Chapter 10
Summary, Conclusion, Limitation and Recommendations

10.1 Summary
There is growing recognition in India in general and Maharashtra in particular of the significant effect of the crop loan on the production, income and standard of living of the farmers. The central point of this thesis is that Crop loan is an integral part of the Annual Credit Plan of the District, and therefore the purpose of this study is to explore the Economic impacts of Crop loan on the area, yield, production, export, income and standard of living of the farmers in Pune District.

To fulfill the objective of the study empirical study was carried out with the help of structured questionnaire survey on the farmers in Pune District.

The researcher’s, review of the literature highlights the importance of Crop loan.

10.2 Research Proposal
The proposal of this thesis is to study the effect of, Crop loan on Area cultivated, Yield, production, export of cash crops like Sugarcane, Grapes, Tomato, Potato and Onion, and non cash crop like Rice by the farmers in Pune District.

As Crop loan has a budgetary provision, in the Annual Credit Plan of the Pune District, the researcher decided to study its evaluation, for the period 2003-2004 to 2007-2008.

The subject of Crop loan caught my attention and interest because for past 20 years I have being teaching the paper of Indian Economy in general and Agriculture Economics in particular, apart from this my father is a farmer and I have seen the difficulties he faced in getting loan for cultivation, and the agony he had to undergo when there was crop failure due to natural calamity
The principle objective of this study, is to find out whether the borrower farmer has benefitted more than the non borrower farmer in terms of increase in area, yield, production and export, from the crop loan, given by Pune District Central Co-operative Bank, from 2003-04 to 2007-08..

Generally, the credit needs of the farmers fall into three categories namely, the short term loans, medium term loans, and long term loans. **The short term loans also called as Crop Loan are for a period of one year**, they are taken for purchase of seeds. Fertilizers, to pay labour etc. They are repaid after the harvest. The Medium term loans are for a period of three to five years. They are taken for deepening of wells, sinking of new wells, installation of pump sets etc. The Long term loans are for a period of more than five years they are taken for digging well, purchase of tractor purchase of costly machinery including oil engines, electrical motors and pump sets etc. The short term and medium term credit needs are at present met by the Cooperative Credit Structure consisting of the State Cooperative Bank at the (State) Apex level, Central Cooperative Banks at the District level, and Primary Agriculture Credit Societies covering a group of villages at the base. The Long term credit dispensed by the State/Central Land Development Banks through their branches or through Primary Land Development Banks at the District or Taluka level. It is essential that the lending policies of these institutions are designed to help the farmers to increase their production, income and standard of living. Of these three types, in a developing economy, like India, majority of the marginal and small farmers require short term loans because they do not have adequate funds to finance agriculture activity.

It must be noted that Agricultural development programmes, cannot be successful unless the farmers are provided, “Adequate” and “Timely” and “Cheap” credit for their current production and family living expenses. It was realized that the cooperative framework offers the best means of placing agricultural credit on sound footing and that governments must assume major responsibility for provision of funds. Credit was to be given to cultivators on the basis of their “production-worthiness” rather than “Asset-worthiness”. In other words, the system aimed to change the very basis on which agricultural credit could be advanced to cultivators.
Agriculture Credit is considered as one of the important instruments to bring about desired change in productivity and income of the farmer. At the grass root level the cooperative form of organization is regarded as the most ideal agency for providing credit to the farmers. In the present study attempt is made to critically evaluate the implementation of the Crop Loan and Crop Insurance policy in Pune District, which has a strong Central Cooperative Bank, with many viable Primary Societies operating in diverse agro-climatic zones with distinct crop patterns.

According to the “All India Rural Credit Survey Committee “in 1951 the Institutional sources accounted for only 7.3% of total credit given to farmers. If the farmer was to be removed from the “Vicious Circle” of Poverty, low income, low saving, low capital, low productivities consequently low income, then he must be provided with Adequate, Timely, and Cheap credit. This can be done by the Institutional source, particularly, cooperative organization, because it involves the very people (farmers for whom the programme is intended). Strengthening of cooperative credit structure is necessary, because, Cooperative credit institutions play crucial role in meeting the agricultural credit requirement because of their deep penetration into the rural belt. With the advent of the crop loan system in the district, there has been unprecedented expansion of Agricultural credit provided by cooperative societies. It has resulted in an exclusive emphasis on the requirements of production credit and benefitted mostly those classes whose requirements of this type of credit are relatively high. It has given impetus to enterprising agriculturists to take to intensive cultivation and get higher yields. Since adequate, timely and cheap crop loan is given to all types of farmers, it has reduced the importance of moneylenders. Crop loan system has widened the coverage of cooperative credit, because it is provided not only to owner cultivators, but also to tenants, because it is provided not on the basis of Assets, but on the production of a crop.

Under the crop loan system the loan policy has been production oriented. As a result of the change in the agricultural loan policy, the agriculturists have the incentive and the means of increasing their outlay on production and get better results. Following the adoption of the crop loan system under which
irrigated and commercial crops have received substantial financial help, agriculturists have taken increasingly to crops like Sugarcane, Grapes and Vegetables like Tomato, Onion, and Potato in Pune District. Area under these crops has increased and the yield per acre has shown significant improvement in most areas in which these crops are raised. This has been proved by the finding of the Sample Survey, as shown in Chapter 8. This has helped to improve the economic conditions of farmers. On an overall assessment, there is every reason to be optimistic about the prospects of cooperative agricultural credit in the district and its potential contribution to increased agricultural production and rural prosperity. It can reasonably be expected that cooperative credit societies will be able to meet the growing needs of agricultural economy of the district.

10.3 The Crop loan System

Under the crop loan system, the credit requirement of a farmer are determined on the basis of “Per acre Scale of finance” for each crop grown in the field. This is done by the “Technical Committee” appointed by the District Central Cooperative Bank. This Thesis seeks to do an analysis of the performance of Pune District Central Cooperative Bank in Implementing the Crop Loan Scheme, and Crop Insurance Policy, from 2003-2004 to 2007-2008.

The Cooperative banks with their rural ethos and large network are, without doubt the best agencies for dispensation of short term agricultural credit. Recognizing their important role, a lion’s share in disbursement of crop loans has been allocated to the Pune District Central Cooperative Bank in the “Annual Credit Plan” of Pune District.

The performance of the Pune District Central Cooperative Bank in distributing crop loans is praiseworthy. During 2003-04, the Pune District Central Cooperative Bank (PDCC) had issued crop loans to the extent of Rs. 233.1 crore which was 69.17% of the Crop Loan given by all the financial institutions, it increased to Rs 479 crore in 2007-08. Compared to this, crop loans issued by the scheduled Commercial banks during 2003-04 was only Rs. 103.9 crore which was 30.83% of the Crop Loan given by all the financial institutions, it increased to Rs 357 crore in 2007-08.
10.4 Objectives of the Study

The main objectives of the study were to

1. Get a picture of the progress of the Crop Loan and Crop Insurance Policy and deficiencies if any in its implementation. The researcher will try to find out how many farmers are taking Crop Loan and Crop Insurance Policy from Pune District Central Co-operative Bank. What is happening to it from 2003-04 to 2007-08. In other words, to analyse the growth pattern of Number of borrowers, Area under cultivation, Amount distributed, for different crops during Kharif and Rabi Season, in Pune District from 2003-04 to 2007-08.

2. Which are the crops for which Crop Loan is given by Pune District Central Co-operative Bank, and the Crops for which Crop Insurance is taken.

3. Which crop is prominent in the Crop Loan and Crop Insurance. To study the variations in Crop Loan, for different Crops from 2003-04 to 2007-08 in Pune District.

4. To study the variations in Crop Insurance, from 2003-04 to 2007-08 between different Crops in Pune District

5. To study the procedures of Crop Loan, including preparation of Normal Credit Limit Statement (NCL).

6. To show how Crop Loan has benefitted the borrower, to increase their area, yield, output and export, compared to non borrower farmer from the same Primary Agriculture Credit Society

In other words the objective of this study was to examine critically the working, progress, and performance of Crop Loan and Crop Insurance Scheme in Pune District, and in light of empirical data suggest ways and means for more effective implementation of the scheme so as to fulfill its social and economic objective.
10.5 Need for the present study and scope of the study

Pune is an important District of Maharashtra, both in terms of, total geographical area and Population. The total geographical area of Pune District is 15642 sq Kms, which is 5% of the total geographical area of Maharashtra, and according to Census of 2001, the total Population of Pune District is 72.33 lakhs, which is 7.5% of the population of Maharashtra. The Net area cultivated was 1021583 hectares, double cropped area was 181165 hectares and the Gross cropped area was 1202748 hectares. It has 14 Talukas and 1866 villages. Even though it is considered as a progressive district, industrially, from the point of agriculture, there is need to take appropriate steps for its rapid progress. The soil, topography, rainfall and climate in Pune District, in general, are not very conducive to agriculture, leading to low yields of crops.

1. Low irrigation facility has been one of the serious problems of the District. About 83% of cultivated area is under rain fed condition.

2. Due to low irrigation facility, the productivity of most of the crops is low, resulting in low income and low standard of living of the farmers.

Hence the present study tries to examine the growth in the important crops of Pune District from 2003-04 to 2007-08, particularly the effect due to Crop Loan One of the major aims of our agricultural Policy is to achieve a rapid increase in agricultural production. This necessitates the large scale use of High Yield Variety of Seeds, Fertilizers, Insecticides, Pesticides, Along with rural infrastructure and Institutional Credit. The New technology is productive and at the same time very costly and the crop loans serve as short term production credit to meet the expenses on account of improved technological inputs. The present study is an attempt to analyze the nature and working of crop loan system and its contribution to agricultural development in Pune District. Certain aspects like procedure followed by Pune district Central Cooperative Bank for determining the amount of Crop Loan, has the Crop Loan benefitted the borrowers of Crop Loan from PACS, which crops have got more proportion of Crop Loans, reference has also been made to the “Crop Insurance Scheme” How many farmers have taken it, for which crop is it prominent. The study relates to the period 2003-04 to 2007-08.
10.6 Hypotheses

1. The Pune District Central Cooperative Bank, through Primary Agriculture Credit Societies, has given crop loan to large number of farmers, but there is still scope to cover more number of farmers.
2. Demand for Crop Loan is more in the Kharif Season compared to Rabi Season.
3. Crop loan has increased the area, productivity and production of large number of Cash crops.
4. The surplus generated of cash crops like grapes, potato, onion, tomato and sugar has increased the exports of them.
5. Crop Insurance Policy exists only for some crops and is taken only by some non borrowing members.

10.7 Methodology and Sources of data

The methodology adopted, was using the secondary data given by PDCC, and the literature on the topic, the sample survey (primary data) was conducted to validate the results from the survey.

The study has been carried out in two parts,

1. Part A. This part that deals with the survey of secondary literature.
2. Part B. This part that deals with the results of the field survey.

Part A. The secondary data is based on the reports, data from different sources like Annual Credit plan, of the Pune district, Socio-economic Abstract of Pune District, Annual reports of PDCC, Annual reports of selected PACS, books, reports, Articles in Journals relating to Crop Loan and Crop Insurance.

Part B. Field investigations for collecting the primary data for this study, three different regions (Bagayat, Jirayat and Hilly Talukas) representing diverse agro climatic zones of Pune District were selected. Since Pune District Central Cooperative Banks gives Crop Loan for Sugarcane, Rice, Tomato, Onion, Potato, Groundnut, Grapes and Bajra, the sample was chosen for these crops (except for Bajra, for which crop loan is very negligible) by finding out the
places which has more area under these crops. Accordingly, the following talukas (and the places from them) were short listed

1. For Sugarcane (Indapur and Baramati taluka)
2. For Tomato, Otur (from Junnar taluka)
3. For Grapes, Narayangaon (from Junnar taluka)
4. For Potato, Peth (from Ambegaon taluka)
5. For Onion, Bhaul (from Khed taluka)
6. For Groundnut, Khed (from Khed taluka)
7. For Rice, Paud (from Mulsi taluka)

Two societies from each of the above places were selected. From each society 30 borrower members and 10 non borrower members, comprising Small farmers and large farmers were selected on random basis.

The primary survey was based on information obtained from a total of 640 individual farmers, for seven different crops.

1. **The Bagayat region** (consisting of Indapur, Baramati and Daund taluka). It has large area under irrigation, and is suitable for the production of sugarcane, grapes, and onion. The sample survey was done of two societies from Indapur and two societies from Baramati, for sugarcane.

2. **The Jirayat region** (consisting of Junnar, Ambegaon, Khed, Shirur, Purander Talukas). This region is suitable for the production of onion, potato, tomato, grapes, groundnut and rice. The sample survey was done of two societies from Otur, for tomato (in Junnar Taluka), two societies from Narayangaon, for grapes (from Junnar Taluka) two societies from Khed, for groundnut (Khed taluka) two societies from Bhaul, for onion (Khed taluka) and two societies from Peth, for potato (Ambegaon Taluka) for the purpose of study.

3. **The Hilly region** (consisting of Maval, Bhor and Velhe Talukas). These areas have a very high attitude, (500 to 1000 meters), rocky and undulated terrain, heavy rainfall and red soil, as well as humid and temperate climate. The area under irrigation is very less. This region is suitable for the cultivation of rice. The sample survey was done of two societies from Paud in Mulsi Taluka.

578
The survey with the help of questionnaire tried to collect data relating to, the profile of the respondent farmers, the education status, the size of land holding, the sources of irrigation, whether there is increase in Area under cultivation, Yield, Production, increase in exports, change in cropping pattern etc. It deals with the membership of the societies, credit disbursement to, small farmers and large farmers. The findings of the survey relates to impact of crop loan on the cropping pattern, change in area cultivated, yield, production, export of borrower farmer and compares it with non borrower farmer.

The conclusion of this study may be stated under following heads
1) Conclusion from the survey of existing literature
2) The main observations based on the analysis of data collected through field survey
3) Principal finding of the study
4) Limitation of the study
5) Suggestion of the future study

The review of the evolution of agriculture development strategies during the plan period reveals some significant paradigm shifts. The first Green Revolution gave a “U” turn to the Indian economy, that is, from a net importer, India became self sufficient, and was capable of generating some surplus for export. This was made possible, by use of HYV seeds, subsidized fertilizers, large scale irrigation, subsidized credit, administered price etc.

The emphasis on diversification, from food crops to non food crops, was initiated in 1980’s. Due to which there is increase in the production of cash crops like sugarcane, vegetables like tomatoes, onions and fruits like grapes, in Pune District. This has not only increased the productivity of them, but generated surplus for exports. In other words, from 8th five year plan, emphasis has been on horticulture (fruits and vegetables) for employment generation, increase in income and generating foreign exchange. The diverse agro climatic-conditions, soils in different region of Pune District are suitable for these Crops. Secondly, due to higher growth rate of the economy, there was change in consumption pattern, that is, there was increase in demand for fruits and vegetables, and hence the recent agriculture development strategies, emphasis, increasing production of these commodities. Thirdly
sugar, fruits (grapes) and vegetables (onion, tomato and potato) have been identified in the category of nontraditional exports, as having significant export earning potential. However, necessary steps must be taken in quality control, post harvest technology, storing processing, cold storage etc. The literature on agricultural diversification, have stated that diversification in horticulture, would not only help to generate employment, but increase the exports, and income of the farmers.

10.8 Main observations based on the analysis of data collective through field study

Chapter 8 is devoted to the findings of the sample survey. The sample survey was conducted for seven crops, namely sugarcane, tomato, potato, onion, rice, groundnuts and grapes for which Pune district Central Co-operative bank gives crop loan, two societies for each crop were selected, from each society, 15 small borrower farmers, 5 small non borrower farmers, 15 large borrower farmers, 5 large non borrower farmers, were selected for the survey. Thus totally 640 farmers were interviewed with the questionnaire; similarly, the secretaries of the Primary Agriculture Credit Society were interviewed, to collect the data.

The objective of the study, as mention at the outset, was to examine, whether, and to what extent, does Crop Loan help to increase, the Area, Yield, Production, Export and the income of the farmer, and foreign exchange for the country, and compare it with the non borrower farmer, in order to explain how Crop Loan is beneficial to the farmer not only to safe guard him from the exploitation of the money lender but also to improve his standard of living ,apart from benefitting the country to be self sufficient in agriculture goods, apart from earning foreign exchange from export of agriculture goods like grapes, tomato, potato, onion and sugar. .It is due to this reason efforts must be made to increase the number of farmers to become members of the Primary Agriculture Credit Society, and give Crop Loan to large number of farmers.
1. The credit policy has tried, to bring more farmers under PACS, and to give more credit to the farmers. The secondary data of PDCC has stated that, there is increase in the number of members of PACS and the amount of credit given to them. This was proved by the primary data from sample survey.

2. Because of diversification it was found that there was increase in the area, yield and production of cash crops. This has been proved both by the secondary data provided by PDCC as well as by the Primary data from sample survey.

3. However there was decrease in area of sugarcane & groundnut. This has been proved by the secondary data provided by PDCC.

4. Tomato has emerged as the crop getting highest crop loan followed by Sugarcane. This has been stated by the secondary data provided by PDCC. This was proved by the primary data from sample survey

5. There is increase in exports of grapes, tomatoes, potatoes and onions. This has been proved by the Primary data.

6. Rice is used mainly for self consumption and some quantity is sold in local market.

7. None of the borrower farmers are taking crop insurance policy. This has been proved both by the secondary data provided by PDCC as well as by the Primary data.
10.9 **The conclusions drawn from this research (Thesis)**

1. A very high percentage of farmers taking crop loan have understood the vital importance of crop loan. At the headline level, the research hypotheses have been proven because of the strong positive feedback from the respondents to the survey questionnaire.

2. Of the total sample, 65.86% of Small farmers had taken Crop Loan from PDCC Bank.

3. Of the total number of farmers 70.0% of Small farmers, have taken crop loan during the Kharif season and 30.0% of the farmers have taken crop loan during the Rabi season. The highest percentage of farmers taking Crop Loan in Kharif is in case of Groundnut Crop, followed by Rice Crop, tomato accounting for low percentage.

4. In case of large farmers, 67.9% of the farmers have taken crop loan during the Kharif season and 32.1% of the farmers have taken crop loan during the Rabi season.

5. Of the total number of Small borrower farmers 55.4% of farmers, have increased the area, (mainly under cash crop) and 44.6% of the farmers have not increased the area. However in case of Rice Crop and Groundnut Crop the increase in area is 33.3% and 30% respectively.

6. Of the total number of Small non borrowing farmers 26.3% of farmers, have increased the area, (mainly under cash crop) and 73.8% of the farmers have not increased the area. However in case of Groundnut Crop the increase in area was 10%.

7. Of the total number of large borrower farmers 59.2% of the farmers have increased the area under cash crop and 40.8% of the farmers have not increased the area under cash crop, however in case of Rice Crop and Groundnut Crop the increase in area was 40% and 36.67% respectively.
8. In case of Large Non borrower farmers, 23.8% of the farmers have increased the area under cash crop and 76.2% of the farmers have not increased the area under cash crop.

9. When we compare between the borrower farmer and non borrower farmer we find that the increase in the Area of the borrower farmers is more than the non borrower farmers, this was possible because of Crop Loan.

10. Of the total sample, of the Small Borrower farmers, 53.8% said that their Yield has increased, and 46.3% said that their Yield has not increased.

11. Of the total sample, of the Small Non Borrower farmers, 23.8% said that their Yield has increased, and 76.3% said that their Yield has not increased.

12. Of the total sample, of the Large Borrower farmers 55.4% said that their Yield has increased, and 44.6% said that their Yield has not increased.

13. Of the total sample, of the Large Non Borrower farmers 28.8% said that their Yield has increased, and 71.3% said that their Yield has not increased.

14. Of the total sample, of the Small Borrower farmers 55.4% said that their Production has increased, and 44.6% said that their Production has not increased.

15. Of the total sample, of the Small Non Borrower farmers 30% said that their Production has increased, and 70% said that their Production has not increased.

16. Of the total sample, of the Large Borrower farmers 55.8% said that their Production has increased, and 44.2% said that their Production has not increased.
17. Of the total sample, of the Large Non Borrower farmers 31.3% said that their Production has increased, and 68.7% said that their Production has not increased.

18. The main crops which are exported are Grapes, Onion, Potato, Tomato and Sugar through the Sugar factory.

19. Largest export is made of Grapes the export of Sugar through the Sugar Factory is also large.

20. Among the exported products highest increase in exports is of Grapes followed by Tomato, Onion, and Potato respectively.

21. Even though both the borrower as well as non borrower farmer exports, the increase in exports of borrower farmers is more than the non borrower farmer not only, because of increase in production the surplus generated for export is more but also because they are motivated by large profit earned from exports.

22. The cropping pattern of borrower farmers have changed more compared to non borrower farmers. This is because the borrower farmer with the help of Crop Loan are able to modernize Agriculture by using inputs like HYV Seeds, more fertilizers, pesticides and irrigation.

None of the Small and large borrower farmers have taken Crop Insurance Policy because during the period of study (2003-04 to 2007-08) the Crop Insurance Policy did not exist for Crops like Sugarcane, Potato, Grapes, and Tomato for which crop loan is given by PDCC.. Secondly, since Rabi 2006, the Crop Insurance Policy has been made optional for borrower farmer, since then only some of the Small & large non borrower farmer are taking Crop Insurance Policy for Crops like Rice, Onion and Groundnut.
Summation of Hypothesis Testing

1. The five hypothesis postulated in this research thesis have been proved, both by calculated percentage responses from 640 respondents as well as by Statistical tools-95% Confidence level for all categories for all the questions relating to the hypothesis, and also by computed values of Chi-square and its comparison with the Critical Chi-square values for alpha= 0.05 for each category for a given degree of freedom and P values.

From the foregoing analysis, based on the responses of the borrower and non-borrower farmers from sample survey, it is clear that Crop loan has benefited the borrowing farmers to increase their Area, Yield, production exports, and hence efforts must be made to encourage more farmers to take Crop loan. In other words, most of these changes in the outlook of the borrower farmers towards agriculture would not have taken place but for the active role played by the Pune District Central Cooperative Bank in providing agricultural finance, particularly, Crop Loan.

Since the Cooperative Banks can play an important role in building a strong rural economy, it is necessary that concentrated efforts are made to gain peoples participations in the Cooperative Banks. People’s participation can come only through the gradual development of their faith in the cooperative principles and the ability of the principles to assist in solving the local economy problems. But what is needed is to encourage the right sort of leadership among the people themselves and improve the existing popular institutions. Reliance on government assistance may even though be necessary in the initial stages of the development of the movement; ultimately it is the people’s voluntary participation which alone can ensure its durable success.

Thus, though Co-operative credit played a significant role in improving the socio-economic conditions of farmers, much is yet desired to be done qualitatively as well as quantitatively. It must be remembered that Credit disbursement is not an end itself, it is only a means. Instead of loading the rural households with debt burden, the objective of lending agencies should
be to ensure that credit generated additional income, enabling borrowers to repay loans and improving their living conditions. The output of this research can be extrapolated to represent a pan-Indian or Maharashtra view of Crop loan as long as the comparison is with the similar type of cash crops and between borrowing and non-borrowing farmers.

The essence of cooperation is that “Each shall work for All and All for Each” in the attainment of common good

10.10 Suggestions / Recommendations

Based on the findings of the thesis following suggestions can be made

1. More farmers must be encouraged to take crop loan from PDCC. This can be done by encouraging more number of farmers to become members of the Primary Agriculture Credit Society.

2. Even though more farmers are taking loan in Kharif season, and less in Rabi season, steps must be taken to encourage more farmers to take loan both in Kharif and Rabi season, particularly in Rabi Season.

3. Even though the yield has increased there is scope for further increase, by reducing the gap that exists between the potential and the actual yield, this is necessary to increase the production for meeting the domestic demand and, in order to generate more surpluses, for export. For example,

1. **In case of Onion**
   
   Expected Yield is 20 MT/ha.
   
   In Pune District it is 17 MT/ha
   
   Thus the yield gap can be bridged by
   
   **Making available quality seed**
   
   **Planting on raised beds**
   
   **Development of suitable varieties for processing**
   
   **Creation of storage facilities**
   
   **Irrigation through sprinkler**
2. **In case of Grape**

   Expected Yield is 35 MT/ha.
   In Pune District it is 30 MT/ha
   Thus the yield gap can be bridged by
   Development of disease forecasting mechanism
   Pest and disease surveillance

3. **In case of Sugarcane**

   Expected Yield of Suru variety is 125 MT/ha.
   In Pune District it is 85 MT/ha
   Expected Yield of Pre Seasonal variety is 150 MT/ha.
   In Pune District it is 88 MT/ha
   Expected Yield of Adsali variety is 175 MT/ha.
   In Pune District it is 99 MT/ha
   Thus the yield gap can be bridged by
   **Seed Treatment.**
   **Season wise varietal Planning.**
   **Paired row planting with drip irrigation.**

4. Even though exports have increased, steps must be taken to increased it further, by developing cordial relationship with the foreign countries.

5. Through appropriate marketing of crop insurance policy, by convincing the benefit of crop insurance policy, both the borrower as well as non-borrower farmer must be encouraged to take crop insurance policy.

6. Steps must be taken to bring more food crops under crop loan, so as to increase production of food grains, and thus not only make the country self sufficient, self reliant but also generate some surplus for exports.

7. Since low irrigation facility and variation in rainfall are considered to be important factors responsible for low and varied productivity level, major initiatives need to be taken to increase irrigation facility where ever possible. In those areas where irrigation potential is low, watershed development programme should be promoted.

8. The government must strengthen the system for timely supply of necessary inputs, and check quality of inputs since there are evidences
that sales of spurious seed, fertilizers and farm chemicals is on the rise.

9. Research efforts must be intensified further to develop HYV Seeds of the crops suitable to agro-climatic conditions of the regions, also drought tolerant and pest resistant varieties should be developed. Low water intensive cum high value commercial crops should be promoted.

10. Cultivation of crops by using micro irrigation (drip and sprinkler) should be encouraged same time volumetric pricing of water must be introduced.

11. Ongoing irrigation projects should be completed in specific period and watershed Development programme and rainwater harvesting system should be promoted in a big way to increase productivity.

12. Electricity supply to agriculture should be regulated.

13. The Researcher suggests that crop insurance alone is not sufficient; that policy and programs that supports self-insurance, such as micro credit or increase of off-farm employment, are also important. Investment in agricultural Infrastructure/research would be more equitable as opposed to subsidies to crop insurance and may yield more long-term benefits

14. The Following Defects may be removed

15. There is significant improvement, in yield per acre, in case of commercial crops, compared to food crops, because the scale of finance for commercial crops is high.

16. Large percentage of the cultivated area is outside the impact of crop loan (as it is not Covered by crop loan) for example Large percentage of the cultivated area is under Jowar but crop loan is not given for Jowar crop

17. Since more finance is given to cash crops, as a result, the legitimate share of major food Crops are deprived.

18. The researcher feels that there ought to be a proper coordination in the activities of the credit societies, marketing societies and the processing societies in the district so as to make the crop loan scheme successful as also to build the cooperative credit movement on sound lines. Frequent meeting of the office bearers of the marketing societies, and
credit societies should be convened by the District Central Cooperative Bank to create coordination in the activities of these societies. This is necessary even for reducing the size of over dues which have accumulated with the societies. (Detail study of this is beyond the scope of this study). There is a need to concentrate on reducing the over dues, because it may erode the success achieved by credit movement.

10.11 Limitations

1. It is restricted to Pune District only,
2. The sample size is 640, covering Seven Crops, six Talukas and sixteen Societies from Pune District.
3. Study period is from 1<sup>st</sup> April 2003 to 31<sup>st</sup> March 2008,
4. Crop loan is given by PDCC as well as commercial banks, but this Study deals only with PDCC
5. The study does not deal with what is the situation of overdue, what are the causes of over dues, this needs to be studied in detail, as this acts as a stumbling block on the progress of Cooperative credit System
6. Due to limitation of time and other reasons, the study was restricted to Pune District.
7. Generalization of result may not be possible for different Crop growing areas of the Maharashtra state. Further, the findings of the study were based on the responses of the respondents and hence the objectivity is limited to the honesty and memory power of the respondents
10.12 Scope for further study

1. Similar study can be taken for the entire Maharashtra State
2. Similar study can be taken for the other Crops for entire Maharashtra State
3. Similar study can be taken for the other Crops for a longer period, for entire Maharashtra State
4. There is a scope to study the Evaluation of the crop loan given by commercial banks this is particularly important because of reasons like
   a) Recently the percentage of crop loan given by commercial banks is increasing while the percentage of cooperative banks is decreasing.
   b) Commercial banks are professionally managed compared to Cooperative banks, and hence the implementation of Crop loan scheme by commercial banks may be more efficient compared to the cooperative bank.
   c) There is more political interference in case of cooperative banks Unlike Commercial banks, hence there is need to study the effectiveness of the implementation of crop loan by commercial banks.