SUMMARY OF FINDINGS AND CONCLUSIONS

Developing countries need to design appropriate strategies for increasing access to financial services by all segments of the population. They must also turn their strategies into effective policy measures and implementation plans. This means that multiple stakeholders must work together to design these strategies and determine the best ways to organize their implementation. Such an effort entails the cooperation of the range of governments, financial institutions, civil society organizations, development partners, and the private sector. And it requires all stakeholders to ensure that adequate attention is focused on financial inclusion over the long term.

This Chapter presents a Summary of the foregoing chapters, Conclusion arrived at, Suggestions/Hints for the policy makers and Avenues for further research to the scholars' who would like to undertake research in this area in future.

6.1. Summary of findings

6.1.1. Introduction and Methodology

A. Introduction

The Indian financial system is quite old with a rich and varied evolutionary experience. The existing literature on agricultural credit in general and agency wise institutional credit in particular identified many problems and suggested many measures and policy reforms. The outcomes of these efforts are reflected in the form of increasing the flow of credit to agriculture by setting targets for all institutional agencies and mobilization of the shortages to different agencies that work for infrastructure development. Many research studies conducted by the Reserve Bank of India and popular agencies like NSSO surveys have come out with many fine tuned credit packages exclusively for the rural poor. These efforts are reflected in the form of Kisan Credit Card, Agriculture Insurance and measures to adopt technology for farm mechanization by giving subsidy in thrust areas of agriculture.

B. Need for the study

Now all institutional agencies i.e., Cooperatives, Primary Agriculture Credit Societies, Commercial Banks and Regional Rural Banks have started to provide both short-term and long-term loans, direct and indirect financing and necessary services to farmers. It is in fact a welcome move. However, it has become difficult especially for commercial banks to gauge and appraise the quality of agricultural loan. The past experiences bring out the fact that banks are simply giving agriculture loans just to reach the target of priority sector lending. In India agriculture productivity is low and soils health is in danger zone. Even though
commercial banks proved as active catalysts in economic growth, attempts have not been made by them in this regard. By traversing most of the previous studies the present study felt the research gap in this aspect. The study does stress the need for redefining the role of commercial banks in discharging the agricultural finance mechanism.

The Kurnool District falls in the drought hit region of Andhra Pradesh. It has good agriculture infrastructure like the Regional Agriculture Research Station, Agriculture College, Krishi Vignana Kendra etc. Sona Masuri, a paddy variety grown in this district, is very popular not only in the state but also all over the country. The well performing revenue divisions of the district are Kurnool, Nandyal and Adoni. A sound banking network has taken root in the district with many public and private players. The State Bank of India has a separate branch exclusively for agriculture purpose. In spite of all these, credit farmers' distress also exists in the district. This study tries to find out the reasons for the farmers' unrest in this district.

Deteriorating soil health is a major constraint limiting productivity in agriculture. The present system of fertilizer subsidy which is based on subsidization of products rather than nutrients, contributes to the problem because there is excessive subsidy on nitrogen compared to potassium and phosphates, and no subsidy at all on micronutrients. The result is excessive use of nitrogenous fertilizer which depletes the soil of other micronutrients (sulphur, zinc, boron), reducing soil productivity over time. Most farmers do not have information on the soil health of their farms and the extent of micronutrient deficiency, which varies across areas. Increased awareness of this problem is extremely important. There is also need to expand the network of soil testing laboratories in most States and also to extend soil testing to measure micronutrients, which are typically not covered at present.86

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While addressing the technological needs of our farmers, care must be taken to integrate issues of environmental and ecological sustainability with the pressing need to increase production and productivity. "The more the better" syndrome, particularly when it comes to chemical fertilizers, herbicides and pesticides, it is already having serious deleterious effects in sustainable tracks of the country, especially those which have advanced agriculturally. Concerted research will need to be carried out in developing eco-friendly technologies which would be just as productive as the technologies existing today\(^{87}\).

Agricultural insurance is an important instrument in the strategy of risk management. When properly implemented, it results in a process of identification of risks, their control, avoidance or reduction. This is obviously in the interests of insurance companies and they are generally eager to promote it. Apart from the financial interests of insurance companies, risk management has a broader social aspect as it leads to reduction in wastage of economic resources and prevents environmental degradation.\(^{88}\)

The study considers the research gap in order to take a fresh look in this dimension. Accordingly objectives are framed and hypotheses are set out to test and finally conclusions are drawn.

C. Objectives of the Study

The main objective of the study is to go into the ‘Retrospect and Prospects of Agriculture Finance by Commercial Banks’. The main objective can be delineated into the following sub objectives. They are:

1. To appraise the commercial banks’ credit delivery mechanism to the agriculture sector.

\(^{87}\) K.C. Pant, India’s Development Scenario Next Decade and Beyond..., a set of two volumes: “Macro Aspects & Sectoral Aspects”, Academic Foundation, New Delhi, 2003, pp.29-30.

\(^{88}\) C.S. Prasad (ed.), Sixty Years of INDIAN AGRICULTURE 1947 TO 2007, New Delhi: New Century Publications, 2006, p.120.
2. To evaluate the norms followed by commercial banks to priority sector lending.

3. To critically analyze the efficacy of the National Agriculture Insurance Scheme.

4. To know and analyze farmers’ perceptions on agricultural finance.

D. Hypotheses

The entire sketch of the investigation rests upon the following hypotheses:

1. Commercial banks’ credit delivery mechanism and credit provided to agriculture sector is inadequate.

2. Performance of National Agriculture Insurance (NAIS) is not in conformity with the objectives of its establishment.

E. Research Methodology

To justify the retrospective aspect, the study first evaluates statistical profile of agricultural finance at aggregate and disaggregates level in order to know the measures that were taken in the past to extend the financial assistance to all the categories of farmers. To cover the prospective aspects of the study, farmers’ and bankers’ perception on agriculture finance by commercial banks are evaluated via well structured schedules. The schedules have been designed keeping in view the objectives and hypotheses and were pretested by means of pilot study. The study purposively selected four mandals on the basis of familiarity and accessibility. The sample farmers in Nandyal, Panyam, Bandi Atmakur, Gadivemula mandals are 140, 140, 108 and 112 respectively. Farmers’ perceptions are attitudinal in nature and basically it depends upon farmers’ category. That’s why out of four mandals 100 samples are randomly drawn from each of the five categories viz., marginal, small, semi medium, medium and large. The total sample size (n) therefore forms 500.

Some important and unique problems faced by farmers and bankers are discussed in direct personnel investigation. The farmers schedule has been compiled and analyzed by using SPSS, a statistical package. Bankers’ responses are given in abstract form.
6.1.2. Role of Commercial Banks and Agricultural Finance

1. There was no systematic assistance to farmers other than financial assistance under Taccavi Loans 1793, Land Improvement Act 1883 and Agricultural Loans Act 1884 in pre independence period. The advent of Cooperatives institutions in 1904 gave some respite to the farmers. After independence the land mark development was the nationalization of RBI.

2. To address the problems of rural finance the government came out with the nationalization of banks to serve better the needs of development of the economy in conformity with National Priorities and Objectives.

3. Several innovative experiments like Service Area Approach, Lead Bank Scheme etc were also introduced mainly with a view to ensure that the rural financing system grows in strength. In pursuance of the recommendations of the Committee to Review Arrangements for Institutional Credit for Agriculture and Rural Development (CRAFICARD) to review the working of the lead bank scheme in all its aspects. The recommendations of this group with some modifications were implemented.

4. Farm Management is a decision making science. It deals with efficient use of farm resources like labor, power and equipment. It should possess balanced combinations of various enterprises to avoid excessive risks and provide flexibility. It further deals with utilizing the farmers' knowledge, training and experience to consider efficient marketing facilities and updates the latest agricultural methods and practices.

5. In India land related problems especially lack of legal tenancy rights are the main reason for yield gap and thus hampers the agricultural productivity to a great extent.

6. Agriculture Marketing in India till green revolution was almost under the full control of private sector. Since then the government has taken active interest in development of institutional mechanisms, legal framework and regulations and direct intervention...
in the market are made by public sector agencies. The outcomes are Agricultural
Produce Market Regulation Act (APMRA), Agricultural Produce Grading and
Marketing Act, 1937, State Agricultural Produce Marketing (Development and
Regulation) Act, 2003 and Market Intervention Scheme (MIS) to name a few.

7. The study noted the deep-rooted presence of moneylenders in the rural credit delivery
mechanism. Farmers approach moneylenders for their consumption and needs, not by
choice, but by compulsion. Unfortunately farmers' knowledge of money lending
laws is very poor. Many money lenders are active in the state without
licensing/registration. Farmers are simply approaching moneylenders irrespective of
their licensing and registration.

8. In Kurnool District of Andhra Pradesh agriculture sector with paddy, oil seeds, jowar
and pulses plays a dominant role in the district's economy. Apart from these crops,
fruits, vegetables and spices are also cultivated in significant area. Animal husbandry
especially diary, sheep and goat rearing have good acceptance in this district. The
RIDF projects contribution is significant in infrastructure development in this district.

6.1.3. Priority Sector and Agricultural Finance: A Retrospective Analysis.

A. Statistical Profile of Priority Sector and Agricultural Finance at Aggregate Level

1. The statistical figures compiled from 1999-2009 for region-wise SCBs advances
under priority sector reveals that accessibility to institutional credit is higher in the
Southern Region where the level of agricultural development is also higher. Even
C.D ratio (96.23 per cent) is higher in Southern Region and crossed the All India
average (76.26 per cent).

2. In Southern Region Tamil Nadu stood first (116.72 per cent), followed by 112.87 per
cent in Andhra Pradesh. In Andhra Pradesh C.D ratio is less in districts like
Rangareddy (53.90 per cent), Chittoor (63.12 per cent), Karimnagar (72.80 per cent).
C.D. ratio is higher in the districts like West Godavari (151.57 per cent), Guntur (150.81 per cent) and Prakasam (145.59 per cent).

3. The sectoral deployment of gross bank credit from 1996-97 to 2009-10 exhibits that the agricultural credit ranges from 11.0 per cent to 13.5 per cent during this period.

4. In Rayalaseema Region Kurnool district is consistent in percentage of increase in total bank credit during 2004-2009, in Telangana Region Medak district (74.53 per cent) and in Coastal Region Prakasam district (35.13 per cent).

5. All India Debt and Investment Survey and NSSO, 2010 disclose sources of non-institutional credit decreased from 92.7 per cent in 1951 to 29.7 per cent in 2010. Commercial banks accounts for more than one fourth of the institutional credit since 1981. The share of commercial banks in agriculture finance was 0.9 per cent, 0.6 per cent and 2.4 per cent in 1951, 1961 and 1971 respectively.

6. For the past two decades compiled coefficient of variation of small, medium and large farmers’ number of accounts and amount outstanding shows that the medium farmers’ performance is more consistent than the rest of the farmers.

7. Many statistical reports confirmed that 65 per cent of the Indian farmers are marginal and small farmers. According to the RBI reports these farmers share could not exceed not even 30 per cent of the total loan disbursement for the past two decades.

8. The share of priority sector advances in total credit of scheduled commercial banks was 14.0 per cent in 1969 and stood at 34.8 per cent in 2009. During the same period the inflation increased from 2.29 per cent to 10 per cent. The inflation figures asses the priority sector advances in real terms.

9. In flow of institutional credit to agriculture from 2000 to 2011; commercial banks share has increased from 53 per cent to 75 per cent. Cooperative share has come down from 39 per cent to 15 per cent.
B. Statistical Profile of Priority Sector and Agricultural Finance at Disaggregate Level

1. The District Credit Plan (DCP) from 2006-2011 has been progressive in issuing crop loan with an average of 50.4 per cent in total priority sector lending. NABARD projections for crop loans stood at an average of 53.93 per cent in total priority sector lending for the same period. A high degree of association could be observed between DCP and NABARD.

2. Nandyal, Allagadda, Kurnool, Nandikotkur, Yemmiganur blocks showed positive trend in block wise average account and loan amount aspect. The rest of the blocks trend was negative. The negative impact is severe in Pathikonda and Done blocks.

3. The State Bank of India, Andhra Bank, Syndicate Bank, Canara Bank (Lead Bank of the Kurnool District), Andhra Pragathi Grameena Bank and Kurnool District Credit Cooperative Bank have been contributing major share in credit deployment for agriculture sector. During 2006-2011 in all these banks more than 90.0 per cent of the agricultural accounts are exclusively operating for issuing of crop loans.

4. During 2006-2011 these six banks' minor irrigation share accounts for 0.2 per cent to 2.66 per cent of the total accounts. Syndicate Bank's contribution is more than the rest of the banks in issuing loan for land development. Canara Bank and Andhra Bank remain as active agents in farm mechanization. Andhra Bank is better than the State Banks of India in this regard.

5. The share of Plantation and Horticulture and Sericulture credit is relatively poor compared to the rest of the categories during 2006-11. In the same period State Bank of India stood first in issuing loans to Other Priority Sectors followed by Canara Bank on an average.

6. Commercial Banks attained 100.03 per cent, 128.40 per cent, 139.61 per cent 98.30 per cent in 2006-07, 2007-08, 2008-09 and 2009-10 respectively in crop loan
disbursement. During the succeeding years the achievements against targets were in
the order of 96.26 per cent, 100.38 per cent, 90.13 per cent and 77.91 per cent.

6.1.4. Agricultural Finance by Commercial Banks - Policies and Schemes

A. Agricultural Debt Waiver and Debt Relief Schemes (ADWDRS), 2008

1. In Agricultural Debt Waiver and Relief Scheme-2008, the Andhra Pradesh state got a
major part of the number of accounts received loan waiver/debt relief (Coop+RRB),
2009, followed by Maharashtra, Uttar Pradesh, Madhya Pradesh, Orissa and
Rajasthan. These six states account for 66.97 per cent of the total per account waiver
plus relief.

2. Maharashtra stood first with 18 per cent followed by Andhra Pradesh and Uttar
Pradesh with 15.48 per and 14.80 per cent respectively. These three states alone
account for 50 per cent of the total waiver and relief.

3. Many land owners had taken loan or gold loan for non-agriculture purpose but
benefited from the waiver as the loan was recorded under agriculture purpose. The
same thing applied for real cultivators i.e., tenants and share croppers in reverse order.

4. As per the All-India Debt and Investment Survey (AIDIS) and the Situation
Assessment Survey of Farmers (SAS) conducted by NSSO- 2003, the share of money
lenders in farmers outstanding debt was high in A.P (53 per cent) followed by Tamil
Nadu (40 per cent), Rajasthan (37 per cent), Punjab (36 per cent) and Bihar (33 per
cent). In all these states, expect Bihar, the share of moneylenders in farmers
outstanding debt was higher than that of commercial banks.

B. Emergence of new moneylenders

1. Now new players in the field of rural finance entered in the form of input dealers,
finance companies including the for-profit MFIs are functioning in villages. Usually
these MFIs charged 5 to 10 per cent interest per month.
2. Micro Finance Institutions (Development and Regulation) Bill, 2011 was introduced to protect the rural poor from unfair practices of MFIs. According to Banking Regulation Act, 1949, now no micro finance institution shall commence or carry on the activity of providing micro finance services without obtaining a certificate of registration from the Reserve Bank under this Act.

C. Measures aimed at improving access to Institutional Credit

1. To strengthen the institutional credit delivery system, KCC scheme, strengthening of Primary Agricultural Credit Societies, Self Help Groups, Joint Liability Groups have been introduced. The success of Self Help Group model now takes the turn as Micro Finance movement in many parts of the country.

2. Rural Infrastructure Development Fund (RIDF) set up by NABARD, 1995-96, became an important instrument of routine bank funds for financing rural infrastructure. The scope of RIDF widened to enable utilization of loan by Panchayat Raj Institutions, Self–Help Groups (SHGs), Non Government Organizations (NGOs) etc, since 1999-2000.

3. To bring back the farmers to the institutional hold, debt waiver, debt relief, one-time settlement and loan reschedule are being provided.

4. Both PACS as well as new generation thrift and credit cooperatives have registered under more liberal cooperative laws. Input-intensive versus Low External Input Sustainable Agriculture (LEISA) model is the need of the hour to benefit the farmers.

5. To mitigate the distress of farmers, the GOI launched a special rehabilitation package in 31 districts in the states of Maharashtra, Andhra Pradesh, Karnataka and Kerala. The package aimed at providing viable farming and livelihood support system.
D. Agriculture Insurance - NAIS

1. In 1972-73, General Insurance Corporation (GIC) was nationalized. The General Insurance Corporation of India was set up by an Act of Parliament. It introduced Individual Approach scheme initially for H-4 cotton and later included groundnut, wheat and potato. It was implemented in the states of Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Tamil Nadu and West Bengal.

2. Pilot Crop Insurance Scheme, 1979 was set up by General Insurance Corporation of India based on Area Approach. It functioned up to 1984 on voluntary basis.

3. Comprehensive Crop Insurance Scheme (CCIS) was implemented in 1985 on the basis of Homogenous Area Approach. Till Kharif 1999, the scheme was adopted in 15 states and 2 Union Territories on compulsory basis.

4. CCIS was modified and named as Experimental Crop Insurance Scheme in 1997. This scheme provide 100 per cent subsidy on premium. The premium and claims were shared by Central and State Governments in 4:1 ratio.

5. National Agriculture Insurance Scheme (NAIS) scheme stared on the basis of both Area Approach, for widespread calamities, and Individual Approach, for localized calamities such as hailstorm, landslide, cyclone and floods. Agriculture Insurance Company (AIC) took over the implementation of NAIS till date. Now 10 per cent subsidy is provided on the premium payable by marginal and small farmers. Most of the states in India have been implementing NAIS on compulsory basis.

6. Farm Income Insurance Scheme was started on a pilot basis for wheat and rice during 2003-04 to provide income protection to farmers by integrating the mechanism of insuring yields as well as market risks. But it remained as pilot scheme.
7. In 2003-04 the private sector came out with some insurance products in agriculture based on weather parameters. This scheme covers deviation in the rainfall index and extended for economic losses due to less or more than normal rainfall are paid.

6.2. Conclusions

Based on the retrospective and empirical study the following conclusions are drawn.

A. Conclusions on Priority Sector Lending at Aggregate and Disaggregate Level

1. The Southern Region got the lion’s share in priority sector lending. Direct and indirect agricultural finance is higher and the level of agriculture development is also higher in this region.

2. C.D. ratio of the Southern Region is higher. Especially, Andhra Pradesh stood second in CD ratio among southern region states and its ratio is far above the national average.

3. All the districts in Andhra Pradesh except three viz. Karimnagar, Chittoor and Rangareddy exceeded the national C.D. average.

4. Andhra Pradesh has achieved the highest share not only in SCBs advances to priority sectors in southern region but also in the disbursement under RIDF.

5. SHGs Bank Linkage programme succeeded well in Andhra Pradesh. Nearly 90 per cent of the SHGs are being run by the women.

6. In spite of these credits, distress among farmers in the form of indebtedness and suicides is also higher.

7. The central government has identified suicide prone districts in Andhra Pradesh. The study felt the disagreement between the higher statistical share in agricultural finance and farmers’ distress in the same state.

8. Kurnool is one of the fastest growing districts in Rayalaseema Region with outstanding performance of its revenue blocks Nandyal and Adoni especially in
agriculture marketing. The Nandyal block has a sound banking network and good agriculture infrastructure.

9. The Nandyal Market Yard was started in 1970 but it is still is non-functional. The loans against warehouse receipts are higher in Nandyal block. Added to that the loans provided under Rythu Bandhu Pathakam by Market Yard are being utilized by the farmers to a complete extent. At the same time tenancy is prevailed in this district and farmers’ distress is observed. Here again the study observes the disagreement between the statistics and facts even at disaggregate level.

B. Analysis of Farmers’ perceptions – An Empirical Analysis.

I. Socio-economic characteristics of farmers

1. The mean ages of farmers in all categories range from 46 years to 54 years and the SD ranges from 8 to 12. The sample farmers’ family sizes are almost nuclear.

2. The tenancy is prevailing among the marginal, small and semi medium farmers. In the sample farmers’ SC and ST social category could be observed only in marginal and small farmers’ category.

3. A high level of significance could be found for irrigated land leased in and leased out. It confirms that tenancy exists to a large extent.

II. Investment cost per acre

1. The investment cost per acre of paddy crop has been increasing for the past five years. The fertilizer prices mounted up. There is an increase of 22 per cent in urea, 106.25 per cent in DAP, 58 per cent in 20-20-0, 131 per cent in 28-28-0, 44 per cent in superphosphate, 152 per cent in potash and 377 per cent in sulfate per 50 kg bag within the period of 2008-2012. Only monokotapas pesticide increased to 21 per cent within this period. Labor cost increased by 50 per cent. These two factors of production has become dead weight to cultivate paddy crop. There is a high
significant difference at 5 per cent level in the usage of these variables as between the five categories of farmers.

2. Investment cost for rain fed crops like maize, jowar and sunflower varies from crop to crop and cultivation practices. ANOVA showed a high level of significance for all variables at 5 per cent level except for the seed variable as between the categories of farmers.

III. Investment cost on organic and inorganic fertilizers and pesticides

1. The ratio of organic fertilizers for paddy crop and rain fed crops are 19.95 per cent and 21.05 per cent respectively. The usages of organic pesticides for both types of crops are ranges from 15.17 per cent to 17.50 per cent. This situation indicates very high imbalance use of organic and inorganic matters.

2. Many farmers are using unusually high levels of nitrogenous fertilizers that had widened the gap in the N: P: K ratio. The N: P: K use in Punjab is 35:9.4:1 and for Haryana, it is 75:24:1, as against recommended practice of 4:2:1.

3. During 2006-2009 the North and South Zones stood first and second in average usage of NPK per hectare and had far exceeded the all India average. During the same period in South Zone Andhra Pradesh had crossed the South zone average in the usage of nitrogen, and potash per hectare.

4. Excessive use of fertilizers and insecticides is destroying the existing diverse biological resources. Andhra Pradesh stands second in fertilizer consumption in the country. In consumption of plant protection chemicals AP occupies first position with an average of 0.82 Kgs. of Technical Grade/ha, as against the 0.3 kgs/ha.
IV. Farmers Annual Average Income from different sources

1. Income aspect showed right skewed distribution. It implies that most values are concentrated on left side of the mean with extreme values to the right side.

2. ANOVA test shows that the incomes from live stock and other sources are significant at 5 per cent level of significance.

3. As far as the additional income sources are concerned, farmers are concentrating more on other sources than live stock. The many success stories reveal that farming and live stock together contributes for agriculture prosperity.

V. Soil Health Management practices

1. More than 50 per cent of farmers are not at all performing soil testing and 17.8 per cent are doing once in three years. It implies that the major farm input soil health is in dangerous zone. The study observed that neither lease holder nor the land owner is interested in long term soil health management practices.

2. Maintenance of ideal NPK ratio is nil and very poor. For the past two decades the NPK ratio in soil has been increasing many folds due to heavy consumption of chemical fertilizers. The usage of total NPK has increased from 69.84 per cent in 1991-92 to 94.94 per cent with a growth rate of 35.94 per cent where as in 2008-09 the growth rate stood at 35.43 per cent over the year 1999-00.

3. Within a period of two decades Nitrogen (N) and Potash (K) increased by nearly 3 per cent and 2 and half times respectively where as Phosphate (P) has been doubled. This adversely affects not only crop yield but also the food and nutritional security.

4. Very few attempts are being made to increase the soil fertility. Even though the government has created awareness and extended financial help for the establishment of vermi compost units, the study didn’t find any improvement in this regard. Only in
Bandi Atmakur mandal the farmers are using vermin compost. A good number of vermi compost units are operating in this mandal.

VI. Farm Mechanization

1. Agriculture uses almost 85 per cent of the total water available in the country. With the existing practices, water-use efficiency may seldom increase to 40 per cent, while technological potential exists to raise it to about 90 per cent. Inefficient use of water leads to inefficiency of all other resources/inputs like seeds, fertilizers etc.

2. The field statistics reveal that tube irrigation is popular. Drip irrigation and usage of sprinklers are relatively very poor compared to tube irrigation. Lack of awareness among the farmers about the advantages of micro irrigation system has put off the usage of micro irrigation system.

3. Majority of the farmers are using tractors followed by manual for land tillage operations.

4. Hand operated sprayers are popular in spite of the widespread usage of tractors. The study observes that the tractors are not utilized to a complete extent expect tillage due to lack of sufficient power in right time.

5. It is observed that crop trampling is done by sickle and animal and mechanical power operated trampling. It indicates that farm mechanization is in the nascent stage.

6. Inadequate power supply is a major problem and irregular supply of power to existing wells due to frequent power failures is compounding the problem.

7. Adequate awareness is not created about the importance of farm mechanization in improving the agriculture productivity.
VII. Financial Management

1. Field level investigations pointed that still non-institutional credit is playing dominant role than institutional credit. There is a significant difference among the five categories as between across the five categories of non-institutional sources of credit.

2. Every year farmers are carrying forward the debt amount. It is almost all equal to the marginal, small and semi medium farmers. These farmers do pay one fourth of their income as interest. The cumulative debt amount compels them to take non-institutional sources again and again.

3. Farmers are not utilizing the Kisan Credit Cards well and very few are going for KCC with Personal insurance. The study observed lack of financial literacy and awareness in this regard. Land development loans are not utilized well by the farmers.

4. There is a poor awareness among the bankers about the activities to be financed under On Farm Development (OFD) activities. OFD needs to be considered carefully.

5. The study felt lack of coordination among Agriculture Department, Banks and DTC in estimating the scale of finance at one side and inefficient cultivation practices of farmers at another end.

6. Many farmers reported that crop seasons declared by bank are not sufficient to get remunerative prices. In many instances farmers miss subsidy benefits like zero interest or 25 paisa interest due to delayed loan repayments.

7. Many farmers repay loans not only by sale of farm produce but also by taking another loan or sale of assets. The study felt that low or negative returns coupled with small and marginal farmers’ tenancy deepens the agriculture crisis.

8. Lack of group cohesiveness could be observed among farmers. Due to this, Joint Liability Groups and Business Correspondent/Business Facilitator models are limited to strategic level. Only women SHGs and Podupulakshmi gained a momentum in the process of financial inclusion.
VIII. Agricultural Insurance

1. Most of the irrigated land is under tube/canal irrigation system. So it is hard to get insurance claims generally in this area. But all farmers have joined the NAIS due to the compulsion of financial institutions. Many respondents informed that in the case of crop failure the entities are transferring the accountability to other entities instead of accelerating the claim procedure. As the insurance claim assessment procedure considers mandal as one unit, the farmers are approaching many other agencies for relief.

2. More than three fourth of the farmers are not satisfied with the insurance mechanism. They need the coverage of more crops, individual assessment or village as one unit and speedy claim settlement. These facts support our research hypothesis to a greater extent – “Performance of National Agricultural Insurance (NAIS) is not in conformity with the objectives of its establishment”.

3. In the farmers interaction session many farmers are of the opinion that the factors of insurance must be rain fall and revenue. In practice, the claim procedure is based on financial reports. They further said that financial report alone has become the decisive factor for settling insurance claims.

4. Many farmers gave preference to rythu sabhalu, TV and newspapers as media to promote agriculture insurance. For personal insurance the most preferred option is insurance at door steps.

5. The farmers are of the opinion that they are ready to bear the crop loss at ten per cent but they demand for peril type as multiple. Moreover they favored that the insurance orientation must be crop and market sensitive. The field level remarks indicate that the promotion of insurance via proper channel farmers utilizes the Farmers Income Insurance Scheme to a complete extent.
IX. Farm Produces Management

1. Village traders and mandies are the major sources to purchase the farm produce in this district. This fact is consistent with the farmers’ response to loan on WHR. Many farmers are responded with nil and rare to loan on Warehouse Receipts. The bankers responded to the same query with always. This contradiction confirms the structural anomalies exits in loan on WHR. The farmers further stated that indebtedness and lack of direct purchase centers are the main causes for not taking the WHR.

2. Many farmers reported that the bankers’ initiatives in contract farming, market and logistic guidance for getting remunerative is very poor. In some areas bankers are of the opinion that it is nil.

X. Farm Crisis

1. During the field level study the farmers explored many reasons for the farm crisis. The reasons are categorized into five factors. They are low and negative returns, lack of institutional credit, insufficient subsidy management, increasing input cost and social and economic insecurity.

2. Farmers gave more weightage to every factor. It shows the severity of agriculture crisis. That’s why the impact of agriculture crisis is manifold. The agriculture crisis is highly reflected in the form of indebtedness due to low and negative returns. The first four factors are related to policy concern. These four factors strongly affect the social and economic insecurity aspect of farmers either directly or indirectly.

3. The study observed that these five factors hit the farmers’ distress and suicides.
XI. Test of Significance on Few Perceptions

Chi Square Test of significance has been applied on few perceptions in order to know these perceptions association with farmers’ category and farmers’ education.

1. The association between farmers’ category and reasons for not taking WHR perception are significant at 5 per cent level for four perception viz., Illiteracy, Indebtedness, Lack of Direct Purchase Centers, Lack of Bankers initiative. The farmers’ education category also agrees with the same level of significance for the perceptions on Warehouse Receipts.

2. The association between farmers’ education category and reasons for farm crisis perceptions are significant at 5 per cent level for all perceptions except the increasing input cost. The farmers’ education category also agrees with the same level of significance for all the perceptions on Warehouse Receipts.

XII. Conclusions on Direct Personal Investigation

A. Farmers’ Responses

1. Neither the land owner nor the tenant farmer is interested in the long term soil health management practices. Moreover soil health is not the criteria for getting crop loan.

2. The reasons for the farmers’ insolvency are crop failure in the form of seed failure, weather failure, irrational subsidy management, no punishment for the violation of ECA orders to input dealers, virtual disaster relief and inflation pushed poverty.

3. There is no official recognition of tenancy; consequently the tenant farmers are excluded from a string of public benefits like insurance claims, subsidy, and debt waiver scheme and government relief during crop loss.

4. Many farmers are of the opinion that more crops are to be covered under the agriculture insurance followed by village should be considered as unit instead of mandal for claim procedure.
5. Non institutional credit still plays dominant role in agriculture especially in marginal and small farmers' category. These farmers get caught in the debt trap due to lack of tenancy rights, low/negative returns, and volatility in input and farm produce prices.

B. Bankers’ Responses

1. The guidelines are not given by the RBI and Government for weightage maintenance to good soil health management practices in order to sanction crop loan.

2. Getting verification from 1B form regarding land entitlement is the main problem for sanctioning crop loan. The process gets delayed due to the unavailability of updated land records.

3. Low productivity, mounting input costs and price volatility in market prices of farm produce and weather failure are the reasons for agriculture crisis.

4. The impact of Debt Waiver & Relief Scheme was severe on loan recovery. Many farmers are reluctant to pay the loan and respond with questioning the use of repayment. The prompt payers got only Rs.5, 000/- as incentive where as the willful defaulter got complete waiver.

5. Due to canal irrigation, agriculture insurance failed to gain acceptance by farmers. Bankers felt that village should be considered as a unit in claim assessment procedure.

6. Financial illiteracy, financial indiscipline and lack of group cohesiveness still exist among farmers. These attributes stimuliates farmers to come out from banking hold.

6.3. Hints to Policy Makers hint

Based on the conclusions drawn the following hints can be given to policy makers.

A. Suggestions/Hints to policy makers – At Macro Level

1. The Government of India and RBI should formulate policies and guidelines to extend the concept of social control in banking industry even for the maintenance of ideal N: P: K ratio and good soil health management practices. It must be made a mandatory
exercise while sanctioning crop loans. These measures will reduce the input cost, increase the agriculture productivity and protect the natural resources/environment. Protection of natural resources and passing them on to the future generations is every body’s business. It is believed that banks are the right catalysts to create a momentum for the development of eco-friendly farming system.

2. The over exploitation of the groundwater has led to a drop in the water-table. Inequity in access or availability of water is the major problem for agriculture. Water economy becomes vital in future. Policies should be formulated by government and RBI for compulsory adoption of drip irrigation system and usage of sprinklers for obtaining agriculture finance. Besides, tanks, canals and wells are to be renovated. Watershed development programmes should start at village level. These measures will harness rain water to a greater extent which in turn prevents the drop in water-table. In this aspect banks should give more weightage on watershed development programmes at village level while sanctioning loans for the development of irrigation system.

3. Crop Insurance is a very imperative risk mitigation mechanism especially for marginal and small farmers. So crop insurance should cover both crop and market risks. Added to that the crop insurance should apply for all crops instead of notified crops and village should be considered as the unit for loss assessment.

4. KCC with personal insurance must include health insurance. Crop loans are to be sanctioned via these two insurance facilities. Risk in agriculture coupled with social and economic insecurities causes the agriculture crisis. KCC linked with personal and health insurance reduces the financial burden on farmers to some extent.

5. There are a large number of PACS and primary cooperatives located in rural areas where there are no other financial service outlets. These cooperatives functions in a
democratic manner. Such PACS could provide valuable services to the marginal, small and tenant farmers if they get access to a commercial bank on an ongoing basis. RBI has already listed cooperatives as eligible institutions under the BF/BC Model.

6. Banks are not willing to finance tenant farmers/oral lessees as they do not provide any security like recorded tenancy and ownership rights for raising the crops. A corpus fund must be set up by the government and monitored by commercial banks as a risk mitigation mechanism. These types of funds enable banks to lend to Joint Liability Groups thereby reduce marginal, small and tenant farmers dependence on informal sources of credit.

7. Computerization of land records leads to systematization of land records. On line availability of 1B form details regarding the land entitlement facilitates the bank’s loan appraisal, sanctioning and recovery process. Transaction processing cost will be reduced for bankers and farmers.

8. Policies should be made by government for physical and logical partition of land records. The physical partition (Parent Table) contains details of the land entitlement and the logical partition (Child Table) holds the details of the tenants for official recognition of the tenancy just to avail the range of benefits of institutional credit to tenant farmers. Strong political will and transparency in administrative drive is required to accomplish this task.

9. Money lenders and businessmen (input dealers) are strong and powerful players in non-institutional financing. To break their dominance, the government policies should be changed via its crop loan disbursement. Instead of giving crop loans in cash, payments should be made directly to input dealers via farmers account. This method regulates the input prices and to that extent farmers’ dependence on non-institutional sources will be reduced. Besides, misuse of crop loans can be eliminated.
10. Government should encourage cooperative farming by giving its surplus land tillage rights to landless and marginal farmers as a part of community development programme. These programmes should be organized on the lines of Sangha Krishi where millions of women are farming nearly ten millions of land as part of Kerala's anti-poverty programme Kudumbashree. Neighborhood Groups (NHGs) are the primary unit of Kudumbashree with each NHG consisting of ten to twenty women. These NHGs transform into Area Development Society (ADS) and this in turn associated into Community Development Societies (CDS) at the panchayat level. The NHGs are different from Self Help Groups and these are structurally linked to the local self government institutions and concentrate on local development and needs and aspirations of communities.

11. Commercial Banks should actively engage in financing the NHGs not only to create food economy but also for setting up of backward linkages to SHGs for their income generating activities.

12. Commercial Banks should make efforts to ensure that all farm produce is subjected to primary and if possible secondary value addition locally as a part of credit linked marketing services instead of sanctioning loans on Warehouse Receipts. These types of services stimulate the non-loan farmers to get into the banking hold.

13. As part of capacity building, the commercial banks should upload their crop loan details on the lines of core banking. This facilitates for all banks to derive all types of crops total production in kharif and rabi. This updated information is very helpful to bankers to link the farmers with direct purchase centers with optimum logistics. It provides avenues for farmers to enter into contract farming. This type of technical inclusion makes loan recovery easier.
14. To offer credit plus services and enhance the efficiency of credit, a separate cell should be established in rural development division to join with agri-business clinics and corporate engaged in agricultural activities, to provide inputs, extension services and market linkages to the bank’s borrowers.

15. Problems in issuing the crop loan, crop insurance and the tenancy rights related issues could be observed at field level. A constant follow up is possible if the agricultural direct finance is in local hands. PACS are the best alternate in this aspect. Commercial banks can use the PACS as front end for their agricultural direct finance disbursement. Agro industries promotion, infrastructure development, credit linked marketing services, enhancing productivity and income are as important as direct agricultural finance. These services are directly taken up by the commercial banks.

B. Suggestions/Hints for policy makers – At Micro Level

1. On Farm Development activities need to be considered carefully. Bankers should finance more for land development activities.

2. Banks should finance for adequate diesel retail outlets especially in rural areas to encourage farm mechanization.

3. Kurnool District is one of the major producers of various horticulture crops. Even fresh production also needs cold storage support for these crops. There are two cold storage plants in the district with a combined capacity of about 10200 MT. Bankers should think about the possibilities for financing more cold storage facilities particularly with smaller capacity.

4. Only 32 per cent of the milk produced in the district is handled by organized diary sector according to the milk union data. At least two milk processing plants of 10000 liters capacity are required to get 5 per cent of produced milk into organized sector.
Bankers should think about their financing in this regard because income from livestock is one of the major sources of income for farmers.

Multilevel Agency approach is needed to deal with these problems in agriculture. But all agencies must use the banking services to discharge their services. Due to this reason Government introduced the concept of social control with a view to serve better the needs of development of the economy, in conformity with national priorities and objectives. Remarkable changes could be observed in the development of economy after nationalization. Commercial banks have become the hub for financing rural development activities after nationalization. Now commercial banks should extend the social control concept for the promotion of eco-friendly farming system. To accomplish this task new norm must be introduced in the commercial banks credit delivery mechanism to the agriculture sector. There is a need to attempt the problems in agriculture finance in this direction as a part of their Corporate Social Responsibility.

6.4. Avenues for future research

There is ample of scope for future research in this domain. They are Agriculture Insurance, Strengthening of Primary Agriculture Credit Societies, Redesigning the functions of Public Distribution System, Financial Inclusion, Technology Inclusion, Role of Commercial Bank in credit linked marketing services, Contract Farming and Commercial Banks role in increasing the agriculture productivity and income.