasthan". M.Sc. Thesis, MPUAT, Campus : Udaipur.

Jhajharia, A.K., Khan, I.M., Bangarva, G.S., Jhajharia, Santosh (2012). "Awarness of farmers about farm based radio and television programmes". *Raj. J. Extn. Edu,* 20 : 209-214.

Kannan Elumalai (2011). "Relationship between agricultural credit policy, credit disbursements and crop productivity: a study in Karnataka". *Indian Journal of Agricultural Economics,* 66(3):444-456.

Kaur, M. (2005). Impact of self help groups promoted by urmul Seemant Samiti, Bajju on rural women of Kolayat Block (Bikaner district). M.sc. Thesis (Unpublished), college of Home Science, Rau, Bikaner.

Khan, Aamir Riaz and Ahmad G.A. Munir (2012). "Utilization of agriculture credit by the farming community of Zarai Tariqiati Bank Limited (ZTBL) for agriculture development". *Pakistan Journal of Agricultural Sciences,* 49(4):557-560.

Khodke, M.V., Deshmukh N.D. and Mane N.B., (2010). "Determinants of farm credits utilization by farmers*". Agriculture Update,* 5:303-305.

Kumar, Suresh, Kumar Sunil and Kumar Prem (2013). “Role of income in determining the awareness level about welfare schemes among backward classes: a study of rural Haryana.”. *Review of Research Journal,* 2(9): 333.

Kumar , R. K. and Kapoor A. K. (2007). “Development programme and social change among the parhaiyas of latearhr district, Jharkhand”. *South Asian , Anthropologist .* Vol. 7(2): 125-128

Kumar, Anuj, Chand, Ram, Singh, Randhir and Yadav, V. K., (2007), “Impact of TAR-IVLP on Crop Cultivation”. *Indian Res*. *J*. *Ext*. *Edu*, 7 (2&3) : 1-5.

Lal, Hanumanram., Neeta and Badhala, B.S. (2011). “ Awareness of respondents about Swarnjayanti Gram Swarozgar Yojana”. 6th National Extension Education Congress 168.

Lalrinlienna, J. and Kanagaraj, E. (2005). SHGs and tribal development in Mizoram. Kurukhetra,54(3): 37-40.

Meena, S. S. and Reddy, G. P. (2013). “A study on growth, performance and impact of Kisan Credit Cards on farmer's income in Rajasthan - an economic approach”. *Journal of Research ANGRAU,* 41(3): 75-81.

Mehrotra, S. and Mathur, S. (2006). Growth of institutional credit. Kurukshetra, 54(11): 23-24.

Mishra, R. K. and Samant, V. D. (2006). “Utilisation and efficiency of credit in agriculture in Banki block of Cuttack District”. *Indian Cooperative Review,* 43(3):589-603.

Mohan,R. (2006). Agricultural credit in India: status, issues and future agenda, Financing Agric. 3-16.

Mohindra Versha and Kaur Gain (2012). “Total factor productivity of Regional Rural Banks in India: a Malmquist approach”. *Commerce and Managemen*, 1(3):75-86.

Oleaker, Ramesh. O. (2012). “Effectiveness of Kisan Credit Card Scheme in Karnatak state”. *International Journal of Research in Commerce, IT & Management,* Vol. 2(7): 104-109.

Olagunju, F. I. and Adeyemo, R. (2007). “Agricultural credit and production efficiency of small-scale farmers in south-eastern Nigeria”. *Agricultural Journal,* 2(3):426-433.

Orebiyi, J. S. Eze, C. C. Henri-Ukoha, A. Akubude, F. C. Ben-Chendo, N. G. and Ibitoye, S. J. (2012). “Utilization and determinants of institutional credit of the NACRDB by small scale farmers in Imo State, Nigeria”. *Agricultural Journal,* 2012. 7(5):360-364.

Orebiyi, J. S. (2004). “Credit procurement and utilization by rural farmers from selected rural creditinstitutions in Imo State, Nigeria”. *International Journal of Agriculture and Rural Development,* 5:156-163.

Parwate, Pramod., Sharma, M.L. and Maske Mahesh (2012). “A study on utilization pattern of Kisan Credit Card (KCC) among the farmers in Raipur district of Chhattisgarh”. *International Journal of Agronomy and Plant Production,* . 3(2):54-58.

Prakash, Arul, (2004). Analysis of Swarnajayanti Gram Swarozgar Yojana in Salem and Thiruvallur district of Tamil Nadu. M.Sc.(Agri.) Thesis submitted to University of Agricultural Sciences, Dharwad.

Prasad, S.P. (2003). KCC Vs ATM, *State Bank of India* - Monthly Review **42**: 489-96.

Prasad, T.S. (2003). Regional rural bank performance evaluation. Kurukshetra, 52(3):19.

Rai, Rajesh and Rai j. (2012). “Studies on the importance of credit for development of socio-economic status of borrowers in district Jaunpur (U.P.)”. *Agriculture Update*, Vol. 7 (3&4): 330-333.

Rai, R. K. and Singh, S. K. (2012). “Impact of diversification on income and employment of self-help groups through micro-credit”. *International Journal of Commerce and Business Management,* 5(1): 58-63.

Raj, R. K., Pradhan, B. B., Manty, S. K. and Badana, T. (2010). “Constraints of the farmers in cultivation of hybrid rice oryza”. *Indian Research Journal of Extension Education,* Vol. 47(4): 324-327.

Rawat, R., Tewari, S.K., and Shukla, A.N. (2009). “Awareness of institutional credit and insuranceNprogrammes in Uttarakhand”. *Pantnagar Journal of Research*, **7**: 1-6.

Sahu, B. P. Chaturvedi, M. K. and Yadaw, K. N. (2012). “Analysis of socio-economic profile of the ATMA beneficiaries of Chhattisgarh”. *Journal of Plant Development Sciences,* 4(2):207-213.

Sajane, A. M. Basavaraja, H. Guledgudda, S. S. Patil, B. L. Mahajanashetty, S. B. and Bhat, A.R.S. (2011). “Economic evaluation of kisan credit card scheme”. *Karnataka Journal of Agricultural Sciences,* 24(2):173-176.

Samantara, Samir (2010), Kisan credit card - a study. National Bank for Agriculture and Rural Development, Mumbai (52):xv + 64 pp.

Sandesh, H.M., (2004). Conducted study on a profile study of Kannada farm magazine readers participation farmers of the watershed development programme in Raichur district project. Ph.D. Thesis submitted to University of Agricultural Sciences, Dharwad.

Sangappa, Sameer.,V.M. and Balaganurmath, Laxmi, B. (2011). “ Farmers Awareness about Kisan Call Centre”. 6th National Extension Education Congress 235.

Shah, M. M. I. Nayan, Z.and Alam, M. I. (2008). “Credit utilization behaviour of the women beneficiaries of Bangladesh rural development board”. Annals of Bangladesh Agriculture, 12(2):19-25.

Sharma, Pramod Parwate and Maske M. L. Mahesh (2012). “A study on utilization pattern of Kisan Credit Card (KCC) among the farmers in Raipur district of Chhattisgarh”. *International Journal of Agronomy and Plant Production,* 3(2):54-58.

Sharma, N. and Singh, K. (2003). Improved farm Implements for Reducing Drudgery of Women in Agriculture Activities. Abstracts of Research Papers: National Seminar on *“Extension Strategy for Promoting Development Initiatives Among farming Community”* June 18-20, Organized by ISEE, at GBPUA&T Pantnagar (UP).

Shashidhara, K. K. (2003). A study on socio-economic profile of drip irrigation farmers in Shimoga and Davanegere districts of Karnataka. M.Sc.(Agri.) Thesis submitted to University of Agricultural Sciences, Dharwad.

Shukla, A. N. Tewari, S. K. and Dubey, P. P. (2010). “Agricultural credit recovery performance of scheduled commercial banks”. *Agricultural Science Digest*, 30(2):85-89.

Sidhu, R.S. and Gill, S. (2006). Agricultural credit and indebtedness in India: some issues, *Indian Journal of Agriculture Economics* **61**: 11-35.

Singh, K.M., Meena, S.N. and Jha. A.K. (2009). “Impact Assessment of Agricultural Extension Refoms in Bihar”. *Indian Research Journal of Extension Education*, 9.110-114.

Singh, S. K. (2009). “Pattern of utilization of institutional credit in agriculture an analysis”. *Economic Affairs (Calcutta);* 2009. 54(3/4):113-117.

Singh, A. Selchan, S. and Singh, D (2008). “Income generation through Self Help Groups”. *Indian Journal of Social Research,* Vol.49(2):209-210.

Singh, Anjani Kumar and Kumar D.K. Prabhat (2007). “Performance of rural credit and factors affecting the choice of credit sources*”. Indian Journal of Agricultural Economics,* 62(3):297-313.

Singh, P. (2005). “Sampooran Gramin Rozgar Yojna and Employment Generation”. An assessment, Kurukshetrsa , Vol. 3(10): 17-20.

Sonkamble, B.J. (2000). A study of beneficiaries under Integrated Rural Development

Programme from Maval taluka of Pune district. M.Sc.(Agri.) Thesis submitted to Mahatma Phule Krishi Vidyapeeth,Rahuri.

Thakur, A. and Barman, U. (2013). “Reasons for poor performance of disbursement of Kishan Credit Card and recovery of loan under the scheme in Assam-A qualitative study”. *Journal of academia and Industrial Research (JAIR),* 2(1): 16- 20.

Vanichetan, K. and Shivamurthy, M., (2002). Impact of SGSY on women beneficiaries, In Souvenir and Abstracts, National Seminar on *contemporary challenges for Indian Agriculture and Rural Development*, University of Agricultural Sciences Dharwad.

Vimalraj, G. (2010), “An analytical study of best practices and competencies of award winning agripreneurs of Tamil Nadu”. M. Sc. (Agri.) Thesis, IARI, New Delhi.

Wadiwale, S.M. (2004). Slum, Women empowerment by saving credit programme, *Social Welfare,* 57(5):31-35.

Wagh, V. S. Mokhale, S. U. Deshmukh, A. N. and Wadar, A. Y. (2011). “A study on information sources utilized by cotton growers”. *Agriculture Update*, 6(3/4):118-121.

Yadav, B.C. (2006). “A study on knowledge and adoption of improved production technology of mandarin by the farmers in Jhalrapatan panchayat samiti of Jhalawar district of Rajasthan”. M.Sc. (Ag.) Thesis, Rajasthan Agricultural University, Bikaner, Campus-Jobner.

Yadav, Chaturbhuj., Punjabi, N.K., Sharma, F.L., and Samota, Santosh devi. (2011). “Awareness of farmers about modern communication media in Udaipur District of Rajasthan”. *Raj. J. Extn. Edu.,* 19: 90-93.

Yasir Mehmood Mukhtar Ahmad Anjum, M. B. (2012). “Factors affecting delay in repayments of agricultural credit; a case study of district Kasur of Punjab province”. World Applied Sciences Journal, 2012. 17(4): 447-451.