

# A Study of Agriculture Loan and Various Agriculture Scheme Provide by Amravati District Central Cooperative Bank

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## Abstract

Agriculture is an important part of the Indian economy and supports the livelihood of a large rural population. Farmers require timely and affordable credit to meet expenses related to seeds, fertilizers, irrigation, machinery, and other farming activities. Cooperative banks play a major role in providing institutional credit to farmers, especially small and marginal farmers, due to their strong presence in rural areas and farmer-friendly approach.

The Amravati District Central Co-operative Bank (ADCC Bank) is a key cooperative banking institution in Maharashtra that provides agricultural loans and implements various agricultural schemes for the benefit of farmers. The bank offers short-term crop loans, medium-term loans, long-term development loans, and loans for allied activities such as dairy and poultry. It also implements government-supported schemes like the Kisan Credit Card (KCC), Interest Subvention Scheme, Pradhan Mantri Fasal Bima Yojana, and NABARD refinance schemes. The main objective of this study is to examine the agricultural loan system and agricultural schemes provided by ADCC Bank and to understand their impact on agricultural productivity and the socio-economic condition of farmers in Amravati district. The study also identifies the challenges faced by farmers in accessing loans and the operational issues faced by the bank. The findings reveal that cooperative banks contribute significantly to rural development by improving access to formal credit. However, issues such as lack of awareness, procedural delays, repayment difficulties, and climatic risks affect the effectiveness of agricultural credit. The study suggests that improving farmer awareness, simplifying loan procedures, and ensuring timely credit disbursement can strengthen agricultural development.

**Keywords:** Agriculture, Cooperative Banks, Agricultural Loans, Agricultural Schemes, Rural Development, ADCC Bank

## Introduction

Agriculture is the backbone of the Indian economy, providing employment to a large proportion of the population. However, agricultural activities require continuous financial support for seeds, fertilizers, irrigation, machinery, and technology. To meet these requirements, institutional credit plays a crucial role.

District Central Cooperative Banks act as an important link between State Cooperative Banks and Primary Agricultural Credit Societies (PACS). The Amravati District Central Co-operative Bank has been actively involved in providing agricultural credit and implementing government agricultural schemes to support farmers in the region.

The Amravati District Central Co-operative Bank (ADCC Bank) is a key financial institution in the Amravati district of Maharashtra, catering to the credit needs of farmers, self-help groups, and rural businesses. It offers a variety of agricultural loan schemes including crop loans, investment credit, seasonal agricultural loans, and special financing for allied activities. This study investigates the awareness and utilization of these schemes by farmers and explores their impact on agricultural productivity.

Agriculture is the primary occupation in Amravati district, and farmers require credit for seeds, fertilizers, irrigation, and farm operations. ADCC Bank ensures timely and affordable crop loans mainly through Primary Agricultural Credit Societies (PACS). These short-term and seasonal loans help farmers continue cultivation without depending on informal moneylenders who charge high interest rates. As a

result, the bank directly supports agricultural growth and improves farmer income stability.

### **Profile of Amravati District Central co-operative Bank**

The Amravati District Central Co-operative Bank operates with the objective of promoting agricultural and rural development. It provides financial assistance to farmers through PACS and directly through its branches. The bank offers short-term, medium-term, and long-term agricultural loans and supports various central and state government schemes aimed at farmers' welfare.

### **Agricultural Schemes Implemented by ADCC Bank**

ADCC Bank implements various agricultural schemes in collaboration with the Government of India and Government of Maharashtra, such as:

1. Kisan Credit Card (KCC) Scheme
2. Interest Subvention Scheme
3. Crop Insurance Scheme (Pradhan Mantri Fasal Bima Yojana)
4. Debt Waiver and Relief Schemes (as announced by state government)
5. Agricultural Infrastructure Development Loans

### **Agricultural Loans Provided by ADCC Bank**

**Short-Term Crop Loans:-** Provided for seasonal agricultural operations, used for seeds, fertilizers, pesticides, and labor expenses

**Medium-Term Loans:-** Provided for land development, minor irrigation, and purchase of equipment.

**Long-Term Loans:-** Provided for tractors, farm machinery, irrigation systems, and plantation crops.

### **Need of the Study:-**

Agriculture continues to be the lifeline of the Indian economy, and the majority of the population depends on it either directly or indirectly. In districts like Amravati—where farming is the main occupation adequate and timely credit plays a vital role in ensuring agricultural sustainability and farmers' livelihoods. Despite the presence of multiple financial institutions, a large segment of the rural farming community still relies heavily on cooperative banks for credit due to their accessibility, flexibility, and community-based

approach.

However, even with the availability of various agricultural loan products and government-sponsored schemes, many farmers continue to face challenges such as delayed disbursements, high dependency on informal credit, inadequate awareness of schemes, and difficulty in repayment due to climatic and market risks. These issues highlight the need to systematically study the functioning of cooperative banks in agricultural finance.

The Amravati District Central Co-operative Bank (ADCC Bank) plays a crucial role in extending agricultural credit and implementing state and central government schemes in the district. The bank's activities directly influence the socio-economic well-being of thousands of farmers. Yet, limited empirical research has been conducted on evaluating its effectiveness, reach, and challenges in agricultural financing.

### **Significance of the Study**

The significance of this study lies in its contribution to understanding and strengthening the cooperative banking sector's role in rural credit delivery and agricultural growth. It is particularly relevant in the current scenario where farmers face increasing economic risks due to climate uncertainty, rising input costs, and fluctuating market prices. The cooperative banking model through its local network, social orientation, and government linkages serves as a vital instrument for empowering rural communities.

### **Review of literature**

Hanumanthappa (2024) reviewed the development and current status of agricultural credit in India and found that despite the growth of institutional credit, issues such as weak risk management, outdated regulations, and regional imbalance still exist. The study emphasized the need for modernization and a more sector-specific and inclusive credit delivery system.

Patil Kajal Devidas (2024) highlighted the importance of agricultural credit in India and the role of District Central Cooperative Banks in supporting small and marginal farmers. The study concluded that timely and affordable credit improves agricultural productivity, farmers' income, and financial inclusion while reducing dependence on moneylenders.

Chaudhari and Farmer (2022) studied a cooperative agricultural bank in Gujarat and found that farmers'

awareness and satisfaction were linked to service quality and landholding size. Medium and large farmers showed higher awareness, while marginal farmers accessed loans more frequently.

Gupta and Agrawal (2018) found that although cooperative banks are important for agricultural credit, farmers faced problems such as delays in loan approval, late disbursement, and low awareness of schemes, which reduced their satisfaction.

Raut (2017) reported growth in agricultural lending by District Central Cooperative Banks in Maharashtra but highlighted challenges like declining branches and regional imbalance in credit distribution.

Kulkarni (2017) indicates that awareness about credit schemes significantly influences farmers' decisions to seek institutional credit. However, several studies observe challenges including complex documentation, high interest costs, and lack of financial literacy, which restrain farmers from fully accessing institutional loans (Shinde & Deshmukh, 2021).

### Research problem Definition:

Despite the availability of various agricultural loan schemes from cooperative banks, many farmers continue to face financial constraints due to limited awareness, procedural complexities, and inadequate financial support. In the Amravati district, anecdotal evidence suggests that while some farmers benefit from cooperative credit, others either avoid formal credit institutions or struggle to utilize loans effectively.

This research investigates whether farmers are aware of the agricultural loan schemes provided by ADCC Bank and whether these loans have had a significant impact on agricultural productivity and economic welfare. The study also seeks to identify challenges faced by farmers in accessing and utilizing agricultural credit.

### Objective of the study

1. To study the types of agricultural loans provided by ADCC Bank.
2. To analyze various agricultural schemes implemented by the bank.
3. To examine the impact of agricultural loans on agricultural productivity.

### Research Methodology

The present study adopts a descriptive research design

to examine agricultural loans and various agricultural schemes provided by the Amravati District Central Cooperative Bank (ADCC Bank) and to assess their awareness and impact on agricultural productivity. The study is based on both primary and secondary data to ensure comprehensive analysis.

**Research Design:** The study area covers selected villages of Amravati district. A simple random sampling technique was used to select the respondents. Farmers who had taken agricultural loans from ADCC Bank during the study period were included in the sample. The sample size was considered adequate to represent the population.

**Sources of Data:** Both primary and secondary data were used. Primary data were collected from farmers, while secondary data were obtained from bank reports, government publications, and journals.

**Sample Size:** 50 farmers (customer of ADCC Bank)

**Data Collection Tools:** Primary data were obtained through structured questionnaires administered to 50 farmers selected randomly from various villages in the Amravati district. Farmers who had availed agricultural loans from ADCC Bank within the last three years were included in the sample.

Secondary data were collected through bank publications, government reports, academic journals, and previous studies relevant to agricultural credit and cooperative banking.

**Tools of Analysis :** The following statistical tools were used:

Percentage Analysis to present demographic and awareness data.

Chi-square Test to examine the association between awareness and loan utilization. Paired t-Test to measure differences in productivity before and after financing.

### Data Analysis and Interpretation

The collected data were analyzed using percentage analysis and suitable statistical tests. The results indicate that a majority of farmers are aware of agricultural loan schemes offered by ADCC Bank. The analysis also shows an increase in crop yield and use of modern inputs after availing agricultural loans. Hence, the null hypothesis is rejected, and the alternative hypothesis is accepted. This confirms that awareness exists and agricultural loans have a positive impact on

agricultural productivity.

Table 1: Demographic Profile of Respondents

Particulars	Categories	Percentage
Gender	Male	72%
	Female	28%
Age	Below 30	40%
	31-40	20%
	41- 50	24%
	Above 50	16%
Education	Primary	40%
	Secondary	34%
	Graduate	24%
	Other	2%
Landholding	Marginal	32%
	Small	44%
	Medium	20%
	Large	4%

Interpretation: The demographic analysis shows that a majority of respondents are male (72%) and belong to the economically active age group, with most farmers aged below 50 years. This indicates that agricultural activities and loan utilization are mainly carried out by working-age farmers. The education profile reveals that most respondents have primary or secondary education, which influences their awareness and understanding of agricultural loan schemes. Landholding analysis shows that small (44%) and marginal farmers (32%) constitute the largest share of respondents, highlighting the importance of cooperative banks in supporting farmers with limited resources.

Table 2: Awareness of Agricultural Loan Schemes

Awareness Level	Percentage
Fully Aware	68%
Partially Aware	16%
Not Aware	16%

Total	100%
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#### Chi-Square Test for Awareness

Particular	Value
X <sup>2</sup> value	Significant
Level of significance	5%
Degree of freedom	2
Result	Null hypothesis rejected

Interpretation: The Chi-square test results show a statistically significant outcome at the 5% level of significance. This indicates that farmers' awareness of agricultural loan schemes is not due to chance and that a meaningful level of awareness exists among respondents. Therefore, the null hypothesis is rejected, confirming that awareness of agricultural loan schemes among farmers is statistically significant and supports the effectiveness of the bank's information dissemination efforts.

Table 3: Utilization of Loan Funds

Purpose	Percentage
Seeds purchase	44.9%
Irrigation	20.4%
Farm Machinery	12.2%
Livestock	18.4%
Other	4.1%

Interpretation: The analysis of loan utilization reveals that a major portion of agricultural loans is used for productive farming purposes. A large share of funds is spent on seed purchase (44.9%), followed by irrigation facilities (20.4%), livestock activities (18.4%), and farm machinery (12.2%). This indicates that farmers are primarily using agricultural loans to strengthen their farming operations and enhance productivity, which reflects appropriate and effective utilization of institutional credit.



Table 4: Productivity Before and After Loan (Mean in Quintals/Acre)

Period	Mean Productivity
Before Availing Loan	8.20
After Availing Loan	11.60
Mean difference	3.40

Source: Primary Data Paired t-Test

t value	Result
5.12	Significant at 5% level

Interpretation: The paired t-test results clearly show that mean agricultural productivity increased significantly after farmers availed agricultural loans. The increase in productivity can be attributed to better access to quality inputs, improved irrigation facilities, and adoption of modern farming practices made possible through institutional credit. This confirms the effectiveness of agricultural loans in enhancing farm performance.

### Hypothesis Testing

Null Hypothesis ( $H_0$ ): Farmers are not aware of agricultural loan schemes of ADCC Bank, and its agricultural loans do not significantly impact agricultural productivity.

Alternative Hypothesis ( $H_1$ ): Farmers are aware of agricultural loan schemes of ADCC Bank, and its agricultural loans have a significant positive impact on agricultural productivity.

**Decision:** Since the calculated t-value (5.12) is greater than the table value (1.984) at the 5% level of significance, the null hypothesis is rejected and the alternative hypothesis is accepted. This indicates that agricultural loans provided by the Amravati District Central Co-operative Bank have a statistically significant positive impact on agricultural productivity. Based on the significant results of Chi-square and paired t-tests, null hypothesis is rejected and the alternative hypothesis is accepted. Farmers demonstrate awareness and loans positively impact productivity.

### Findings

The key findings from the analysis are:

1. The study finds that the majority of respondents are male farmers belonging to the economically active age group, indicating that agricultural loan usage is concentrated among working-age farmers.
2. Most respondents are small and marginal farmers, showing that the Amravati District Central Co-operative Bank plays a crucial role in providing credit support to farmers with limited landholdings.
3. The educational profile reveals that a large proportion of farmers have primary and secondary education, which influences their level of awareness and understanding of agricultural loan schemes.
4. A significant majority of farmers are aware of agricultural loan schemes offered by the bank, indicating effective dissemination of information, though a notable percentage remains partially or not aware.
5. The Chi-square test results confirm that farmers' awareness of agricultural loan schemes is statistically significant, leading to the rejection of the null hypothesis related to awareness.
6. Agricultural loan funds are mainly utilized for productive purposes such as seed purchase, irrigation development, livestock activities, and farm machinery, indicating proper utilization of credit.
7. The comparison of productivity before and after availing loans shows a clear improvement in agricultural output after receiving financial assistance.
8. The paired t-test results reveal a statistically significant difference between productivity levels before and after loans, confirming the positive impact of agricultural credit on productivity.
9. Farmers who availed agricultural loans were able to adopt modern inputs and improved farming practices, contributing to higher crop yields.
10. Despite positive outcomes, some farmers still face challenges related to documentation procedures and limited technical support, which affects optimal utilization of loans.

### Discussion

The results of the study indicate that institutional agricultural credit provided by the Amravati District Central Co-operative Bank plays a significant role in improving agricultural performance. Farmers who availed agricultural loans were able to invest in quality

seeds, fertilizers, irrigation facilities, and farm machinery, which contributed to increased productivity. Awareness of agricultural loan schemes was found to be higher among medium and large farmers, while small and marginal farmers showed relatively lower awareness, mainly due to limited education and access to information. The statistical analysis confirms that agricultural loans have a positive and significant impact on productivity. However, procedural complexities and limited extension support continue to restrict the optimal utilization of credit.

### Conclusion

The study concludes that agricultural loans and schemes provided by the Amravati District Central Co-operative Bank have a positive impact on farmers' awareness and agricultural productivity. The findings reveal that institutional credit enables farmers to adopt modern farming practices and improve crop yields. While awareness levels are generally satisfactory, focused efforts are needed to include small and marginal farmers more effectively. Simplification of loan procedures and improved financial guidance can further enhance the effectiveness of agricultural credit.

### Recommendations

1. Awareness Campaigns: Conduct regular field-level awareness programs through village meetings, agricultural extension services, and local media.
2. Simplify Procedures: Reduce documentation requirements and offer pre-loan counseling to farmers.
3. Financial Literacy: Educate farmers on loan benefits, repayment planning, and financial management.
4. Customized Loans: Design crop-specific and allied activity loan products.
5. Flexible Repayment Structure: The bank should design flexible and crop-specific repayment schedules aligned with harvesting seasons to reduce repayment pressure on farmers.
6. Regular Monitoring and Support: Post-loan monitoring and technical guidance should be provided to ensure productive use of loans and to reduce the risk of default.

### Limitations of the Study

- The study is limited to selected villages in the Amravati district and is based on a sample of farmers, which may not represent the entire farming population.
- The study focused on ADCC Bank borrowers, excluding farmers using other credit sources.
- Time and resource constraints limited the scope of secondary data analysis.
- Some respondents had limited awareness of loan schemes, affecting data accuracy

### Scope for Future Research

The present study focuses on agricultural loans and schemes provided by the Amravati District Central Co-operative Bank within a limited geographical area. Future research can expand this study by including a larger sample size and covering multiple districts or regions to improve generalizability of the findings. Comparative studies can be conducted between cooperative banks, commercial banks, and regional rural banks to assess the relative effectiveness of agricultural credit delivery systems. Further research may also examine the long-term impact of agricultural loans on farmers' income, debt sustainability, and overall rural development. In addition, future studies can analyze the role of digital banking, Kisan Credit Card (KCC), and government-supported subsidy schemes in improving credit accessibility. Qualitative research methods such as in-depth interviews and case studies can also be used to understand farmers' perceptions, repayment behavior, and challenges in greater detail.

Future studies can:

- Compare cooperative bank performance with other institutional credit sources.
- Investigate long-term economic impact on farm income and livelihood.
- Explore digital loan delivery and financial technology in agricultural credit.

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