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# **Impact Evaluation of Farm Debt Waiver Scheme on Farmers' Livelihood in Uttar Pradesh**

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## Preface

In terms of farmers income the state of Uttar Pradesh ranks 13<sup>th</sup> among the states of India. The average income of a farmer in Uttar Pradesh is INR 4,923 per month which is lower than the National average income of INR 6,426 per month and is also less than one third of the average monthly income of INR 18,059 of a farmer of Punjab. Also an average monthly consumption expenditure of INR 6,230 pushes an average farmer of Uttar Pradesh into a deficit of INR 1,307 in each month. Keeping this hardship in view the Government of Uttar Pradesh chalked out a plan to provide timely relief to the distressed farmers. Thus formulated a crop loan redemption scheme for marginal and small farmers and named it as Farm Debt Waiver Scheme. This scheme is an investment for empowering the marginal and small farmers to alleviate their hardship and rejuvenate their agriculture. Also the increased dependence of farmers on credit to meet out the rising cost of cultivation and decreased returns due to additional costs have been identified as the main reasons for indebtedness of farmers in the State of Uttar Pradesh. Considering the options carefully, the Government of Uttar Pradesh under the “Farm Debt Waiver Scheme” is committed to redeem crop loans up to INR one lakh of individual marginal and small farmers whose crop loans were disbursed by lending institutions in line with the RBI norms.

This study reveals that leasing-in land was commonly practised by marginal farmers for their livelihood. There was not any change after redemption of debt in their primary occupation. The impact of scheme was higher on marginal farms and on small farms there was nominal change in the operational area. The capital investments on irrigation structures as well as farm buildings had increased considerably after redemption of debt due to the farm debt waiver scheme. There was clear impact on rearing of crossbred cattle and buffaloes after redemption of debt. On cropping pattern there was not any impact of the scheme. The operational cost of cultivation had been found to have increased tremendously as an effect of redemption of debt. There was considerable impact of scheme on production and disposal pattern on all the sample farms. There was a change by 22.72 percent in the household expenditure on all the farms after redemption of debt. In credit structure there were considerable changes on all the farms after redemption of debt. The change in amount borrowed as well as outstanding was (-) 25.28 percent which confirms the impact of the scheme. Expressing their opinion regarding the impact of the scheme on their indebtedness,

the maximum i.e. 52 percent of farmers had viewed it to be moderate after the implementation of the scheme.

This study has been conducted by Dr. Rajendra Singh, Ex. R.O., AERC, Allahabad who supervised sampling and field survey after testing the schedules and thereafter supervised analysis of data and drafted the report. Dr. H.C. Malviya, Sri R.S. Maurya conducted field survey and posting and analysis of data. Sri Hasib Ahmad and Sri S.N. Shukla also conducted field survey and posting of data. Sri Ovesh Ahmad typed the draft report. Our thanks are due to the Director Agriculture, Director Statistics, Joint Director Statistics, Uttar Pradesh and District Agriculture Officers of selected districts who facilitated the availability of secondary information and provided itinerary for the completion of this study. Our thanks to all others who cooperated and assisted in completing this study.

Any comments or suggestions for improvement in the report of this study will be acknowledged thankfully.

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# Summary

## Introduction

In terms of farmers income the state of Uttar Pradesh ranks 13<sup>th</sup> among the states of India. The average income of a farmer in Uttar Pradesh is INR 4,923 per month which is lower than the National average income of INR 6,426 per month and is also less than one third of the average monthly income of INR 18,059 of a farmer of Punjab. Also an average monthly consumption expenditure of INR 6,230 pushes an average farmer of Uttar Pradesh into a deficit of INR 1,307 in each month. Keeping this hardship in view the Government of Uttar Pradesh chalked out a plan to provide timely relief to the distressed farmers. Thus formulated a crop loan redemption scheme for marginal and small farmers and named it as Farm Debt Waiver Scheme. This scheme is an investment for empowering the marginal and small farmers to alleviate their hardship and rejuvenate their agriculture. Also the increased dependence of farmers on credit to meet out the rising cost of cultivation and decreased returns due to additional costs have been identified as the main reasons for indebtedness of farmers in the State of Uttar Pradesh. Considering the options carefully, the Government of Uttar Pradesh under the “Farm Debt Waiver Scheme” is committed to redeem crop loans up to INR one lakh of individual marginal and small farmers whose crop loans were disbursed by lending institutions in line with the RBI norms. With the following main objectives:

## Main Objectives of the Study:

This study was undertaken with the following specific objectives:

1. To examine socio-economic characteristics of the beneficiaries under Farm Debt Waiver Scheme.
2. To study the nature and extent of indebtedness of the beneficiaries.
3. To put forth the perceptions of beneficiaries about the likely impact of scheme on their livelihood.



## **Research Methodology**

### **Coverage of the Study**

The present study is confined to the Western Region of Uttar Pradesh where from the three distinct agro-climatic zones areas were selected randomly to cover and represent the whole Western Region of Uttar Pradesh. Such agro-climatic zones thus, undertaken were namely (1). Western Plain Zone which is located between the Ganga and Yamuna in the west and includes Saharanpur, Muzaffar Nagar, Meerut, Ghaziabad and Bulandshahar districts. (2) Mid-Western Plain Zone represents mainly Rohilkhand Division which embraces Bijnor, Moradabad, Rampur, Bareilly, Pilibhit and Badaun districts. (3) South-Western Semi-Arid Zone comprises Aligarh, Etah, Mainpuri, Mathura and Agra.

### **Sampling Design**

Three representative districts were selected randomly from each of the three distinct agro-climatic zones selected from the Western Region of Uttar Pradesh. These districts were namely (1) Bulandshahar from western Plain zone, (2) Moradabad from Mid-Western Plain zone and (3) Agra from south Western Semi-Arid zone. From these three districts thus, selected, two blocks from each selected district were selected randomly. Thereafter two clusters of villages from each block thus selected, were undertaken randomly for the field survey. Thereafter, 15 beneficiaries of Farm Debt Waiver Scheme were randomly chosen from each of the clusters of village/villages. Thus, the total samples were comprised of 180 beneficiary farmers.

## **Major Findings and Policy Implications**

### **Major Findings**

- On 01-04-2019 the total farmers in Uttar Pradesh were reported as 44,54,064 beneficiaries under Farm Debt Waiver Scheme and the total amount paid was estimated as Rs. 24,821.23 Cr. as a whole.

- The maximum debts were waived off among marginal farmers and among small farmers only one fourth of the same was waived off.
- The maximum i.e. more than 26 percent of the sample farmers were illiterates and among literates the maximum i.e. 24 percent were matriculates only. The farmers having graduates and post graduates degrees were only about 6 percent.
- The status of education among both marginal as well as small farmers in the area under the study was much lower than the national average.
- The entire land, both owned and leased-in land, on all the sample farms was irrigated. No leasing-out land was practiced by sample farmers in the area under study.
- There was not any change in dairying as primary occupation after the redemption of debt. Non-agricultural labourers were not reported among small farmers.
- The annual household income had increased after redemption of debt on all farms. The small farmers were benefited significantly in the area under study.
- There was not any change in operational land on marginal farms. On small farms there were only nominal changes after the redemption of debt.
- The capital investments on machine, implements, irrigation structures and cattle sheds had increased after redemption of debt due to the effect of Farm Debt Waiver Scheme in the area under study. This confirms the significant impact of scheme on capital investments on marginal farms.
- The capital investments on tractors, trolleys, cultivators and electric motors had decreased after redemption of debts on all farms showing adverse effect of the scheme.
- Among the buffaloes reared by marginal farmers there was tremendous change in the value of adult female buffaloes after redemption of debt which confirms the impact of scheme.
- On an overall basis, on the crossbred cattle and buffaloes reared by all the sample farmers there was clear impact of farm debt waiver scheme in the area under study affecting the total livestock inventory.
- On the cropping pattern of the sample small farms there was minor change in the crop coverage which confirms the impact of scheme in the area under study.
- The operational cost of cultivation on marginal farms during kharif season had increased considerably after redemption of debt showing clear impact of the scheme.

- In Rabi season too the operational cost of cultivation on marginal farms had increased by 31 percent after the redemption of debt which confirms the impact of debt waiver scheme on marginal farms.
- On small farms too, there were considerable changes in the operational cost of cultivation during kharif and rabi seasons due to the implementation of farm debt waiver scheme.
- On all sample farms also there was 13 percent increase in the cost of cultivation which shows a clear impact of farm debt waiver scheme in the area under study.
- On all sample farms too there was considerable impact of farm debt waiver scheme on production in the area under study.
- The percentage change by 13.43 percent in the domestic expenditure of marginal farmers after redemption of debt confirms the clear impact of debt waiver scheme in the area under study.
- The domestic expenditure on small farms had changed by 6.85 percent after redemption of debt which confirms the impact of scheme on small farmers too.
- There had been a change by 11.65 percent in the domestic expenditure of all the sample farmers after the redemption of debt on an overall basis in the area under study.
- There was clear impact of the scheme on credit structure of the scheme on credit structure of the marginal farmers as the change in amount borrowed was by 13.21 percent and in outstanding loan amount by 9.20 percent in case of loans from cooperative banks.
- Regarding annual change in saving pattern on marginal farms one farmer was reported to have taken LIC Policy before redemption of debt and which he continued after redemption too, but the details were not given by the farmer. Hence, the change was 0.00 percent. No any other means of saving was reported on any of the marginal farms.
- On the sample small farms too only one farmer was reported to have taken LIC Policy without giving details of it and which he continued after redemption too. No other means of saving was reported on small farms too. Hence, change was nil.
- No any means of saving was reported by any of the sample farmers in the area during the survey of the study.

- The total amount borrowed per farm in case of marginal farmers was Rs. 1,00,000 and the outstanding loan amount was Rs. 1,07,000 per farm before the redemption of debt.
- While after redemption of debt the amount borrowed from banking institutions was Rs. 71,054.45 and outstanding loan amount was Rs. 76,028 per farm.
- The percentage change in the amount borrowed was by (-) 28.95 percent and in outstanding loan amount was by (-) 28.95 percent after the redemption of debt showing the decrease in debt on marginal farms.
- As regards the extent of debt waived on small farms, the amount borrowed per farm was Rs. 74,558 and the outstanding loan amount was Rs. 79,777 after redemption of debt on all farms.
- Therefore, the percentage change in amount borrowed as well as in the amount outstanding was (-) 25.28 percent which confirms the impact of debt waiver scheme implemented in Uttar Pradesh.
- On an overall basis out of 180 sample farmers about 1.11 percent had told that getting benefits of scheme was time consuming, 8.88 percent told it cost incurring, 24.44 percent had told that many mandays were lost in getting benefits of scheme.
- Also 12.77 percent of all sample farmers had faced humiliation and 32.77 percent had viewed to face other constraints such as bribe etc. in the area under study.
- About perceptions on farm debt waiver scheme in Uttar Pradesh, out of 141 sample marginal farmers the maximum i.e. 37.59 percent had responded that there was not any reduction in agrarian stress, 14.18 percent told it less, 21.99 percent told it moderate, 26.24 percent told it low and no one told it huge.
- On the 39 sample small farms the change in amount borrowed was by (-) 11.87 percent and in outstanding loan amount also it was (-) 11.87 percent after redemption of debt. This confirms the impact of debt waiver scheme in the state of Uttar Pradesh.
- On all the sample farms the change in amount borrowed as well as in the amount outstanding was (-) 25.28 percent. This confirms the impact of debt waiver scheme in Uttar Pradesh.
- About constraints/difficulties confronted in getting the benefits of scheme, 21.98 percent of marginal farmers had told that many mandays were lost, 26.24 percent told it cost incurring, 14.18 percent responded lot of humiliation and 37.58 percent had viewed to confront bribing etc.

- Among small farmers 5.12 percent had told it time consuming, 38.46 percent told it cost incurring, 33.33 percent had told that many mandays were lost, 7.69 percent told to confront humiliation and 15.38 percent had faced bribing etc.
- On all sample farms, 100 percent had responded it time consuming, 8.88 percent cost incurring, 24.44 percent had told that many mandays were lost, 12.77 percent had faced humiliation and 32.77 percent viewed to face bribe etc.
- As regards suggestions, 37.59 percent of the marginal farmers responded that there was not any reduction in agrarian distress, 14.18 percent told it less, 21.99 percent told it moderate, 26.24 percent told it low and no one told it huge.
- About increased farm profitability 12.05 percent of marginal farmers responded that there was not any increase, 9.22 percent told it less, 39.72 percent told it moderate, 34.75 percent told it low and only 4.76 percent had told it huge.
- As regards the decreased indebtedness 4.96 percent of marginal farmers had told it no, 21.28 percent told it less, 48.94 percent told it moderate, 17.02 percent told it low and only 7.80 percent had told it huge.
- On small farms 33.33 percent had told that there was not any reduction in agrarian distress, 5.13 percent told it less, 30.77 percent told it moderate, 30.77 percent told it low and no one told it huge.
- 33.33 percent of small farmers had also expressed their views that loans taken from money lenders should also be waived-off.
- On all farms 36.67 percent had said no about the reduction in agrarian distress, 12.22 percent had told it less, 23.89 percent told it moderate, 27.22 percent told it low and no farmer had told it huge.
- About increased farm profitability, 12.78 percent had said no, 8.89 percent told it less, 38.33 percent told it moderate, 35.56 percent had told it low and 4.44 percent told it huge.
- About decreased indebtedness, 5.56 percent had said no, 18.33 percent told it less, 52.22 percent had told it moderate, 17.78 percent told it low and only 6.11 percent had told it huge in the area under study.

## **Policy Implications**

Based on the findings the following Policy Implications are given.

1. 100 percent marginal farmers must be benefited under farm debt waiver scheme and among small farmers only the farmers having poor resources or not having adequate resources may be benefited.
2. Status of education among both marginal and small farmers must be elevated for proper awareness about the Government Schemes for their benefits.
3. Marginal and small both types of farmers must be encouraged and assisted to shift from their primary occupation of agriculture to other allied and secondary occupations for doubling their incomes.
4. The subsidies on farm machines particularly tractors, electric motors, rotavators, diesel engines and power threshers must be increased to benefit more genuine farmers.
5. Both marginal and small farmers must be facilitated and encouraged for rearing crossbred cattles, buffaloes and improved breeds of goats on their farms.
6. Both marginal and small farmers must be provided incentives to diversify their farms for increasing the cropping intensity from 200 percent to atleast 300 percent.
7. Both types of farmers must minimize their operational cost of cultivation by opting for the modern techniques of farming as per their available resources.
8. For profitable disposal of their produce marginal and small farmers must adequately sensitized to take safeguards against mal-practices or illegal demands from any quarter.
9. Both marginal and small farmers must minimize their domestic expenditures on litigations and other consumptions.
10. For better credit facilities RRBs must be strengthen in the far off and remote villages to benefit poor farmers.
11. Farm Debt Waiver Scheme must be implemented transparently avoiding discriminations with the farmers who repay installments of loan regularly.
12. Loans taken from money lenders must also be waived off by the Government.
13. To alleviate indebtedness farm profitability of marginal and small farmers must be increased through modern and improved techniques of farming.

## Chapter-I

### Introduction

#### I.1. Background of the Study

Around 70% of the total population of Uttar Pradesh depends directly or indirectly on Agriculture and allied activities. Apart from it, the farmers of this state are economically extremely backward and, as a result, among the 18 major states of India the state of Uttar Pradesh ranks 13<sup>th</sup> in terms of farmer's income. The average income of a farmer in Uttar Pradesh is INR 4,923 per month which is lower than the National average income of INR 6,426 per month and it is less than one third of the average monthly income of INR 18,059 of a farmer of Punjab. Also an average monthly consumption expenditure of INR 6,230 pushes an average farmer of Uttar Pradesh into a deficit of INR 1,307 in each month.

Among its endeavors towards improving the agricultural eco-system the Government of Uttar Pradesh has taken many initiatives like adoption of scientific approaches to improve productivity, reduction in post harvest wastages, production of skills and agricultural infrastructural development and encouraging agro as well as food processing. To align with these initiatives and to provide a timely relief to the distressed farmers the Government of Uttar Pradesh has formulated a crop loan redemption scheme for marginal and small farmers. This scheme is an investment for empowering the marginal and small farmers to alleviate their hardship and rejuvenate their agriculture.

As regards the theme of the present study, the "Farm Debt Relief Scheme" has been announced recently by the major states like Rajasthan, Maharashtra, Punjab and Uttar Pradesh. The Green Revolution has enabled the states of Punjab, Haryana and Western Region of the state of Uttar Pradesh to achieve the solid and virtual increase in production and productivity of staple food grains with the adoption of new technology in agriculture in respects of HYV-seeds, fertilizers and adequate irrigation water with the price support and other desired infrastructure.

It has been observed that since 1980s the impact of technology has adversely resulted into stagnation in yield, absorbitantly rising costs of inputs and shrinking profit margins. Thus, the increased dependence of farmers on credit to meet out the rising cost of cultivation and

decreased returns from additional costs has mainly caused the indebtedness of farmers in the state.

Under the “Farm Debt Relief Scheme” the Government of Uttar Pradesh, considering the options carefully, is committed to redeem crop loans up to INR one lakh of individual marginal and small farmers, whose crop loans were disbursed by lending institutions on or before 31<sup>st</sup> March, 2016. This redemption would be done after adjusting the repayments/credits received from the farmer during the Financial Year (FY) 2016-17. The definitions of the terms used in this scheme are given in Table-I-1

**Table-I-1**  
**Definitions of Terms used in Farm Debt Waiver Scheme by Government of Uttar Pradesh**

Sl. No.	Terms	Definition
1.	Marginal Farmer	A farmer owing agricultural land upto 1 hectare in the state of Uttar Pradesh with name recorded on the record of rights (Khatauni). It would include total agricultural land of the farmer located within the state of Uttar Pradesh.
2.	Small Farmers	A farmer owing agricultural land more than 1 hectare and upto 2 hectares in Uttar Pradesh with name recorded on the record of rights (Khatauni). It would include total agricultural land of the farmer located within the state of Uttar Pradesh.
3.	Crop Loan	A loan given by a lending institution in the form of cash credit for raising crop.
4.	Scale Finance	As decided by the District Level Technical committee of the respective districts.
5.	Lending Institution	Following are covered (through their branches in U.P. and Financing in U.P.); Scheduled Commercial Banks, Regional Rural Banks, Cooperative Banks (Excluding Urban Cooperative Banks)
6.	Bhulekh	Web application ( <a href="http://www.upbhulekh.gov.in">www.upbhulekh.gov.in</a> ) developed by NIC for maintaining record of lands (such as owner details, plot details, etc.) in the state of Uttar Pradesh.
7.	Tehsil	Administrative division denoting a sub-district.
8.	Khatauni	The record of rights of a land owner.
9.	Redemption	Redemption in consonance with Uttar Pradesh GO No. 134(B)/01(B)/SVKN-6/2017, dated 7 <sup>th</sup> April, 2017.
10.	Statement of Redemption	The statement of adjusted crop loan account given by the lending institution to the farmer with the signature of the manager of the lending Institution.
11.	Information letter	The letter signed by the chairman of the District Level Committee (DLC) and passed in appropriate awareness campaigns to the farmers, who are yet to receive redemption amount.
12.	Empowered Committee	The committee constituted under the Chairmanship of Chief Secretary, Government of Uttar Pradesh vide GO No. 134(B)/01(B)/SVKN-6/2017, dated 7 <sup>th</sup> April, 2017 and order dated 9 <sup>th</sup> May, 2017.



### **About Farm Debt Waiver Scheme of Uttar Pradesh**

The Government of Uttar Pradesh had announced to provide loan redemption upto INR 1 Lakh to individual marginal and small farmers whose crop loans were disbursed by lending institutions on or before 31<sup>st</sup> March, 2016. For the purpose of calculating the loan redemption amount the outstanding amount (including interest) as on 31<sup>st</sup> March, 2016 would be reduced by the repayments/credits received from the farmer during the financial year (FY) 2016-17 after 31<sup>st</sup> March, 2016 and till 31<sup>st</sup> March, 2017 without taking into account the money withdrawn by the farmer or new sanctions by the lending institutions during FY 2016-17. The criteria fixed for the implementation of Farm Debt Waiver Scheme in Uttar Pradesh were as follows:-

- (i) The farmer taking the loan, bank branch (through which the loan has been granted) and the farmer's owned land, all shall be in the state of Uttar Pradesh.
- (ii) The total area of all the lands owned by the small farmers would not exceed 2 hectares and by the marginal farmers would not exceed 1 hectare.
- (iii) The farmer whose crop loans were restructured due to occurrence of natural calamities in accordance with the guidelines of the Reserve Bank of India (RBI) will be covered under this scheme.
- (iv) Crop loans taken by the farmers for the cultivation on government leased land as per the Revenue records of Government.

### **Criteria for Loans to be Excluded from the Farm Debt Waiver Scheme are as follows:**

- (i) Crop loans availed by Self Help Groups (SHGs) and joint Liability Groups (JLGs).
- (ii) Loans to farmers by companies or corporate guaranteed loans even though disbursed by lending institutions and loans given by other institutions like Trusts, Partnerships, Micro Finance Institutions (MFIs)/ Urban Cooperative banks (UCBs).
- (iii) Loans extended to sugar factories for onward lending to member farmers.
- (iv) Term loans given for any purposes.
- (v) Loan or cash credit accounts given for fisheries or any kind of activities allied to agriculture (excluding crop loan).
- (vi) Any crop loan taken by particular farmer against the same piece of land for the same purpose but from more than one bank would not be eligible for any redemption. However if the farmer has availed the loan from multiple banks for multiple crops

against the security of different agricultural lands, the redemption would be given on proportional basis, subject to a maximum aggregate of NRI lakh.

- (vii) Cases where money withdrawn from the Kissan Credit Card (KCC) account has been mis-utilized or not used for crop purposes but deposited as any term / recurring deposit money.

### **Non-Performing Assets (NPAs)**

Crop loans of individual marginal and small farmers classified as NPAs by the lending institutions in line with the RBI norms would form part of the loan redemption scheme for NPAs (Non-Performing Assets). The following eligibility criteria were fixed for NPAs:

- (i) In case of NPAs, loans prescribed under the scheme, disbursed upto 31<sup>st</sup> March, 2016 would be taken into consideration.
- (ii) Recovery charges while calculating the outstanding balance for NPAs accounts will not be the part of the eligible amount.
- (iii) The redemption amount for NPA loans would be upto INR 1 lakh.
- (iv) A separate scheme for redemption of NPAs would be brought after negotiation with the banks.

### **I.2. Need for the Study:**

Several studies conducted in the past have revealed that indebtedness was the main reason for farmers suicide in the major states of India. In the state of Uttar Pradesh the average income of farmers was estimated as INR 4,923 per month. This was lower than the national average income of INR 6,426 per month and it was less than one third of the average monthly income of INR 18,059 of Punjab's farmer. Moreover, an average monthly consumption expenditure of INR 6,230 compels an average farmer of Uttar Pradesh into a deficit of INR 1,307 every month. Therefore, considering this grave situation and clear agrarian distress among the marginal and small farmers, particularly in the state of Uttar Pradesh, the government of Uttar Pradesh has announced the "Farm Debt Waiver Scheme" for marginal and small farmers in the past recent years. Hence a concurrent evaluation of the impact of this scheme was barely needed to be done to see its likely impact on the livelihood of the beneficiaries of this scheme.

### **I.3. Specific Objectives of the Study:**

This study was undertaken with the following specific objectives:

4. To examine socio-economic characteristics of the beneficiaries under Farm Debt Waiver Scheme.
5. To study the nature and extent of indebtedness of the beneficiaries.
6. To put forth the perceptions of beneficiaries about the likely impact of scheme on their livelihood.

### **I.4. Status of Farm Debt Waiver Scheme in the State of Uttar Pradesh:**

Table-I.2 shows the progress report of the beneficiary farmers under loan waiver scheme as on 01.04.2019 in the state of Uttar Pradesh. This indicates that the total number of non-NPA farmers in the state of U.P. was 34,91,798 on 1<sup>st</sup> April, 2019 and the amount paid to them was estimated at Rs. 21,018.15 Cr. The number of non-NPA loanee farmers was the highest (1,22,270) in Sitapur district with total amount (Rs. 682.68 Cr) against the lowest (9,345) with amount paid (Rs. 72.06 Cr.) in Ghaziabad district. District Kheri ranked 2<sup>nd</sup>, Hardoi ranked 3<sup>rd</sup> and district Bulandshahar ranked 4<sup>th</sup> among Non-NPA farmers. While the total complaints by non-NPA farmers were reported as 487439 and the total amount paid was estimated at Rs. 3,192.04 Cr. in the state as a whole. Among the NPA farmers the total number reported in the whole state of Uttar Pradesh was 4,72,734 and the amount paid was estimated at Rs. 602.12 Cr. The highest number of NPA farmers (16,260) was reported in Bareilly district against the lowest (468) in Balrampur district of Uttar Pradesh. In the whole state of Uttar Pradesh district Bareilly ranked 1<sup>st</sup> (16,260) with total amount paid as Rs. 26.76 Cr., district Badaun ranked 2<sup>nd</sup> (15,737) with total amount paid as Rs. 14.06 Cr. and district Azamgarh ranked 3<sup>rd</sup> (13,221) with amount paid as Rs. 12.20 Cr. The total number of complaints by NPA farmers were reported as 2,093 and the amount of total loan paid was estimated at Rs. 8.99 Cr. in the whole state of U.P. Thus, the total number of farmers in the state of U.P. on 01.04.2019 (44,54,064) were reported as beneficiaries under Farm Debt Waiver Scheme and the total amount paid to them was estimated at Rs. 24821.30 Cr. The related data are given in Table-I.2.

Table-I-2

## Progress Report of Benefited Farmers under Loan Waiver Scheme as on 01.04.2019 (as per Portal)

Sn. No.	District Name	NON-NPA		NON-NPA Complaints		NPA		NPA Complaints		Total Status	
		Number of Farmers	Amount Paid (Rs. In Crore)	Number of Farmers	Amount Paid (Rs. In Crore)	Number of Farmers	Amount Paid (Rs. In Crore)	Number of Farmers	Amount Paid (Rs. In Crore)	Number of Farmers	Amount Paid (Rs. In Crore)
1	Agra	65934	482.89	14091	114.38	9556	15.78	44	0.1	89625	613.15
2	Aligarh	78813	566.1	23858	182.33	4630	8.97	32	0.18	107333	757.58
3	Ambedkar Nagar	37334	191.71	4328	22.18	2514	2.9	17	0.08	44193	216.87
4	Amethi	36427	180.94	2977	14.99	3814	4.36	27	0.12	43245	200.41
5	Amroha	45859	300.16	5191	37.46	3319	3.69	2	0.01	54371	341.32
6	Auraya	24321	130.32	3285	19.84	4127	3.79	16	0.07	31749	154.02
7	Ayodhya	36425	184.28	8815	51.72	4802	6.4	94	0.43	50136	242.83
8	Azamgarh	44606	252.47	4519	28.65	13121	12.2	41	0.13	62287	293.45
9	Badaun	60277	411.66	21499	110.1	15737	14.06	19	0.09	97532	535.91
10	Bagpat	21348	172.44	1985	15.69	1124	3.01	4	0.02	24461	191.16
11	Ballia	48839	216.72	5123	27.62	4891	8.38	41	0.15	58894	252.87
12	Bairampur	38569	233.59	5490	36.1	468	1.53	7	0.02	44534	271.24
13	Banda	49085	311.91	6838	43.53	5321	8.73	37	0.14	61281	364.31
14	Barabanki	95979	553.39	14153	83.56	9771	16.03	87	0.35	119990	653.33
15	Bareilly	66039	400.02	11809	77.49	16260	26.76	97	0.3	94205	504.57
16	Basti	61547	286.71	2095	11.98	3274	2.7	34	0.13	66950	301.52
17	Behraich	84116	569.64	6657	46.82	4473	9.06	80	0.38	95326	625.9
18	Bhadohi	9789	61.85	1846	12.51	3544	3.25	19	0.06	15194	77.67
19	Bijnor	72323	466.79	10324	70.53	7114	10.97	26	0.13	89787	548.42
20	Bulandshahar	87851	668.39	14071	107	5160	10.65	35	0.16	107117	786.2
21	Chandauli	11170	67.86	2158	11.13	6308	4.84	12	0.05	19648	83.88
22	Chitrakoot	20894	121.16	1336	7.52	4650	6.8	7	0.04	26887	135.52
23	Deoria	40759	173.11	4287	23.89	3751	2.02	12	0.04	48809	199.06
24	Etah	43371	293.17	10037	67.03	9728	10.96	15	0.06	63151	371.22
25	Etawah	33979	192.34	3806	25.86	4722	5.39	22	0.1	42529	223.69
26	Farrukhabad	42898	277.65	2614	16.9	7255	12.71	5	0.03	52772	307.29
27	Fatehpur	49452	281.01	1972	13.16	8310	10.22	10	0.05	59744	304.44
28	Firozabad	36750	261.02	8675	62.83	7055	12.14	14	0.06	52494	336.05
29	G.B. Nagar	11153	87.87	3607	31.41	508	1.18	1	0	15269	120.45
30	Ghaziabad	9345	72.06	1064	7.73	909	3.43	3	0.02	11321	83.24
31	Ghazipur	40816	251.39	4731	33.33	10385	12.78	51	0.24	55983	297.74
32	Gonad	81767	521.3	15241	103.02	670	2.28	43	0.23	97721	626.83
33	Gorakhpur	41884	178.28	3660	19.38	11365	7.28	29	0.08	56938	205.02
34	Hamirpur	30023	176.03	4858	26.95	5322	6.26	18	0.08	40221	209.32
35	Hapur	16920	122.31	3634	26.61	1394	3.77	0	0	21948	152.69
36	Hardoi	101214	565.34	10060	66.38	7179	9.81	67	0.34	118520	641.87
37	Hathras	40602	287.1	7348	52.83	6999	10.3	50	0.25	54999	350.48
38	Jalaun	43783	277.13	5441	37.4	7361	6.12	6	0.02	56591	320.67
39	Jaunpur	60520	348.2	8738	55.22	7787	13.83	10	0.03	77055	417.28
40	Jhansi	48161	271.74	6403	37.79	5127	6.53	28	0.1	59719	316.16
41	Kannauj	51283	334.35	5943	41.1	6769	10.16	108	0.47	64103	386.08
42	Kanpur Dehat	45361	238.2	4658	26.12	7904	10.43	19	0.07	57942	274.82
43	Kanpur Nagar	31232	168.02	5428	31.35	6590	7.16	30	0.1	43280	206.63
44	Kasganj	36809	238.91	6991	43.01	7342	7.63	3	0.01	51145	289.56
45	Kaushambhi	19965	123.15	1635	10.97	2715	2.92	5	0.04	24320	137.08
46	Kheri	112869	747.05	19429	136.67	12170	14.24	107	0.5	144575	898.46
47	Kushi Nagar	87090	418.66	8597	47.41	4963	4.55	17	0.07	100667	470.69
48	Lalitpur	36279	212.58	10821	70.79	5747	4.56	22	0.13	52869	288.06
49	Lucknow	31779	184.68	3129	19.88	6546	5.88	19	0.08	41473	210.52
50	Maharajganj	64932	277.17	3343	19.2	11196	5.91	21	0.09	79492	302.37
51	Mahoba	33166	211.09	6215	36.75	5429	5.22	22	0.09	44832	253.15
52	Mainpuri	38001	251.98	4904	31.95	9005	10.4	31	0.17	51941	294.5

53	Mathura	49384	372.43	7620	57.04	13038	21.62	9	0.04	70051	451.13
54	Mau	23309	119.91	2220	13.19	3447	4.45	3	0.01	28979	137.56
55	Meerut	40577	291.49	10322	77.73	3550	8.71	18	0.11	54467	378.04
56	Mirzapur	40346	242.34	5745	36.25	9632	12.1	26	0.13	55749	290.82
57	Moradabad	50725	296.69	3617	22.21	3499	3.31	8	0.03	57849	322.24
58	Muzaffar Nagar	40357	292.32	5119	38.71	4945	11.85	15	0.09	50436	342.97
59	Pilibhit	36008	226.63	5370	36.93	12009	16.98	14	0.09	53401	280.63
60	Pratapgarh	40273	216.01	3399	13.78	12282	9.61	6	0.03	55960	239.43
61	Prayagraj	47942	265.64	3095	20.65	7186	6.55	18	0.1	58241	292.94
62	Raibareli	66661	318.98	4226	21.84	10245	10.2	17	0.06	81149	351.08
63	Rampur	52173	336.08	4578	26.57	8896	11.96	19	0.08	65666	374.69
64	Saharanpur	51024	386.9	12302	90.45	10185	19.28	59	0.34	73570	496.97
65	Sambhai	48033	305.32	13742	92.21	3256	3.24	32	0.16	65063	400.93
66	Shahjahanpur	53250	356.14	5455	39.21	7984	11.21	72	0.24	66761	406.8
67	Shamali	23849	176.21	2664	20.43	2481	5.06	4	0.01	28998	201.71
68	Shravasti	29601	185.12	1944	13.95	1730	3.34	4	0.02	33279	202.43
69	Sidharth Nagar	37218	173.52	2630	15.14	927	0.65	17	0.06	40792	189.37
70	Sitapur	122270	682.68	13992	90.16	10497	12.61	37	0.16	146796	785.61
71	S.K. Nagar	29134	138.03	1620	10.17	3495	2.95	18	0.07	34267	151.22
72	Sonbhadra	33773	201.05	5679	33.99	4951	6.43	35	0.16	44438	241.23
73	Sultanpur	44438	206.12	5013	28.36	1506	1.91	29	0.12	50986	236.51
74	Unnao	60723	292.02	6596	32.61	6607	5.07	46	0.16	73972	329.86
75	Varanasi	11022	62.63	774	4.81	4205	2.1	25	0.03	16026	69.57
	<b>Grand Total</b>	<b>3491798</b>	<b>21018.15</b>	<b>487439</b>	<b>3192.04</b>	<b>472734</b>	<b>602.12</b>	<b>2093</b>	<b>8.99</b>	<b>4454064</b>	<b>24821.3</b>

## I.5. Review of Literature

The main reviews consulted are as follows:

**Thirupathi (2013)<sup>1</sup>** has found that PACCs functioning at grass-root level has direct contact with the rural people and meet the financial requirements of 10.983 crore members. PACCs rely heavily on external support and have not yet been able to become self-reliant with respect to resources through deposit mobilization and internal accruals, affecting their growth and expansion of business activities. The study has explored the sources of funds of PACCs and the mobilization and deployment of funds. The suggestions given aim at helping the societies to improve their performance and achieve their objectives.

**Kishore (2012)<sup>2</sup>** has said that in India strengthening of agriculture is important for elimination of rural poverty, food insecurity, unemployment and for sustainability of natural resources. But till today strengthening of agriculture is meant to be increasing productivity by introduction of high yielding variety seeds, application of chemical fertilizers and pesticides, mechanization and making availability of institutionalized credit for purchasing the inputs. As a result, the Indian agriculture has become commercialized but not profitable to the producer. This commercialization has attracted more number of middle men making the marketing channels inefficient by delivering the produce at inflated prices to the consumer

and negligible margin to the producer increasing his indebtedness. This is discouraging the farmer to move towards capital intensive commercialized agriculture practices which only can serve the future food requirements of the country.

**Sharma (2012)<sup>3</sup>** has analyzed the agricultural debt waiver scheme which is the major highlight of the Union Budget 2008-09. It becomes clear that this scheme is a total disaster. Such waiver has never worked in the past, nor will this. It sets a wrong precedent and nation is going to pay a very heavy price for this misdeed. In fact if the government would have spent this waiver amount on constructing warehouses, irrigation, canals, rural roads, power and other rural infrastructure farmers would have benefitted much more. After the study of the scheme, he concludes that the waiver in the current context is a pretentious panacea. It will do no real good to most farmers in the short term and also in the long term. The causes of the woes that wreck farmers will remain. One of the major drawbacks of this agricultural debt waiver scheme is that it does not benefit every needy person. The Government could have extended the benefit of waiver to all the people below the poverty line. Economists have complained that the waiver is a one-time measure which will not lift the agriculturists from their inherited poverty.

**Soni and Saluja (2012)<sup>4</sup>** have stated that the Cooperative Banking sector is one of the main partners of Indian banking structure; the Cooperative Banks have more reach to the rural India, through their huge network of credit societies in the institutional credit structure. The cooperative sector has played a key role in the economy of the country and was always recognized as an integral part of our national economy. Cooperatives have ideological base, economic objects with social outlook and approach. The cooperative covers almost all villages in India. The cooperative form of organization is the Ideal Organization for economically weaker sections in the country. According to recent study by World Bank and National Council for Applied Economic Research, the Primary Agriculture Credit Societies (PACs) account for about 30 percent of micro credit in India. The paper has also highlighted that in a developing State like Chhattisgarh with huge deficits in terms of quality and quantity, the State has to shoulder the primary responsibility of providing cooperative credit. Considering the low living standards of common man, incomplete and imperfect markets, and other socio political considerations, it is the primary duty of the government to ensure that its citizens have easy access to cooperative credit.

**Bhardwaj, Priyanka and Raheja (2011)**<sup>5</sup>, have analyzed the role of cooperative banks in agricultural credit in India from 2001-2002 to 2006-2007 with the help of Average Compound Growth Rate (ACGR). The study reveals that the aggregate amount of agricultural credit has increased, while, the share in the total institutional agricultural credit has decreased from 37.91 percent in 2001-2002 to 18.51 percent in 2006-07 and it has further found that the level of NPAs in Co-operative Banks is very high as compare to other financial institutions in India. So, Co-operatives Banks should control their NPAs level for surviving in credit market of India. The study also reveals that the ACGR of agricultural credit by Co-operative Banks always less in comparison to ACGR of all India institutional agricultural credit during the period under consideration and the level of NPAs in Cooperative Banking system is very high as compared to other financial institutions. Therefore, Co-operatives Banks should control their NPAs level for surviving in credit market of India.

**Ramkumar (2011)**<sup>6</sup> has studied the recent trends of Agricultural credit in India and drawn two inferences. First, the growth rate of credit flows to agriculture from commercial banks in the period 2002 to 2011 was 17.6 per cent per annum, which was significantly higher than the corresponding growth rate in the period between 1991 and 2001. However, contrary to general perception, this revival of credit flows to agriculture cannot be attributed to the announcement of the government in 2004 to double credit flows to agriculture in three years. In fact, the revival had begun in the late-1990s itself. Secondly, the extent of revival of credit flow to agriculture in the 2000s would have been far less impressive in the absence of a sharp growth in indirect finance to agriculture. About one third of the increase in credit flow to agriculture between 2002 and 2011 was on account of the increase in indirect finance. This growth does not originate from a growth in the traditional components of indirect finance, such as loans for the supply of inputs, power and credit to agriculture. The sharp growth in indirect finance in the 2000s was, in all likelihood, a result of a series of definitional changes effected since the second half of the 1990s. These definitional changes broadly involved (a) the addition of new forms of financing commercial, export oriented and capital-intensive agriculture; and (b) raising the credit limit of many existing forms of indirect financing. Indeed, meeting the task of doubling agricultural credit appears to have become much easier for banks as a result of these definitional changes.

**D. Sourovi (2010)**<sup>7</sup> in his paper has presented an overview of the agrarian credit scenario in India. Drawing from past studies and previous research, this paper provides a

detailed analysis of the various issues pertinent to the functioning of agrarian credit markets. These include the glaring chasm between demand and supply of agrarian credit, the emergence of sectors within the Indian economy which compete with agriculture for institutional credit and the aversion of institutional lenders towards agrarian borrowers. The paper also attempts an analysis of deficiencies plaguing the three distinct phases of a credit cycle resource mobilization, lending and recovery.

**John, Lakshmi and Chatterjee (2010)<sup>8</sup>** have given an insight into the agricultural history of India and have also touched upon the role of liberalisation in aggravating the agrarian crisis experienced by the country. According to them, Indian agriculture flourished under the phenomenal success of the Green Revolution during the 1980s. But now rural indebtedness is the single biggest challenge facing India, as the farmers of India are suffering under the burden of debt and penury. In order to arrest the increasing number of farmers' suicides, the government of India implemented the Agricultural Debt Waiver and Debt Relief Scheme, 2008. The cost of the scheme worked out to be INR 71, 680 crore. It has been widely criticized to be a populist measure proposed by the government, paying least regard to the root-cause of the problem.

According to **Satish (2010)<sup>9</sup>** the agricultural credit delivery system in India is multi-agency in approach. With the availability of a large number of (more than 1,50,000) rural retail banking outlets of commercial banks, cooperative banks and regional rural banks, the formal banking system has basically an enormous potential to provide financial services almost in nearly all rural areas in the country. But several studies have brought out disturbing trends with regard to the flow of credit to agriculture from institutional sources. Though the share of commercial banks in agricultural credit is increasing, data gaps indicate to its insufficiency, as also to its direction away from small farmers. Cooperatives that have become moribund in most parts of the country are on the threshold of reforms. However, there are doubts as to the sustainability of reforms on a long term, as these institutions are a part of the political economy process rather than a professional banking set up. This leaves us with only one institutional alternative Regional Rural Banks (RRBs). This agency, somehow or the other, was not allowed to blossom to its full potential and even its existing presence is not being fully leveraged. A dedicated and robust agricultural credit system can emerge in India only if RRBs are repositioned to play the leading role as purveyors of agricultural credit.



**Anand (2009)**<sup>10</sup> has studied that, in the midst of global financial crisis, gift of the then finance minister to the farmers in the form of Rs. 71,600 crore agricultural debt waiver has actually resulted into boon for the banks as through this agricultural debt waiver they were able to recover the Non Performing Asset of Rs. 71,600 core. Further, the waiver was only for the loans taken from the commercial or Regional Rural Banks and no care has been taken of the farmers who have taken loans from the informal sources. Also the limiting of landholding to 5 acres only has caused problems for the farmers as there are some areas in the country where farmers have more than 7 acres of land but they are still poor as the land is not fertile.

**Okerhe et al. (2009)**<sup>11</sup> have examined the credit risk exposure of banks in agricultural financing. Sources of bank risks have been highlighted. Farm risks that limit credit repayment capacity have been outlined. Statistical techniques for risk measurement were discussed alongside process and strategies for credit risk management. Recommendations for minimizing losses from bank risks in financing agriculture were also given.

**Economic and Political Weekly, (2008)**<sup>12</sup> Rural India needs a strategy that strengthens the credit structure, increases the number of bank branches and establishes sound relationship banking. Even as banks are encouraged to increase their rural commitments, an essential aspect of the incentive structure for the banking system should be an assured recovery process. A socio-political environment that nurtures expectations of a loan waiver is not conducive for building a healthy financial system, particularly in rural areas where borrowers have weak bargaining power and bank officials are known to be reluctant to lend at the smallest sign of a poor recovery.

**Paramasivan (2008)**<sup>13</sup> has focused on the primary agricultural cooperative societies in Mallasamudram block in Namakkal district of Tamil Nadu. He has suggested that the restructuring of co-operative societies is unavoidable in the present day situation and the primary agricultural co-operative banks should change their structure and programs in accordance with modern development.

**Vishwanath (2008)**<sup>14</sup> has made an attempt to understand the problems of institutional rural finance in Karnataka. The author has looked into the recommendations of various committees related to rural finance and provided valuable suggestions for its improvement.

**Sriniwasan (2008)**<sup>15</sup> has identified that the loan waiver scheme is an effort that cures symptoms rather than the causes. It has high visibility, but unlikely to produce lasting results in the development of farm sector. The large amount of money being spent could have been used to usher in fundamental reforms in agriculture and make it market oriented and profit centered. The government intervention in farming should move towards improving profitability and target farm incomes through measures in the real sector than merely making marginal changes through the financial sector. The opportunity to do the right thing by the farmers and agriculture is not lost; but certainly the money is.

**Ujjawal (2008)**<sup>16</sup> in his paper has highlighted that the loan waiver scheme of the Union Budget 2008 has some serious flaws, and it is perfectly fine because the outreach of any government measure is limited, and some section of the society would be benefited more than the other. But the most important consideration is the fact that agriculture is facing a serious crisis and some productive measures have to be undertaken by the government in this regard. The present scheme has a very limited number of beneficiaries, and with such huge amount of money the least to be expected from a government scheme is to reach a large number of people.

It seems that the assumptions under which the Finance Minister developed this scheme were flawed, despite the comprehensive report of Dr. R Radhakrishnan Committee on rural indebtedness. The loan waiver scheme targets a selected group of farmers, and the problem is not with the small section of farmers being benefited, but the fact that the potential of such a huge amount of money is enormous and many more could have been benefited.

**Bandopadhyaya (2007)**<sup>17</sup> has developed a credit scoring model for agricultural loan portfolio of a large Public Sector Bank in India and suggested how such model would help the Bank to mitigate risk in agricultural lending. The logistic model developed in this study reflects major risk characteristics of Indian agricultural sector, loans and borrowers and is designed to be consistent with Basel II norms, including consideration given to forecasting accuracy and model applicability. This study has shown how agricultural exposures are typical and can be managed on a portfolio basis which will not only enable the bank to diversify the risk and optimize the profit in the business, but also will strengthen banker borrower relationship. It would enable the bank to expand its reach to farmers because of transparency in the loan decision making process.

**Kamat (2007)<sup>18</sup>** has emphasized the need for consolidation through amalgamation and merging of co-operative organization either in the same business or complementary business units in the emerging economic conditions to be recognized.

**Kumar and Singh (2007)<sup>19</sup>** in their study on “Impact of co-operative credit on the agriculture sector of Himachal Pradesh: A study of Mid Hill Zone” have suggested the proper guidance regarding utilization of the available high yielding varieties of seeds, fertilizers and pesticides depending on soil conditions and effective supervision from time to time.

**Muley (2007)<sup>20</sup>** has revealed that the recovery performance of cooperative banks is not satisfactory and they are facing problems of recovery and its associated problems. He has suggested that considering the importance of cooperative credit in rural area, the government should protect the co-operative societies and co-operative banking agencies in new environment.

**Ramappa and Sivasankaraiah (2007)<sup>21</sup>** have attempted to study the recovery performance of the Rayalseema Grameena Bank in Andhra Pradesh and found that the recovery performance was improved as its overdue declined from 34 per cent in 2003 to 19 per cent in 2004. Sector wise analyses revealed that the repayment performance of non-priority sector was better compared to that of priority sector. Among farm activities the percentage of overdue was high (68 per cent in 2003 and 58 per cent in 2004) in case of minor irrigation. The repayment position of Self Help Groups is quite impressive as the members of these groups repaid more than 95 per cent of total demanded loans.

**Hatai (2006)<sup>22</sup>** while analyzing agricultural credit and overdue in Uttar Pradesh has found that out of total borrowing on marginal farms, crop loan shared about 61 and 74 per cent in the west and east zones respectively. The term loan is only 25 and 38 per cent of the total borrowing in the east and west zone respectively on the marginal farms. The share of crop loans is further reduced to 32 per cent on large farms. He has concluded that crop loan has inverse relationship with the size of holding, whereas the positive relationship has been observed between the term loan and the size of holdings.

**Hussain (2006)**<sup>23</sup> has made an analysis by comparing the performance of PACSs in Kerala with all India position to find out the reasons for the failure in achieving profitability. He has concluded that it is high time that the service cooperative banks in Kerala have to analyse the profitability of each of their activity, plan their funds efficiently and effectively, utilize their work force to the maximum in order to get a reasonable profit and survive in their competitive environment.

**Prasad (2006)**<sup>24</sup> has pointed out several problems faced by PACSs greatly affecting their performance. He has suggested that PACSs must advance more amounts of short-term, medium-term and long-term loans to the members and link the credit with marketing of products which will go a long way towards better recovery of loans and advances, which in turn, will surely improve the financial soundness of PACSs.

**Prasad (2006)**<sup>25</sup> has examined the performance of co-operative credit and banking structure. He has analyzed the critical problems faced by PACSs such as lack of diversification in business portfolio, low volume of business, declining percentage of borrowing membership, high cost of management, imbalances in loan outstanding, unskilled staff, lack of professionalism, weak MIS, involvement in less profitable PDS business and low interest margin.

**Seilan (2006)**<sup>26</sup> has suggested that the societies should be encouraged to mobilize more deposits to become financially stronger so that the owned funds get strengthened, the loaning policies reoriented in favor of small and marginal farmers and other weaker sections of the rural community. To ensure proper utilization of credit, strict vigilance and effective supervision of credit is necessary. The members should take active interest in the working of co-operative credit societies and proper training has to be given to society staff which will lead to the improvement in the quality of service rendered by co-operative credit societies.

**Jeniffer (2005)**<sup>27</sup> in his paper, has studied the phenomenon of farmer Suicides in India, specifically in the State of Maharashtra. Research data were collected through primary Sources (interviews) as well as secondary sources (journal articles and books on previously completed studies). There was not any single cause for the suicides; therefore, this paper looked for several compounding factors (political, economic, and social) that had influenced

the decision of the farmers to commit suicide. Some of the factors include: integration with the world market, genetically modified crops, government policies, water access and drought, as well as social issues. Lastly, this paper analyzed policies and preventative measures in order to make a final recommendation of endorsing organic farming techniques, creating more insurance schemes, and creating more community groups for farmers. The paper also included a discussion of the prevalence of farmer suicides in the media, and highlighted the new 2012 Budget, which included an increase in funding towards agriculture.

**Krishnaveni and Narayan (2005)**<sup>28</sup> have aimed to estimate the centrality measures with respect to direct agricultural credit, short term and long term credit by taking the scheduled commercial banks and RRBs as rivals of co-operatives. The main reasons for the failure of the co-operative in the provision of agricultural credit are (i) huge dependence on local resources and larger dependence on higher credit institutions (ii) problem of high level of over dues (iii) regional disparities in the distribution of credit (iv) high level of NPAs (v) politicization of co-operatives (vi) domination of government over the cooperatives (vii) poor management (viii) lack of enthusiasm and dedication among the members.

**Katchova and Barry (2005)**<sup>29</sup> have developed models for quantifying credit risk in agricultural lending. They have calculated probabilities of default, loss given default, portfolio risk, and correlations using data from farm businesses. The authors showed that the calculated expected and unexpected losses under Basel II norms critically depend on the credit quality of the loan portfolio and the correlations among farm performances. These analyses of portfolio credit risk could be further enhanced if segmented by primary commodity and geographical location. Agricultural lenders could adopt similar models to quantify credit risk, a key component in the calibration of minimum capital requirements.

**Kumar (2004)**<sup>30</sup> has stated that the Indian agriculture, dominated by the small operational land holdings, has been facing a serious problem of insufficient credit availability. The traditional methods of financing like subsidised credit through cooperatives, priority sector lending and other farm credit schemes have proved to be insufficient and unsustainable.

The analysis made by **Dayanandan (2004)**<sup>31</sup> has revealed that there are two groups of borrowers (non-defaulters and defaulters); in agricultural sector, two characteristics namely, number of times borrowed and utilization are the factors having high discriminating power. If a borrower avails loan for a number of times, he can use it for cultivation continuously which will yield regular income. Ultimately he can earn additional income to repay the loan promptly. Further, proper utilization of loans results in good yield from the venture and motivates the borrowers to repay the loan regularly. If mis-utilized, there is no chance of generating additional income resulting in default. In agriculture-allied sector, utilization and number of visits to the bank are the variables having high discriminating power. If the loan amount is not utilized properly, no positive impact can be absorbed from the venture. That situation will lead the borrowers to become defaulters. Moreover, if the borrower made a number of visits to the bank to get the loan, he will get frustrated and will decide not to repay the loan. This situation leads to more defaulters.

**Mohan (2004)**<sup>32</sup> has observed that agricultural credit has played a vital role in supporting agricultural production in India. The Green Revolution characterized by a greater use of inputs like fertilizers, seeds and other inputs, increased credit requirements which were provided by the agricultural financial institutions. Though the outreach and the amount of agricultural credit have increased over the years, several weaknesses have crept in, which have affected the viability and sustainability of these institutions. Furthermore, antiquated legal framework and the outdated tenancy laws have hampered flow of credit and development of strong and efficient agricultural credit institutions.

**Sen (2004)**<sup>33</sup> has concluded that co-operative banks continue to play a critically significant role in the socio-economic matrix of India. As such, these institutions cannot simply be wished away. Effective measures are, therefore, required to be taken on an urgent basis so that they continue to contribute towards the development process in the country.

**Kumar and Thattil (2001)**<sup>34</sup> have examined the status of Kisan Credit Card business in India as well as in the State of Kerala. In the backdrop of the current Kisan Credit Card scenario, a micro level study presenting the utilization pattern of credit available under the scheme by a group of Kisan Credit Card holders in Trivandrum district was undertaken. In

this study, it has been found that the misutilisation of credit was a major factor which threatens the successful growth of kisan credit card scheme.

**Mathur (2001)**<sup>35</sup> has observed that herculean efforts have been made for providing credit to agriculture by various agencies. No doubt, these efforts contributed positively to the growth of agriculture. Much has been done and much remains to be done. But one fact is certain that agricultural sector performed well only because of role played by credit institutions. No doubt, there have been some lapses noticed in the system, but most of them are made by man for self interest. There has been a feeling that advances extended to rural areas, that too to the priority sector, result in higher level of non-performing assets than in other sectors. For any credit system to sustain its operations on a viable basis, it is necessary that it enforces strong credit discipline among the clients. The institutions engaged in granting agricultural credit need to tackle the problem of low recovery by implementing effective measures. The problem of recovery is quite alarming in co-operative credit institutions.

**Varma and Reddy (2000)**<sup>36</sup> have found that the majority of borrowers became defaulters due to willful causes which include misutilization of loans and political factors. They have also found that the failure of crops, low market prices for produce, inadequate income and natural calamities are the major non-willful causes.

**Dayanand and Shashikumar (1999)**<sup>37</sup> have undertaken comparative analysis of District Central Co-operative (DCC) Banks in Kerala with the national level performance and revealed that the state level performance was behind the national level performance with regard to membership, old funds, borrowings, loan advanced etc., whereas deposit is slightly higher than national level performance. But as long as there is no considerable decrease in rate of total loan overdue, profitability of the bank cannot be improved.

**Shiyani and Sima (1999)**<sup>38</sup> while comparing performance of credit institutions in promoting agricultural development in Gujarat, have opined that the total overdue of agriculture and allied activities in Gujarat was as high as Rs. 421.52 crore. The situation of agriculture overdue in co-operative banks warranted and needed immediate action, as its proportion in the total overdue of all banks in Gujarat was more than 65 percent. Out of this, the share of cooperative banks in the total credit flows to the agricultural sectors by all the banks was only 36 percent.

**Shollapur (1995)**<sup>39</sup> has studied the recovery performance of Karnataka State Cooperative Apex Bank. He has revealed that the percentage of recovery to demand has declined from 94 per cent to 55 per cent in total credit and from 95 per cent to 54 per cent in agricultural credit revealing the poor performance in credit collections. The total overdue has moved from Rs. 401.26 crore to Rs. 5,059.32 crore establishing a rise by 13 times. He suggested that the bank should arrange training in recovery management involving central cooperative banks and other constituents.

**Ajjan (1994)**<sup>40</sup> has studied the performance of the three-tier structure of cooperative credit institution in Tamil Nadu in terms of their deposits, borrowing working capital, loans granted, loans outstanding for a decade (1982-83 to 1991-92). He has revealed that the deposits, borrowing and working capital have increased more than 20 per cent in all the short-term and medium term cooperative credit institutions. The percentage of overdue has continuously declined from 46 to about 35 per cent during the study period reflecting the poor recovery performance. He has suggested that recovery performance should be improved by drawing suitable plans.

**Shylendra and Katar (1994)**<sup>41</sup> have found that rural debt relief scheme of 1990 has adversely affected the functioning and performance of the primary agricultural credit societies and the primary land development banks. The scheme has led to increase in the loan overdues and a consequent decline in the flow of rural credit from co-operatives. Authors have also suggested a ban on general loan waivers and call for measures like implementation of effective insurance scheme and for following an incentive based loan recovery system.

**Ramachandra (1992)**<sup>42</sup> has studied the Agricultural and Rural Debt Relief Scheme of 1990 from a critical angle. He sees loan waivers as inflationary in effect. He sees it as a fraud on the tax-payers. He wants instead of waiver, a deferment of the repayment period and also quick settlement of bank cases through special courts and tribunals as the means to improve the repayment culture.

**Upadhya (1992)**<sup>43</sup> has made a study of recovery problems in RRBs and observed that all future recovery effort has been hit, as if by a missile, by the ARDR scheme of 1990. He records that the loan waiver has proved not a boon but a bane. It has affected the deposit position of the RRBs as the people are losing faith in them. He has suggested that subsidies be released only when 75% of the loan has been repaid. He has also pleaded for the



replacement of the target-oriented approach by the quality-oriented approach on the implementation of rural development programmes.

**Balisher (1991)<sup>44</sup>** has evaluated the performance of RRBs in terms of branch expansion, deposit mobilization, loans and advances, recoveries and profitability. He has recorded many disturbing trends in the working of the RRBs like fall in credit deposit ratio, poor recoveries and recurrent losses.

**Balisher et al. (1991)<sup>45</sup>** have studied overdue of loans in agriculture from the point of view of current and old overdue, extent of willful defaults and the reasons for non-payment. The study has revealed that the affluent class of farmers was responsible for a large portion of overdue and about 90 per cent of them were willful defaulters. The old debts constituted about 71 per cent, and needed serious concerns.

**Vaikunthe (1991)<sup>46</sup>** has studied the agricultural credit utilization and recovery performance of KCC bank, Dhārwad. The study has pointed out that the percentage of repayment is more in the case of the farmers in the non-irrigated area compared to the irrigated area. The overdues are larger in the case of small farmers as compared to medium and big farmers in the irrigated area.

**Singh and Mruthyunjaya (1990)<sup>47</sup>** have made a strong plea for the simplification of the loan-granting procedures, and argued for a sincere implementation of recommendations of the Talwar Committee, regarding the issue of passbooks to land owners and tenants which serve as evidence to the rights in land of the agriculturists. This will save the farmer the trouble of running from pillar to post for certificates of ownership, eligibility, etc. They have also argued for a stoppage of the levy of penal interest.

**Khusro Committee (1989)<sup>48</sup>** has examined the agricultural credit system. This committee has reviewed the rural financial system in the country and also assessed the quantum of agricultural credit requirements for the next decade. Again it has examined the role of credit system in the national plan for agricultural development. The major problems and issues affecting the agricultural credit system have been also presented in its report.

**Kulshrestha (1985)<sup>49</sup>** in his article, has assessed the performance of Lead banks in the western regions of U.P; with such parameters as branch expansion, deposits and credit

deployment. He has also reviewed the problems faced by the lead banks and recommended a re- examination of the discretionary powers of bank managers, particularly in the rural areas in order to avoid unhealthy competition between commercial banks and primary credit societies. He has also recommended the issue of credit eligibility passbooks to the farmers by the block development officials.

## **I.6. Study Design and Methodology**

### **I.6.1. Coverage of the Study**

The present study is confined to the Western Region of Uttar Pradesh where from the three distinct agro-climatic zones areas were selected randomly to cover and represent the whole Western Region of Uttar Pradesh. Such agro-climatic zones thus, undertaken were namely (1). Western Plain Zone which is located between the Ganga and Yamuna in the west and includes Saharanpur, Muzaffar Nagar, Meerut, Ghaziabad and Bulandshahar districts. (2) Mid-Western Plain Zone represents mainly Rohilkhand Division which embraces Bijnor, Moradabad, Rampur, Bareilly, Pilibhit and Badaun districts. (3) South-Western Semi-Arid Zone comprises Aligarh, Etah, Mainpuri, Mathura and Agra.

### **I.6.2. Sampling Design**

Three representative districts were selected randomly from each of the three distinct agro-climatic zones selected from the Western Region of Uttar Pradesh. These districts were namely (1) Bulandshahar from western Plain zone, (2) Moradabad from Mid-Western Plain zone and (3) Agra from south Western Semi-Arid zone. From these three districts thus, selected, two blocks from each selected district were selected randomly. Thereafter two clusters of villages from each block thus selected, were undertaken randomly for the field survey. Thereafter, 15 beneficiaries of Farm Debt Waiver Scheme were randomly chosen from each of the clusters of village/villages. Thus, the total samples were comprised of 180 beneficiary farmers. The sampling design is given in Table-I-3.

**Table-I-3  
Sampling design**

Sl. No.	Agro-climatic zone of Western Uttar Pradesh undertaken	Districts Chosen	Blocks Chosen	Cluster of Villages undertaken		Sample Beneficiaries undertaken					
				Cluster	Villages	Marginal	Small	Total			
I	Western Plain Zone	Bulandshahar	Bulandshahar	1	Naithala Hassanpur	12	3	15			
				2	Dhimari Asdalpur	11	4	15			
				2	2	23	7	30			
	Western Plain Zone	Bulandshahar	Khurja	1	Nagla Shekher	12	3	15			
				2	Arnia Mansoorpur	14	1	15			
				2	2	26	4	30			
				4	4	49	11	60			
II	Mid-Western Plain Zone	Moradabad	Moradabad	1	Bijana	9	6	15			
				2	Khanpur	14	1	15			
				2	2	23	7	30			
	Mid-Western Plain Zone	Moradabad	Chhijlat	1	Bhikhampur	14	1	15			
				2	Asdalpur	9	6	15			
				2	2	23	7	30			
				4	4	46	17	60			
III	South-Western Semi-Arid Zone	Agra	Achhnera	1	Sahai	9	6	15			
				2	Nagar Manaas	13	2	15			
				2	2	22	8	30			
		South-Western Semi-Arid Zone		Barauli Ahear	1	Behta	13	2	15		
					2	Gangarana	11	4	15		
					2	2	24	6	30		
					4	4	46	14	60		
				3	3	6	12	12	141	39	180

## Chapter-II

### Socio-Economic Status of Beneficiary Farmers

This chapter mainly deals with the socio-economic status of the beneficiary farmers, wherein the profile of age-groups of beneficiaries particularly in the two main categories of farmers, the profile of educational qualifications (primary to post graduates) including illiterate beneficiary farmers (both marginal and small), household composition of respondent farmers in terms of male and female adults as well as minors along with household sizes were worked-out. Also under the economic characteristics, the economic holding size of sample respondent farmers along with their land-use pattern in irrigated and un-irrigated systems were analysed for both marginal and small categories of beneficiary farmers which are being discussed in the following paragraphs.

#### II.1 Socio-Economic Profile of Beneficiaries in terms of Age-Groups:

The socio-economic profile of beneficiaries in terms of age-groups worked-out in Table-II-1 shows that out of the total 180 sample beneficiary farmers under “Farm Debt Waiver Scheme” implemented in three distinct Agro-Climatic Zones of Western Uttar Pradesh, the maximum i.e. 141 sample beneficiary farmers were identified as marginal farmers and only 39 as small farmers. Thus, it is evidently clear that the maximum debts were waived in cases of marginal beneficiary farmers against only about one fourth among the small farmers. The age-group-wise distribution indicates that on an overall the majority of beneficiaries i.e. 62.22 percent were reported to be above 50 years age-group, 30 percent were in the age-group of 36-50 years and only 7.78 percent were below 35 years age group. This very well confirms that majority of the beneficiary farmers were matured and the remaining were quite young. The distribution in the two main categories of beneficiary farmers indicates that in the category of marginal farmers the number of farmers above 50 years age-group was higher covering about 57.45 percent. While 35.46 percent were in the age-group of 36-50 years and the remaining 7.09 percent were in the age-group of below 35 years. Thus, in the category of marginal beneficiary farmers the majority of farmers were matured. In the category of small farmers too about 79.48 percent were in above 50 years age-group, 10.26 percent were in the age-group of 36 to 50 years and the remaining 10.26 percent were in the age-group of below

35 years. Thus, in the category of small farmers too the majority of beneficiaries were matured. The related data are given in Table-II-1.

**Table-II-1**  
**Socio-economic profile of beneficiaries (Age-groups)**

Particulars	(Number)		
	Marginal	Small	Overall
<b>Age-groups</b>			
Up to 35	10 (7.09)	4 (10.26)	14 (7.78)
36-50	50 (35.46)	4 (10.26)	54 (30.00)
Above 50	81 (57.45)	31 (79.48)	112 (62.22)
<b>Total</b>	<b>141 (100.00)</b>	<b>39 (100.00)</b>	<b>180 (100.00)</b>

**Figures in parentheses are percentages of the total**

## II.2 Socio-Economic Profile of Beneficiaries in Terms of Educational Qualifications

The socio-economic profile of beneficiaries in terms of educational qualifications analysed in Table-II-2 indicates that on an overall, among the 180 beneficiary farmers, the highest number, 47 were illiterates, 44 were matriculates, 25 middle, 22 secondary, 21 primary, 11 graduates and only 10 were post graduates. Thus, this fact is very much discouraging that still the maximum i.e. more than 26 percent of the sample farmers were illiterates and among literates the maximum i.e. more than 24 percent were identified to be matriculates only. The farmers having graduate and post graduate degrees were only about 6 percent. Thus, the status of education among the beneficiary farmers was deplorably poor and much below the national level. The status of education among the selected categories of beneficiary farmers indicates that among the marginal farmers the maximum i.e. 40 out of 141 were illiterates and among literates the maximum i.e. 33 were matriculates, 18 were secondary, 19 were middle, 16 were primary and the minimum 5 were graduates and 10 were post graduates. While, among the small farmers about 18 percent were illiterates and among the literates the maximum i.e. more than 28 percent were matriculates, 15 percent were middle and only 15 percent were graduates. There was not a single post graduate among the small farmers. Thus, the status of education among both marginal as well as small farmers was much lower in the area under study than the national level. The related data are contained in Table-II-2.

**Table-II-2**  
**Socio-economic profile of beneficiaries (Education)**

Particulars	(Number)		
	Marginal	Small	Overall
<b>Educational qualification</b>			
Illiterate	40 (28.37)	7 (17.95)	47 (26.11)
Primary	16 (11.35)	5 (12.82)	21 (11.67)
Middle	19 (13.47)	6 (15.38)	25 (13.89)
Matriculate	33 (23.40)	11 (28.21)	44 (24.44)
Secondary	18 (12.77)	4 (10.26)	22 (12.22)
Graduate	05 (3.55)	6 (15.38)	11 (6.11)
Post Graduate	10 (7.09)	--	10 (5.56)
<b>Total</b>	<b>141 (100.00)</b>	<b>39 (100.00)</b>	<b>180 (100.00)</b>

Figures in parentheses are percentages of the total

### II.3 Household Composition of Respondent Farmers:

Table-II-3 shows the household composition of sample beneficiary farmers, wherein the overall average size of family was estimated as 5.54 persons among which 1.69 were found to be female adults, 3.37 were male adults and the remaining 0.48 minors on an overall basis among the sample beneficiary farmers. The category-wise distribution in the family composition of sample farmers shows that in the category of marginal farmers the average family size was estimated as 5.72 persons wherein 3.57 were male adults, 1.61 were female adults and the remaining 0.54 as minors. While in the category of small farmers the average size of family was found to be 3.89 persons among which the male adults were 1.64 and female adults were 1.97 and minors as 0.28 in the average household of small category. Thus, numbers of male adults were dominating in both the categories of sample farmers and number of minors was meagre in both the categories of sample farmers in the area under study. The concerned data are given in Table-II-3.

**Table-II-3**  
**Household composition of respondent farmers**

Family composition	(Number/farm)		
	Marginal	Small	Overall
Adult male	3.54 (62.41)	1.64 (42.16)	3.37 (60.83)
Adult female	1.61 (28.15)	1.97 (50.64)	1.69 (30.51)
Minor	0.54 (9.44)	0.28 (7.28)	0.48 (8.66)
Total	5.72 (100.00)	3.89 (100.00)	5.54 (100.00)

Figures in parentheses are percentages of the total

## II.4 Socio-Economic Characteristics of Beneficiary Farmers:

### II.4.1 Economic Holding Size of Sample farmers (Marginal)

The economic holding size of samples marginal farmers worked-out in Table-II-4.1 shows that the average operational holding per farm in case of marginal farmers was estimated as 2.26 acres of which 0.07 acres was irrigated and 0.10 acre was un-irrigated. Thus, the maximum of the operational holding (96.01 percent) in case of marginal farmers was irrigated and only 3.90 percent was found to be un-irrigated on an average. As regards the land-use pattern on the marginal farms, it was found that the land owned per farm was estimated as 1.34 acres and was 100 percent irrigated. The land leased-in was 1.00 acre and was total irrigated. While the land leased-out on marginal farms was reported to be nil and the uncultivated land per farm was 0.08 acre irrigated and 0.00 acre un-irrigated making 0.08 acre per farm. Hence, leasing-in land was commonly practiced by marginal farmers in the area under study for their livelihood. The land in the area was almost irrigated. The related data are given in Table-II-4.1.

**Table-II-4.1**  
**Economic Holding size of sample farms (Marginal)**

(Acres/Farm)

Sl. No.	Land-use Type	Irrigated	Un-irrigated	Total
1.	Land Owned	1.34 (100.00)	0.00 (0.00)	1.34 (100.00)
2.	Land Leased-in	1.00 (100.00)	0.00 (0.00)	1.00 (100.00)
3.	Land Leased -out	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
4.	Land Uncultivated	0.08 (41.17)	0.10 (58.82)	0.08 (100.00)
	Operational Land (1+2) – (3+4)	2.26 (96.01)	0.00 (0.00)	2.26 (100.00)

Percentages in Parentheses

### II.4.2 Economic Holding Size of Sample farmers (Small)

Table-II-4.2 indicates the economic holding size of small farmers, wherein the average operational land per farm was estimated as 4.75 acres and whole of which were irrigated and only 0.00 was un-irrigated. Thus, almost the entire operational land on the farm (98.08 percent) was found to be irrigated and a meagre i.e. 1.91 percent was un-irrigated land. On the other hand, the land-use pattern indicates that the average land owned per farm was estimated as 3.16 acres and the entire land on the farm was found to be irrigated. The land leased-in was estimated as 1.77 acres per farm and the total land was irrigated. The leased-out land was reported to be nil on small farms too in the area under study. Therefore, it was safely concluded that in the area under study the small farmers too like the marginal farmers,

do not practice to lease-out their land to others as tenants or sharecroppers. Irrigation was reported to be almost 100 percent in the area under study. The related data are given in Table-II-4.2.

**Table-II-4.2**  
**Economic Holding size of sample farms (Small)**

(Acres/Farms)

Sl. No.	Land-use Type	Irrigated	Un-irrigated	Total
1.	Land Owned	3.17 (100.00)	0.00 (0.00)	3.16 (100.00)
2.	Land Leased-in	1.77 (100.00)	0.00 (0.00)	1.77 (100.00)
3.	Land Leased -out	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
4.	Land Uncultivated	0.19 (65.51)	0.10 (34.48)	0.29 (100.00)
	Operational Land (1+2) – (3+4)	4.75 (98.08)	0.00 (0.00)	4.75 (100.00)

Percentages in Parentheses

#### **II.4.3 Economic Holding Size of Sample farmers (Overall)**

The economic holding size of overall sample farms worked-out in Table-II-4.3 indicates that on an average the total operational land per farm was estimated as 2.87 acres of which the maximum i.e. 2.87 acres (96.94 percent) was found to be irrigated and only 0.10 acre (3.05 percent) was un-irrigated. Thus, the entire land on all the farms of marginal and small categories was found to be irrigated in the area under study. Regarding land-use pattern, it was found that on an average 1.73 acres per farm was estimated as owned land in cases of marginal and small farms together. The average leased-in land together on the farms of marginal and small farms was estimated as 1.29 acres per farm and the total land was reported to be irrigated. The leased-out land was reported to be nil. The uncultivated land per farm was estimated as 0.25 acre per farm of which 0.15 acre was irrigated. Thus, it is concluded that entire land both owned and leased-in was irrigated and no leased-out land was practiced in the area. The related data are given in Table-II-4.3.

**Table-II-4.3**  
**Economic Holding size of sample farms (Overall)**

(Acres/Farms)

Sl. No.	Land-use Type	Irrigated	Un-irrigated	Total
1.	Land Owned	1.73 (100.00)	0.00 (0.00)	1.73 (100.00)
2.	Land Leased-in	1.29 (100.00)	0.00 (0.00)	1.29 (100.00)
3.	Land Leased -out	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
4.	Land Uncultivated	0.15 (60.00)	0.10 (40.00)	0.25 (100.00)
	Operational Land (1+2) – (3+4)	2.87 (96.94)	0.10 (3.05)	2.87 (100.00)

Percentages in Parentheses



## Chapter-III

### Impact of farm Debt Waiver Scheme in the State of Uttar Pradesh

The present chapter deals with the impact of Farm Debt Waiver Scheme in the state of Uttar Pradesh on the occupational structure of the beneficiary households. The distribution of beneficiary households according to annual household income before and after redemption of debt, operational holding of sample marginal, small and overall farmers, capital investment of sample marginal, small and overall loanee farmers under the scheme, livestock inventory of the sample farmers, cropping pattern on the sample farms before and after the debt redemption, operational cost of cultivation per unit of area on the sample farms, production and disposal/utilization pattern on the sample farms, annual household expenditures of beneficiary farmers, credit structure of the beneficiary farmers and saving pattern of the sample farmers before and after redemption of the debts under farm debt waiver scheme in the selected area of this study are discussed in the following paragraphs:

#### III.1. Occupational Structure of the Beneficiary Households:

The Table-III-1 indicates that among the primary occupations of the majority beneficiary farmers i.e. 139 out of total 180 sample beneficiaries were agriculture and allied (except dairy) on an overall basis before the redemption of debt under the Farm Debt Waiver Scheme implemented in the state of Uttar Pradesh during the year 2016-17. But after the redemption of debt the number of farmers in the primary occupation i.e. agriculture and allied (except dairy) had increased to 142 on an overall basis. Thus, the percentage change in agriculture and allied (excepted dairy) as primary occupation was estimated as only 1.42 percent on an overall basis. This change was found at the rate of only 2.75 percent among the marginal farmers wherein, the number before redemption of debt was 109 which after redemption had increased to 111 during the year 2017-18. While among the small farmers there was not any change in the primary occupation of the majority i.e. 30 beneficiary farmers out of total 39 sample small farmers. Under the next primary occupation i.e. dairy, only one beneficiary farmer was reported among the marginal farmers before redemption of debt who had continued after redemption of debt too. Thus, there was not any change in dairy. As primary occupations of agricultural labour as well as self employment in services, not a single sample farmer was reported to have opted. Under self employment in household industry there were only two farmers, one each as marginal and small on an overall basis. Thus, there was no

change after the redemption of debt in their primary occupation. Among non-agricultural labour, total 5 marginal farmers had opted as primary occupation before redemption of debt wherein, only 4 remained after redemption. Thus, (-) 20 percent change was found among marginal farmers. Non-agricultural labour were not reported among small farmers. Thus, among non-agricultural labours there was (-) 20 percent change on an overall basis in the primary occupation. In salaried work 4 marginal farmers were reported to opt as primary occupation before redemption who had remained after redemption too and among small farmers there was none. Thus, there was no change among salaried workers as primary occupation. 11 marginal farmers had opted household work as primary occupation before redemption wherein, only 9 had remained after the redemption of debt. Thus, (-) 18.18 percent change was observed among marginal farmers and among small farmers only 4 were reported before redemption and they remained after redemption too. Thus, there was no change in the occupation of small farmers. Therefore, on an overall 15 farmers had opted household work as primary occupation before redemption of debt of which only 13 had remained after redemption. Thus, there was (-) 13.33 percent change after redemption of debt. Two marginal farmers were reported as pensioners before redemption of debt who remained after the redemption too. Among small farmers no pensioner was reported. Thus, on an overall there were only two pensioners before redemption who remained after redemption too and there was no change at all. Among the other primary occupation there were 8 marginal and 4 small farmers before redemption of debt, who had remained after redemption of debt too showing no change after redemption of debts.

As regards the secondary occupations opted by the beneficiary farmers, on an overall basis total 13 farmers had opted agriculture and allied as secondary occupation before redemption of debt which after redemption decreased to 12 showing (-) 7.69 percent change wherein among marginal farmers the number had decreased from 12 before redemption to 11 after redemption showing (-) 8.33 percent change. Among small farmers there was no change. Total 52 farmers had opted dairy as secondary occupation before redemption which increased to 53 after redemption. Thus, there was 1.92 percent change after redemption showing the impact of debt waiver scheme and it had occurred among marginal farmers wherein the number increased from 35 before redemption to 36 after redemption showing 2.86 percent change after redemption. Thus, impact was on marginal farmers only, not on small farmers. Also total 31 farmers had opted agricultural labour as secondary occupation before redemption which increased to 34 after redemption on an overall basis. Thus, 9.68 percent

increase had occurred among farmers opting agricultural labour as secondary occupation after redemption and it had occurred among the marginal farmers only wherein the number increased from 30 before redemption to 33 after redemption with 10 percent increase showing the impact of debt waiver scheme among marginal farmers only. In other secondary occupations there was no change.

**Table-III-1**  
**Occupational structure of the beneficiary households**

(Number per farm)

Type	Marginal			Small			Overall		
	BR	AR	PC	BR	AR	PC	BR	AR	PC
Primary									
Agriculture and allied (except dairy)	109	111	2.75	30	30	0	139	141	1.42
Dairy	1	1	0	0	0	0	1	1	0
Agricultural labour	0	0	0	0	0	0	0	0	0
Self employment in household industry	1	1	0	1	1	0	2	2	0
Self employed in services	0	0	0	0	0	0	0	0	0
Non-agricultural labour	5	4	-20	0	0	0	5	4	-20
Salaried work	4	4	0	0	0	0	4	4	0
Household work	11	9	-18.18	4	4	0	15	13	-13.33
Pension	2	2	0	0	0	0	2	2	0
other	8	8	0	4	4	0	12	12	0
Secondary									
Agriculture and allied (except dairy)	12	11	-8.33	1	1	0	13	12	-7.69
Dairy	35	36	2.86	17	17	0	52	53	1.92
Agricultural labour	30	33	10	1	1	0	31	34	9.68
Self-employment in household industry	2	2	0	2	2	0	4	4	0
Self employed in services	2	2	0	0	0	0	2	2	0
Non-agricultural labour	13	13	0	0	0	0	13	13	0
Salaried work	6	6	0	0	0	0	6	6	0
Household work	0	0	0	0	0	0	0	0	0
Pension	1	1	0	0	0	0	1	1	0
other	1	1	0	0	0	0	1	1	0

**BR- Before redemption, AR- After redemption and PC: Percent Change**

### III.2. Distribution of Beneficiary Households According to Annual Household Income

Table-III-2 shows that out of total 180 sample households on an overall basis the maximum number i.e. 70 were in the income group of up to one lakh Rs. before redemption of debts. But the number decreased to 42 after redemption. Thus, there was (-) 40 percent change as reduction in up to one lakh Rs. income group, wherein among marginal farmers it was

(-) 41.93 percent and among small farmers it was (-) 12.5 percent only. This confirms that impact was higher among marginal farmers comparatively. While in the income group of 1 – 2 lakh Rs. the number of households increased from 57 before redemption to 66 after redemption showing 15.79 percent change as addition in 1 – 2 lakh Rs. income group, wherein among marginal farmers the change as addition was 29.55 percent and among small farmers there was change of (-) 30.77 percent after redemption which confirms that marginal farmers in 1 – 2 lakh Rs. income group had been affected to gain more after redemption of their debts. Like-wise in income group 2 – 4 lakhs Rs. also the change was estimated as 25.64 percent as addition wherein the number of farmers increased from 39 before redemption to 49 after redemption on an overall basis, wherein among marginal farmers it had increased by 47.83 percent after redemption, but among small farmers it had changed by (-) 6.25 percent after redemption. Thus, small farmers were adversely affected after redemption of debt and the marginal farmers had gained significantly after redemption of debt in Uttar Pradesh. In the income group of more than 4 lakh Rs. there was 64.29 percent increase in the number of households after redemption of debt, wherein, the number of farmers had increased from 14 before redemption to 23 after redemption on an overall basis. While in this income group the number of small farmers had increased from 2 before the debt redemption to 9 after redemption i.e. by 350 percent against by 16.67 percent among marginal farmers. The average annual income on an overall basis had increased by 11.39 percent after redemption wherein among marginal farmers it had increased by 24.36 percent against only 3.64 percent among small farmers after redemption of their debts.

Thus, it is evidently clear that farmers were benefited significantly particularly marginal farmers after redemption of debt in Uttar Pradesh State. The related data are given in Table-III-2.

**Table-III-2**  
**Distribution of beneficiary households according to annual household income**

(Number)

Type (Rs.)	Marginal			Small			Overall		
	BR	AR	PC	BR	AR	PC	BR	AR	PC
Up to one lakh	62	36	-41.93	8	6	-12.5	70	42	-40
1 – 2 lakh	44	57	29.55	13	9	-30.77	57	66	15.79
2 – 4 lakh	23	34	47.83	16	15	-6.25	39	49	25.64
More than 4 lakh	12	14	16.67	2	9	350	14	23	64.29
Average annual income	173471	215730	24.36	293667	304346	3.64	467138	520076	11.33

**Figures in parentheses are percentages of the total**

**BR- Before redemption, AR- After redemption and PC: Percent Change**

### III.3.1.: Operational Holding of Sample Marginal Farmers

Table-III-3.1 indicates that on an overall average the operational land per farm was estimated as 2.26 acres before redemption which had continued as such after the redemption of debt too and the whole was irrigated. Thus, there was not any change after the redemption of debt in the operational land on marginal farms. Regarding type of land use on marginal farms, it was estimated as 1.34 acres as owned land per farm before redemption of debt which was reduced to 1.33 acres per farm after redemption showing a change of (-) 0.08 percent on an average. The total land owned was irrigated. The land leased-in was reported as 1.00 acre per farm before redemption which had remained as such after the redemption of debt too. Thus, there was not any change in pattern of leasing-in land by marginal farmers even after redemption of debt. The uncultivated land per farm was estimated as 0.18 acre before redemption on an average of which 0.08 acre was irrigated and 0.10 acre was un-irrigated and the total uncultivated land had remained unchanged after redemption of debt. Thus, there was not any change in operational holding on the marginal farms after redemption of debt. The related data are given in Table-III-3.1.

**Table-III-3.1**  
**Operational holdings of sample farms (Marginal)**

**(Acres/farm)**

S No	Type of Land	Irrigated			Un-irrigated			Total		
		BR	AR	PC	BR	AR	PC	BR	AR	PC
1	Total owned land	1.34	1.33	(-) 0.08	--	--	--	1.34	1.33	(-) 0.08
2	Leased-in	1.00	1.00	--	--	--	--	1.00	1.00	--
3	Leased -out	--	--	--	--	--	--	--	--	--
4	Uncultivated land	0.08	0.07	--	0.01	0.01	0.00	0.18	0.17	--
5	Total operational land (1+2-3-4)	2.26	2.26	--	--	--	--	2.26	2.26	--

**BR- Before redemption, AR- After redemption and PC: Percent Change**

### III.3.2. Operational Holdings of the Sample Small Farmers

Table-III-3.2 shows that the total operational land per farm was estimated as 4.75 acres before redemption of debt on an average which after the redemption of debt had increased to 4.84 acres per farm. Thus, there was a percentage change of 0.31 percent in the operational

land of a small farmer after the redemption of debt. The total operational land was irrigated. While total land owned per farm before redemption of debt was reported as 3.17 acres which had remained as such after the redemption of debt too and the total land was irrigated. Thus, there was not any change in owned area after redemption. The leased-in land per farm was reported as 1.77 acres before redemption of debt which was continuing after the redemption of debt. Therefore, there was not any change in the pattern of leasing-in land after the redemption of debt. The uncultivated land per farm was only 0.16 acre before redemption which had decreased to 0.10 acre after redemption and showed a change of (-) 68.42 percent on an average. Therefore, there was only nominal change in the operational area on the small farms on an average after redemption of debt under the Farm Debt Waiver Scheme in Uttar Pradesh. The related data are given in Table-III-3.2.

**Table-III-3.2**  
**Operational holdings of sample farms (Small)**

S No	Type of Land	Irrigated			Un-irrigated			Total		
		BR	AR	PC	BR	AR	PC	BR	AR	PC
1	Total owned land	3.17	3.17	0.00	--	--	--	3.17	3.17	0.00
2	Leased-in	1.77	1.77	0.00	--	--	--	1.77	1.77	0.00
3	Leased -out	--	--	--	--	--	--	--	--	--
4	Uncultivated land	0.19	0.10	-53.33	0.10	0.10	0.00	0.16	0.10	-68.42
5	Total operational land (1+2-3-4)	4.75	4.84	0.31	0.00	0.00	--	4.75	4.84	0.31

**BR- Before redemption, AR- After redemption and PC: Percent Change**

### III.3.3. Operational Holdings of Overall Sample Farmers

Table-III-3.3 shows that on an average the operational holding of all farmers before the redemption of debt was estimated as 2.89 acres per farm which had increased to 2.93 acres per farm after the redemption of debt. Thus, there was only 0.16 percent increase in the operational holding after the redemption of debt on an average. While the total land owned per farm was reported as 1.73 acres before redemption which had continued as such after the redemption of debt. Therefore, there was not any change in the owned area on all the farms on an average. The total owned area was irrigated. The leased-in land per farm was estimated as 1.29 acres before redemption of debt which remained as such after the redemption of debt

too. In uncultivated land, there was change by (-) 54.17 percent after redemption. The related data are given in Table-III-3.3.

**Table-III-3.3**  
**Operational holdings of sample farms (Overall)**

S No	Type of Land	Irrigated			Un-irrigated			Total		
		BR	AR	PC	BR	AR	PC	BR	AR	PC
1	Total owned land	1.73	1.73	0.00	--	--	--	1.73	1.73	0.00
2	Leased-in	1.29	1.29	0.00	--	--	--	1.29	1.29	0.00
3	Leased -out	--	--	--	--	--	--	--	--	--
4	Uncultivated land	0.19	0.07	(-) 53.33	0.11	0.05	(-) 55.55	0.13	0.09	(-) 54.17
5	Total operational land (1+2-3-4)	2.89	2.93	0.16	--	--	--	2.89	2.93	0.16

**BR- Before redemption, AR- After redemption and PC: Percent Change**

#### **III.4.1.: Capital Investment of sample Marginal Households**

The capital investment of sample marginal households worked-out in Table-III-4.1 shows that in case of marginal farmers on an average Rs. 33,202.00 per farm was estimated as capital investments for maintaining total 5.61 machines, implements, sheds and irrigation structures before the redemption of debt. But after redemption of debt for maintaining the same machines etc., the investment per farm had increased to Rs. 40,012.00. Therefore, the capital investments on machines, implements sheds and irrigation structure, per farm had increased by 20.51 percent after the redemption of debt. This evidently confirms the impact of Farm Debt Waiver Scheme on investments.

The separate distribution on machines and implements, sheds and irrigation structures indicates that among farm machines 0.02 tractors per farm was reported before redemption of debt which decreased to 0.01 after redemption of debt and its present value had decreased from Rs. 2,908.00 during the period before redemption to Rs. 2,624.00 per farm after redemption showing a negative percentage change of (-) 9.77 percent. Among implements it was found that each sample marginal farmer had 0.01 trolley, 0.01 harrow, 0.01 cultivator and 0.09 thresher/chaff cutter before redemption, while after redemption of debt one farmer had purchased additional harrow and another farmer had purchased rotavator in addition to

the trolley, harrow and cultivator, small tools of Rs. 634.00 per farm before redemption had increased to Rs. 887.00 per farm after redemption. Thus, there were percentage changes by (-) 34.11 percent in trolley, 50.00 percent in harrow, (-) 48.17 percent in cultivator, 100.00 percent in rotavator, 17.94 percent in thresher/chaff cutter and 39.91 percent in small tools after redemption. Thus, there was a clear impact of debt waiver scheme on the livelihood of marginal farmers. In case of farm buildings, it was found that there was 0.01 common implement/storage shed per farm before redemption which continued after redemption too. Therefore, there was not any change in storage under the farm buildings. In cattle shed there was an increase from Rs. 24,340.00 per farm before redemption to Rs. 29,888.00 per farm after redemption of debt showing 22.79 percent change. This confirms significant impact of debt waiver scheme on capital investment by sample marginal farmers. In case of irrigation structure also it was found that although the number of electronic motor and diesel engine were reported as 0.06 and 0.12 respectively per farm before redemption which changed to 0.04 and 0.15 respectively after redemption. But the value of electric motor had decreased from Rs. 1,383.00 per farm before redemption to Rs. 1,278.00 per farm after redemption of debt showing (-) 7.59 percent change and the value of diesel engine had increased from Rs. 2,651.00 per farm before redemption to Rs. 3,740.00 after redemption showing 41.08 percent change. Thus, it is evidently clear that the capital investments on irrigation structure as well as farm buildings had increased considerably with variation due to the effect of Farm Debt Waiver Scheme in the state of Uttar Pradesh. The related data are given in Table-III-4.1.

**Table-III-4.1**  
**Capital investment of sample Marginal households**

Type of machine	BR		AR		PC	
	N	PV	N	PV	N	PV
<b>1. Farm machinery and Implements</b>						
Tractor	0.02	2908	0.01	2624	(-) 50.00	(-) 9.77
Trolley	0.01	262	0.01	170	0.00	(-) 35.11
Harrow	0.01	227	0.02	454	0.00	50.00
Cultivator	0.01	191	0.01	99	0.00	(-) 48.17
Rotavator	0.00	0	0.01	170	1.00	1.00
Seed drill	0.00	0	0.00	0	0.00	0
Generator	0.00	0	0.00	0	0.00	0
Spray pump	0.00	0	0.00	0	0.00	0
Potato planter	0.00	0	0.00	0	0.00	0
Thresher/Chaff cutter	0.09	535	0.09	631	0.00	17.94
Small tools	4.73	634	4.79	887	1.27	39.91
Other (specify)	0.00	0	0.00	0	0.00	0



<b>2. Farm Buildings</b>						
Implements/storage shed	0.01	71	0.01	71	0	0
Cattle shed	0.55	24340	0.58	29888	5.45	22.79
other (specify)	0.00	0	0	0	0	0
<b>3. Irrigation Structure</b>						
Electric motor	0.06	1383	0.04	1278	(-) 33.33	(-) 7.59
Diesel Engine	0.12	2651	0.15	3740	25.00	41.08
Submersible pump	0.00	0	0.00	0	0	0
Drip System	0.00	0	0.00	0	0	0
other (specify)	0.00	0	0.00	0	0	0
<b>Total</b>	<b>5.61</b>	<b>33202</b>	<b>5.72</b>	<b>40012</b>	<b>1.78</b>	<b>20.51</b>

N-Number/farm, PV-Present Value (Rs./farm)

### **III.4.2.: Capital Investment of Sample Small Households**

Table-III-4.2 shows that on an average the number of farm machines, buildings and irrigation structures per farm was estimated as 8.23 on the sample small farms before the redemption of debt which had remained as 8.42 per farm after the redemption of debt. But the value of these assets had increased from Rs. 1,38,228.00 per farm before redemption of debt to Rs. 1,46,858.00 per farm after redemption of debt showing an increase of 6.24 percent. Therefore, it was obviously clear that the number of farm assets had increased slightly as well as the average capital investment for the maintenance of these assets had also increased positively by 6.24 percent on an average. This confirms that on the small farms in terms of capital investments the impact of debt waiver scheme was positive.

The distribution of investments on farm machines, buildings and irrigation structures indicates that the numbers of tractor, trolley, cultivator and rotavator were 0.28, 0.31, 0.15, 0.21 and 0.03 on sample small farms respectively before redemption which remained as such after the redemption too and the value of capital investments had decreased by 12.60 percent on tractor, 15.71 percent on trolley and 21.51 percent on cultivator and 3.38 on rotavator respectively after redemption. While on harrow the investments had increased by 11.79 percent after the redemption of debt. On thresher/chaff cutter the investment had increased by 5.40 percent after redemption. But on small tools the investment had decreased by 35.38 percent after redemption of debt. Thus, on the farm machines and implements on an average the capital investments had been found to be negative with variation after the redemption of debt and showed that impact of debt waiver scheme was more or less neutral on small farms.

In case of farm buildings on small farms 0.69 cattle shed per farm was reported before redemption of debt which had changed to 0.67 per farm after redemption. But the value of the maintenance of same had increased by 60.45 percent after the redemption of debt. Hence, investment in farm buildings shows positive effect of debt waiver scheme. While in case of irrigation structures, 0.18 electric motor and 0.33 diesel engine per small farm were reported before the redemption which continued after redemption too. But value on maintenance of these assets had decreased by 14.56 percent on electric motor and 22.77 percent on diesel engine after redemption showing negative impact after redemption of debt.

**Table-III-4.2**  
**Capital investment of sample Small households**

Type of machine	BR		AR		PC	
	N	PV	N	PV	N	PV
<b>1. Farm machinery and Implements</b>						
Tractor	0.28	66,154	0.28	57,821	0	(-) 12.60
Trolley	0.31	14,359	0.31	12,103	0	(-) 15.71
Harrow	0.15	2,179	0.15	2,436	0	11.79
Cultivator	0.21	3,218	0.21	2,513	0	(-) 21.91
Rotavator	0.03	385	0.03	372	0	(-) 3.38
Seed drill	0.00	0	0.00	0	0	0
Generator	0.00	0	0.00	0	0	0
Spray pump	0.00	0	0.00	0	0	0
Potato planter	0.00	0	0.00	0	0	0
Thresher/Chaff cutter	0.13	667	0.18	703	38.46	5.40
Small tools	5.92	1,464	6.08	946	2.70	(-) 35.38
Other (specify)	0.00	0	0.00	0	0	0
<b>2. Farm Buildings</b>						
Implements/storage shed	0	0	0	0	0	0
Cattle shed	0.69	37,366	0.67	59,954	(-) 2.90	60.45
other (specify)	0	0	0	0	0	0
<b>3. Irrigation Structure</b>						
Electric motor	0.18	4,949	0.18	4,228	0	(-) 14.56
Diesel Engine	0.33	7,487	0.33	5,782	0	(-) 22.77
Submersible pump	0	0	0	0	0	0
Drip System	0	0	0	0	0	0
other (specify)	0	0	0	0	0	0
<b>Total</b>	<b>8.23</b>	<b>1,38,228</b>	<b>8.42</b>	<b>1,46,858</b>	<b>2.31</b>	<b>6.24</b>

N-Number/farm, PV-Present Value (Rs./farm)

### III.4.3.: Capital Investment of Sample All Households

Table-III-4.3 indicates that on an average the numbers of farm machinery and implements, farm buildings and irrigation structures were estimated at 6.20 per farm on the overall basis before the redemption of debt, but the same had changed to 6.59 per farm after redemption of debt. While the value of these assets had increased from Rs. 55,862.00 before redemption period of debt to Rs. 63,162.00 after redemption period of debt showing a percentage change by 13.07 percent on an overall average on all farms. This evidently confirms that after redemption of debts the capital investments on implements like harrow, rotavator, thresher/chaff cutter and small tools as well as on cattle sheds and on irrigation structure particularly diesel engine had increased on all farms due to implementation of farm debt waiver scheme in Uttar Pradesh.

On the other hand the capital investments on tractors, trolleys, cultivators and electric motors particularly had been found to have decreased by 12.21 percent on tractors, 16.91 percent on trolleys, 26.56 percent on cultivators and 11.17 percent on electric motors after the redemption of debts on an overall average of all farms in Uttar Pradesh. Therefore, it is found that the redemption of debt under the farm Debt Waiver Scheme in Uttar Pradesh had not been effective on machinery like tractors and electric motors as well as on heavy implements like trolleys and cultivators on all the sample farms on an average in the area under study. On storage sheds also there was not any impact of the debt waiver scheme in Uttar Pradesh. The related data are contained in Table-III-4.3.

**Table-III-4.3**  
**Capital investment of sample Overall Households**

Type of machine	BR		AR		PC	
	N	PV	N	PV	N	PV
<b>1. Farm machinery and Implements</b>						
Tractor	0.08	16,611	0.07	14,583	(-) 12.50	(-) 12.21
Trolley	0.08	3,317	0.07	2,756	(-) 12.50	(-) 16.91
Harrow	0.04	550	0.04	883	0	60.55
Cultivator	0.06	847	0.05	622	(-) 16.67	(-) 26.56
Rotavator	0.01	83	0.01	214	0	157.83
Seed drill	0	0	0	0	0	0
Generator	0	0	0	0	0	0
Spray pump	0	0	0	0	0	0
Potato planter	0	0	0	0	0	0

Thresher/Chaff cutter	0.10	564	0.10	647	0	14.72
Small tools	4.99	814	5.07	900	1.60	10.57
Other (specify)	0	0	0	0	0	0
<b>2. Farm Buildings</b>						
Implements/storage shed	0.01	56	0.01	56	0	0
Cattle shed	0.58	27,163	0.91	36,402	56.90	34.01
other (specify)	0	0	0	0	0	0
<b>3. Irrigation Structure</b>						
Electric motor	0.08	2,158	0.07	1,917	(-) 12.50	(-) 11.17
Diesel Engine	0.17	3,699	0.19	4,182	11.76	13.06
Submersible pump	0	0	0	0	0	0
Drip System	0	0	0	0	0	0
other (specify)	0	0	0	0	0	0
<b>Total</b>	<b>6.20</b>	<b>55,862</b>	<b>6.59</b>	<b>63,162</b>	<b>6.29</b>	<b>13.07</b>

N-Number/farm, PV-Present Value (Rs./farm)

### III.5.1. Livestock Inventory on Marginal Farms:

The livestock inventory on marginal farms worked-out in Table-5.1 shows that in case of indigenous cattle the average number of adult female per farm was estimated as 1.07 before redemption of debt which had changed as 1.20 per farm after redemption showing a percentage change by 12.50 percent. The present value of adult female had naturally increased slightly after the redemption of debt. While the number of adult male indigenous cattle was reported as 1 per farm before redemption which remained as 1 per farm after redemption and the present value had increased slightly on an usual. Also the number of young stock was 1 per farm before redemption of debt which continued as such after redemption of debt too. Thus, among the indigenous cattle the change was meagre showing neutral impact of debt waiver scheme in the area under study. Among the crossbred cattle the number of adult female was found to be 1 per farm before redemption of debt which increased to 1.55 per farm showing 55 percent increase after redemption and accordingly the value had also increased by 74.89 percent. No adult male was reported among crossbred cattle. While the number of young stock among crossbred cattle was 1 per farm before redemption which was changed to 1.11 after redemption i.e. an increase of 11 percent in the number and by 24.05 percent in the present value of young stock. Therefore, among crossbred cattle there was significant change after the redemption of debt. Among buffalo the adult female was estimated at 1.37 per farm before redemption which had changed to 1.41 per farm after redemption showing an increase of 2.92 percent, while the value per farm had

changed by 124.78 percent after the redemption of debt. But the number of adult male was reported as 1 per farm before redemption, which remained as 1 per farm after redemption too and the value had changed by 53 percent after redemption. The number of young stock had decreased from 1.32 per farm to 1.26 per farm after the redemption showing change by (-) 4.55 percent but the value increased by 23.53 percent. The number of other animal was 2 per farm before redemption which remained 2 after redemption showing change in value by 2.5 percent after redemption which confirms the impact of debt waiver scheme in Uttar Pradesh.

**Table-III-5.1**  
**Livestock Inventory on Marginal Farms**

Livestock	BR		AR		PC	
	N	PV	N	PV	N	PV
<b>1. Indigenous Cattle</b>						
Adult Female	1.07	15,593	1.2	16,590	12.15	7.78
Adult Male	1	5,500	1	6,050	0	10.00
Young Stock	1	2,500	1	6,250	0	150.00
<b>2. Crossbred Cattle</b>						
Adult Female	1	25,931	1.55	46,350	55.00	74.89
Adult Male	-	-	-	-	-	-
Young Stock	1	3,950	1.11	4,900	11.00	24.05
<b>3. Buffalo</b>						
Adult Female	1.37	46,634	1.41	1,04,825	2.92	124.78
Adult Male	1	7,804	1	11,940	0	53.00
Young Stock	1.32	7,050	1.26	8,709	(-) 4.55	23.53
<b>4. Other</b>						
Adult Female	2	20,000	2	20,500	0	2.50
Adult Male	-	-	-	-	-	-
Young Stock	-	-	-	-	-	-

N-Number/Farm, PV-Present Value (Rs./farm)

### III.5.2. Livestock Inventory on Small Farms:

Table-III-5.2 indicates that among the indigenous cattle on small farms the number of adult female was 1.22 per farm before redemption of debt which got changed to 1.23 per farm after redemption of debt showing a change by 7.38 percent and the present value was changed by 25.06 percent. The number of adult male remained as 1 per farm but the value had changed by 100 percent after redemption. The number of young stock had increased from 1 to 2 per farm after redemption showing change by 100 percent. In case of crossbred cattle the number of adult female had decreased from 2 to 1.89 after redemption i.e. by 5.5 percent but the

value increased by 20.74 percent. Among young stock the number was 1 per farm which remained 1 per farm after redemption and the value increased by 10 percent. While in case of buffalo the number of adult female was 2.14 per farm before redemption which changed to 1.96 per farm after redemption showing negative change by 8.41 percent and the value increased by 6.62 percent after redemption. Adult male remained as such. The number of young stock decreased from 2.33 per farm before redemption to 2.13 per farm after redemption showing negative change by 8.58 percent and the value also decreased by 37.72 percent. Among other livestock 2 per farm were reported after the redemption of debt. Thus, among crossbred cows and buffaloes there was negative change which confirms that there was not any impact of debt waiver scheme in Uttar Pradesh. The data are given in Table-III-5.2.

**Table-III-5.2**  
**Livestock Inventory on Small Farms**

Livestock	BR		AR		PC	
	N	PV	N	PV	N	PV
<b>1. Indigenous Cattle</b>						
Adult Female	1.22	8,556	1.23	10,700	7.38	25.06
Adult Male	1	5,000	1	10,000	0	100.00
Young Stock	1	3,000	2	3,000	100.00	0
<b>2. Crossbred Cattle</b>						
Adult Female	2	50,889	1.89	61,444	(-) 5.5	20.74
Adult Male	1	5,000	1	8,000	0	60.00
Young Stock	1	2,500	1	2,750	0	10.00
<b>3. Buffalo</b>						
Adult Female	2.14	77,955	1.96	83,115	(-) 8.41	6.62
Adult Male	1	19,000	1	11,833	0	0
Young Stock	2.33	2,40,831	2.13	22,625	(-) 8.58	(-) 37.72
<b>4. Other</b>						
Adult Female	-	-	2	20,000	2.00	0.0
Adult Male	-	-	-	-	-	-
Young Stock	-	-	-	-	-	-

N-Number/Farm, PV-Present Value (Rs./farm)

### III.5.3. Livestock Inventory on All Farms:

Table-III-5.3 shows that among indigenous cattle on all farms in Uttar Pradesh the number of adult female was reported as 1.13 per farm before redemption which had changed to 1.17 per farm after redemption of debt showing an increase of 3.54 percent and the value had increased by 8.91 percent after redemption. The number of adult male was 1 per farm before redemption which changed to 1.33 per farm after redemption showing a change by 33 percent and the value had increased by 38.14 percent after redemption.

The number of young stock among indigenous cattle had increased from 1 per farm before redemption to 1.20 per farm after redemption showing a change by 20 percent and the value has increased by 113.33 percent. Among crossbred cattle the number of adult female had increased from 1.24 per farm before redemption to 1.66 per farm after redemption showing a change of 33.87 percent and the value has increased by 60.27 percent. The number of adult male which was 1 per farm before redemption remained 1 per farm after redemption and the value increased by 60 percent. Thus, there was clear impact of debt waiver scheme on the live stock inventory. The young stock had also increased by 9 percent and the value had increased by 21.60 percent. Among Buffalo the number of adult female was 1.53 per farm before redemption which changed to 1.55 per farm after redemption showing a change by 1.31 percent and the value increased by 87.69 percent. The number of adult male was 1 per farm before redemption which remained 1 per farm after redemption and the value changed by 21.69 percent. But the number of young stock decreased from 1.44 per farm before redemption to 1.37 per farm after redemption showing a negative change by 4.86 percent and the value increased by 15.52 percent. The number of other livestock was 2 per farm before redemption which remained 2 per farm after redemption too and the value increased by 1.25 percent. Thus, there was clear impact of debt waiver scheme on an overall basis particularly on cross bread cattle and buffaloes in the area under study. The related data are given in Table-III-5.3.

**Table-III-5.3**  
**Livestock Inventory on All Farms**

Livestock	BR		AR		PC	
	N	PV	N	PV	N	PV
<b>1. Indigenous Cattle</b>						
Adult Female	1.13	12,829	1.17	13,972	3.54	8.91
Adult Male	1	5,333	1.33	7,367	33.00	38.14
Young Stock	1	2,625	1.20	5,600	20.00	113.33
<b>2. Crossbred Cattle</b>						
Adult Female	1.24	31,842	1.66	51,034	33.87	60.27
Adult Male	1	5,000	1	8,000	0	60.00
Young Stock	1	3,708	1.09	5,409	9.00	21.60
<b>3. Buffalo</b>						
Adult Female	1.53	53,014	1.55	99,500	1.31	87.69
Adult Male	1	9,779	1	11,900	0	21.69
Young Stock	1.44	9,094	1.37	10,505	(-) 4.86	15.52
<b>4. Other</b>						
Adult Female	2	20,000	2	20,250	0.00	1.25
Adult Male	-	-	-	-	-	-
Young Stock	-	-	-	-	-	-

N-Number/Farm, PV-Present Value (Rs./farm)

### III.6.1. Cropping Pattern on Marginal Farms:

Cropping pattern on marginal farms analysed in Table-III-6.1 indicates that the gross cropped area per farm in case of marginal farms was estimated as 4.52 acres per farm before the redemption of debt. The same gross-cropped area i.e. 4.52 acres per farm was estimated after redemption period too. While the net operated area per farm also remained as the same before as well as after redemption of debt period. Hence, the cropping intensity per farm in cases of marginal farmers on an overall average accounted for 200 percent, because during summer season no crop was grown on any of the sample marginal farms. Also the total area was reported to be irrigated on each and every sample marginal farms and, therefore, there was not any change after the redemption of debt on all the sample marginal farms. Also in Kharif season Paddy and Sugarcane were the main crops on sample marginal farms and during Rabi season Wheat and Sugarcane were the main crops on all the marginal farms. The related data are given in Table-III-6.1.

**Table-III-6.1**  
**Cropping Pattern on Marginal Farms**

S No	Season/Crop	Irrigated			Un-irrigated			Total		
		BR	AR	PC	BR	AR	PC	BR	AR	PC
<b>A</b>	<b>Kharif</b>									
1.	Paddy	1.12	1.12	00	--	--	--	1.12	1.12	00
2.	Maize	--	--	--	--	--	--	--	--	--
3.	Bajra	--	--	--	--	--	--	--	--	--
4.	Jowar	--	--	--	--	--	--	--	--	--
5.	Cotton	--	--	--	--	--	--	--	--	--
6.	Sugarcane	1.02	1.02	00	--	--	--	1.02	1.02	00
7.	Groundnut	--	--	--	--	--	--	--	--	--
8.	Moong	--	--	--	--	--	--	--	--	--
9.	Soybean	--	--	--	--	--	--	--	--	--
10.	Urad	--	--	--	--	--	--	--	--	--
11.	Sorghum	0.12	0.12	00	--	--	--	0.12	0.12	00
12.	Other	--	--	--	--	--	--	--	--	--
<b>B</b>	<b>Rabi</b>									
1.	Wheat	1.12	1.12	00	--	--	--	1.12	1.12	00
2.	Gram	--	--	--	--	--	--	--	--	--
3.	Sunflower	--	--	--	--	--	--	--	--	--
4.	Rapeseed & Mustard	--	--	--	--	--	--	--	--	--
5.	Vegetable	0.06	0.06	00	--	--	--	0.06	0.06	00
6.	Berseem	0.06	0.06	00	--	--	--	0.06	0.06	00
7.	Other	--	--	--	--	--	--	--	--	--



C	Summer Season									
1.	Maize	--	--	--	--	--	--	--	--	--
2.	Bajra	--	--	--	--	--	--	--	--	--
3.	Cowpea	--	--	--	--	--	--	--	--	--
4.	Other	--	--	--	--	--	--	--	--	--
	<b>Gross cropped area</b>	4.52	4.52	00	--	--	--	4.52	4.52	00
	<b>Cropping intensity</b>	200%	200%	00	--	--	--	200%	200%	00

Figures in parentheses are percentages of the gross cropped area

### III.6.2. Cropping Pattern on Small Farms:

Cropping pattern on sample small farms worked-out in Table-III-6.2 shows that the gross cropped area per farm among sample small farms on an average accounted for 9.50 acres per farm before redemption of debt. While the net operated area per farm was reported at 4.75 acres per farm in case of sample small farms. Therefore, the cropping intensity per farm was estimated as 200 percent per farm because, during the summer season no crop was reported to be grown on any of the sample small farms before and after redemption of debt in the whole area of study. Also the total area was irrigated on all the sample small farms. As regards the crop coverage during different seasons it was found that during kharif season the major area was covered by paddy and sugarcane and minor area by bajra and sorghum. While during Rabi season the major area was covered by wheat and sugarcane and the minor area by Mustard and Berseem. During Summer season no crop was reported to be grown on any of the sample small farms in the area under the study.

The gross cropped area per farm after redemption period of debt in case of sample small farms accounted for 9.68 acres per farm showing a change by 1.90 percent on an average. This confirms the impact of debt waiver scheme in the area of study. The concerned data are contained in Table-III-6.2

**Table-III-6.2**  
**Cropping Pattern on Small Farms**

(Acres/farm)

S No	Season/Crop	Irrigated			Un-irrigated			Total		
		BR	AR	PC	BR	AR	PC	BR	AR	PC
<b>A</b>	<b>Kharif</b>									
1.	Paddy	2.08	2.08	00	--	--	--	2.08	2.08	00
2.	Maize	--	--	--	--	--	--	--	--	--
3.	Bajra	--	--	--	--	--	--	--	--	--
4.	Jowar	0.41	0.48	14.58	--	--	--	0.41	0.48	14.58
5.	Cotton	--	--	--	--	--	--	--	--	--
6.	Sugarcane	1.92	1.92	00	--	--	--	1.92	1.92	00
7.	Groundnut	--	--	--	--	--	--	--	--	--
8.	Moong	--	--	--	--	--	--	--	--	--
9.	Soybean	--	--	--	--	--	--	--	--	--
10.	Urad	--	--	--	--	--	--	--	--	--
11.	Sorghum	0.34	0.36	5.56	--	--	--	0.34	0.36	5.56
12.	Other	--	--	--	--	--	--	--	--	--
<b>B</b>	<b>Rabi</b>									
1.	Wheat	2.08	2.08	00	--	--	--	2.08	2.08	00
2.	Gram	--	--	--	--	--	--	--	--	--
3.	Sunflower	--	--	--	--	--	--	--	--	--
4.	Rapeseed & Mustard	0.60	0.67	10.45	--	--	--	0.60	0.67	10.45
5.	Vegetable	--	--	--	--	--	--	--	--	--
6.	Berseem	0.15	0.17	11.76	--	--	--	0.15	0.17	11.76
7.	Other	--	--	--	--	--	--	--	--	--
<b>C</b>	<b>Summer Season</b>									
1.	Maize	--	--	--	--	--	--	--	--	--
2.	Bajra	--	--	--	--	--	--	--	--	--
3.	Cowpea	--	--	--	--	--	--	--	--	--
4.	Other	--	--	--	--	--	--	--	--	--
	<b>Gross cropped area</b>	9.50	9.68	1.90	--	--	--	9.50	9.68	1.90
	<b>Cropping intensity</b>	200%	200%	00	--	--	--	200%	200%	00

Figures in parentheses are percentages of the gross cropped area

### III.6.3. Cropping Pattern on All Sample Farms:

Table-III-6.3 indicates that the gross cropped area per farm on all farms together accounted for 7.55 acres per farm before the redemption of debt. While after redemption of debt the

gross cropped area per farm had slightly increased to 7.71 acres per farm showing a change by 2.12 percent on an average. Therefore, it is safely concluded that there was a clear impact of debt waiver scheme on all the farms on an overall average in the area under the study. All the farms were irrigated as no un-irrigated area was reported on any of the sample farms. The crop coverage during Kharif season indicates that the major area was covered under Paddy and Sugarcane and the minor area was covered under Bajra and Sorghum crops during Kharif season. While during Rabi season the major area was covered under Wheat and Sugarcane and the minor area was covered under Mustard, Vegetables and Berseem on all the sample farms. Regarding coverage during the Kharif season before redemption of debt, it was found that 1.60 acres per farm was cropped by Paddy and 1.47 acres per farm was cropped by Sugarcane, 0.41 acre under Bajra and 0.23 acre per farm under Sorghum. Thus, the major area was cropped under Paddy and Sugarcane which remained to be cropped during Kharif season after redemption period of debt showing no change. But the area under Bajra and Sorghum had slightly increased after redemption of debt showing changes by 14.08 percent in Bajra and by 0.04 percent in Sorghum respectively. While during Rabi season the major area was cropped under Wheat and Sugarcane before redemption of debt which remained as such after redemption showing no change. But area under Mustard, Vegetables and Berseem had slightly increased after redemption of debt showing minor changes. Thus, on cropping pattern there was not any effect of the debt waiver scheme in the area under study.

**Table-III-6.3**  
**Cropping Pattern on All Farms**

S No	Season/Crop	(Acres/farm)								
		Irrigated			Un-irrigated			Total		
		BR	AR	PC	BR	AR	PC	BR	AR	PC
<b>A</b>	<b>Kharif</b>									
1.	Paddy	1.60	1.60	00	--	--	--	1.60	1.60	00
2.	Maize	--	--	--	--	--	--	--	--	--
3.	Bajra	0.41	0.48	14.58	--	--	--	0.41	0.48	14.58
4.	Jowar	--	--	--	--	--	--	--	--	--
5.	Cotton	--	--	--	--	--	--	--	--	--
6.	Sugarcane	1.47	1.47	00	--	--	--	1.47	1.47	00
7.	Groundnut	--	--	--	--	--	--	--	--	--
8.	Moong	--	--	--	--	--	--	--	--	--
9.	Soybean	--	--	--	--	--	--	--	--	--
10.	Urad	--	--	--	--	--	--	--	--	--
11.	Sorghum	0.23	0.24	0.04	--	--	--	0.23	0.24	0.04

Contd..

12.	Other	--	--	--	--	--	--	--	--	--
<b>B</b>	<b>Rabi</b>									
1.	Wheat	1.60	1.60	00	--	--	--	1.60	1.60	00
2.	Gram	--	--	--	--	--	--	--	--	--
3.	Sunflower	--	--	--	--	--	--	--	--	--
4.	Rapeseed & Mustard	0.60	0.67	10.45	--	--	--	0.60	0.67	10.45
5.	Vegetable	0.06	0.06	00	--	--	--	0.06	0.06	00
6.	Berseem	0.11	0.12	0.08	--	--	--	0.11	0.12	0.08
7.	Other	--	--	--	--	--	--	--	--	--
<b>C</b>	<b>Summer Season</b>									
1.	Maize	--	--	--	--	--	--	--	--	--
2.	Bajra	--	--	--	--	--	--	--	--	--
3.	Cowpea	--	--	--	--	--	--	--	--	--
4.	Other	--	--	--	--	--	--	--	--	--
	<b>Gross cropped area</b>	7.55	7.71	2.12%	--	--	--	7.55	7.71	2.12%
	<b>Cropping intensity</b>	200%	200%	00	--	--	--	200%	200%	00

Figures in parentheses are percentages of the gross cropped area

### III.7.1. Operational Cost of Cultivation on Marginal Farms:

The operational cost of cultivation on marginal farms worked-out in Table-III-7.1 shows that during the Kharif season the cost of the cultivation of paddy was estimated at Rs. 16,035 per acre before redemption of debt which had increased to Rs.16,925 per acre after redemption of debt showing a change by 5.57 percent. For Bajra the cost of cultivation had increased showing a change by 12.27 percent. In case of Sugarcane also it had increased by 11.39 percent after redemption period of debt. While for Shorghum the cost of cultivation per acre had increased by 11.39 percent. Thus, during Kharif season the cost of the cultivation had increased considerably after the redemption of debt on marginal farms which confirms that there was clear impact of farm debt waiver scheme on it.

In Rabi season also the cost of cultivation of wheat was estimated at Rs. 13176 per acre before redemption of debt which increased to Rs. 14,049 per acre after redemption of debt showing a change by 6.63 percent. While for vegetable crops the cost of cultivation per acre had increased by 16.56 percent after the redemption of debt. While for Berseem the cost of cultivation had increased maximum by 31.80 percent after the redemption of debt in the area.

This evidently high lights the impact of debt waiver scheme in the area under study. The related data are given in table-III-7.1

**Table-III-7.1**  
**Operational Cost of Cultivation on Marginal Farms**

**(Rs./Acre)**

S No	Season/Crop	Irrigated			Un-irrigated			Total		
		BR	AR	PC	BR	AR	PC	BR	AR	PC
<b>A</b>	<b>Kharif</b>									
1.	Paddy	16,035	16,928	5.57	--	--	--	16,035	16,928	5.57
2.	Maize	--	--	--	--	--	--	--	--	--
3.	Bajra	42.78	48.00	12.20	--	--	--	42.78	48.00	12.20
4.	Jowar	--	--	--	--	--	--	--	--	--
5.	Cotton	--	--	--	--	--	--	--	--	--
6.	Sugarcane	26,949	30,018	11.39	--	--	--	26,949	30,018	11.39
7.	Groundnut	--	--	--	--	--	--	--	--	--
8.	Moong	--	--	--	--	--	--	--	--	--
9.	Soybean	--	--	--	--	--	--	--	--	--
10.	Urad	--	--	--	--	--	--	--	--	--
11.	Sorghum	5,722	6,167	7.78	--	--	--	5,722	6,167	7.78
12.	Other	--	--	--	--	--	--	--	--	--
<b>B</b>	<b>Rabi</b>									
1.	Wheat	13,176	14,049	6.63	--	--	--	13,176	14,049	6.63
2.	Gram	--	--	--	--	--	--	--	--	--
3.	Sunflower	--	--	--	--	--	--	--	--	--
4.	Rapeseed & Mustard	--	--	--	--	--	--	--	--	--
5.	Vegetable	15,580	18,160	16.56	--	--	--	15,580	18,160	16.56
6.	Berseem	5,386	7,099	31.80	--	--	--	5,386	7,099	31.80
7.	Other	--	--	--	--	--	--	--	--	--
<b>C</b>	<b>Summer Season</b>									
1.	Maize	--	--	--	--	--	--	--	--	--
2.	Bajra	--	--	--	--	--	--	--	--	--
3.	Cowpea	--	--	--	--	--	--	--	--	--
4.	Other	--	--	--	--	--	--	--	--	--

### III.7.2. Operational Cost of Cultivation on Small Farms:

Table-III-7.2 shows that in case of small farms the cost of cultivation of Paddy was estimated at Rs. 26,269 per acre before redemption of debt which had increased at Rs. 34,323 per acre after the redemption of debt showing a change by 25.87 percent. While on the Bajra the cost

of cultivation per acre had increased by 11.27 percent. But in case of Sugarcane the cost of cultivation per acre had shown a negative change by 1.29 percent, while for Shorgum it had increased by 22.33 percent after the redemption of debt in the area under study.

In Rabi season also the cost of cultivation per acre for wheat had increased by 12.10 percent, Mustard by 61.73 percent and Berseem by 24.96 percent after redemption of debt showing a considerable change due to the implementation of farm debt waiver scheme in the area under study. The related data are given in Table-III-7.2

**Table-III-7.2**  
**Operational Cost of Cultivation on Small Farms**

(Rs./Acre)

S No	Season/Crop	Irrigated			Un-irrigated			Total		
		BR	AR	PC	BR	AR	PC	BR	AR	PC
<b>A</b>	<b>Kharif</b>									
1.	Paddy	26,269	34,323	25.87	--	--	--	26,269	34,323	25.87
2.	Maize	--	--	--	--	--	--	--	--	--
3.	Bajra	11,833	13,167	11.27	--	--	--	11,833	13,167	11.27
4.	Jowar	--	--	--	--	--	--	--	--	--
5.	Cotton	--	--	--	--	--	--	--	--	--
6.	Sugarcane	50,000	49,354	-1.29	--	--	--	50,000	49,354	-1.29
7.	Groundnut	--	--	--	--	--	--	--	--	--
8.	Moong	--	--	--	--	--	--	--	--	--
9.	Soybean	--	--	--	--	--	--	--	--	--
10.	Urad	--	--	--	--	--	--	--	--	--
11.	Sorghum	2,812	3,440	22.33	--	--	--	2,812	3,440	22.33
12.	Other	--	--	--	--	--	--	--	--	--
<b>B</b>	<b>Rabi</b>									
1.	Wheat	27,492	30,818	12.10	--	--	--	27,492	30,818	12.10
2.	Gram	--	--	--	--	--	--	--	--	--
3.	Sunflower	--	--	--	--	--	--	--	--	--
4.	Rapeseed & Mustard	3,875	6,267	61.73	--	--	--	3,875	6,267	61.73
5.	Vegetable	--	--	--	--	--	--	--	--	--
6.	Berseem	1,979	2,473	24.96	--	--	--	1,979	2,473	24.96
7.	Other	--	--	--	--	--	--	--	--	--
<b>C</b>	<b>Summer Season</b>									
1.	Maize	--	--	--	--	--	--	--	--	--
2.	Bajra	--	--	--	--	--	--	--	--	--
3.	Cowpea	--	--	--	--	--	--	--	--	--
4.	Other	--	--	--	--	--	--	--	--	--

### III.7.3. Operational Cost of Cultivation on All Farms:

The operational cost of cultivation on all the sample farms worked-out in Table-III-7.3 shows that for Paddy the cost of cultivation per acre was estimated at Rs. 21,152 before the redemption of debt which had increased to Rs. 25,626 per acre after redemption of debt showing a change by 21.15 percent. For Bajra it had increased by 11.52 percent, Sugarcane by 3.15 percent and Sorghum by 12.58 percent. While during Rabi season for Wheat the cost of cultivation per acre had increased by 10.33 percent, Mustard by 38.61 percent, Vegetables by 8.88 percent and Berseem tremendously by 29.95 percent showing the considerable impact of farm debt waiver scheme in the area under study.

**Table-III-7.3**  
**Operational Cost of Cultivation on All Farms**

(Rs./Acre)

S No	Season/Crop	Irrigated			Un-irrigated			Total		
		BR	AR	PC	BR	AR	PC	BR	AR	PC
<b>A</b>	<b>Kharif</b>									
1.	Paddy	21,152	25,626	21.15	--	--	--	21,152	25,626	21.15
2.	Maize	--	--	--	--	--	--	--	--	--
3.	Bajra	8,056	8,984	11.52	--	--	--	8,056	8,984	11.52
4.	Jowar	--	--	--	--	--	--	--	--	--
5.	Cotton	--	--	--	--	--	--	--	--	--
6.	Sugarcane	38,475	39,686	3.15	--	--	--	38,475	39,686	3.15
7.	Groundnut	--	--	--	--	--	--	--	--	--
8.	Moong	--	--	--	--	--	--	--	--	--
9.	Soybean	--	--	--	--	--	--	--	--	--
10.	Urad	--	--	--	--	--	--	--	--	--
11.	Sorghum	4,267	4,804	12.58	--	--	--	4,267	4,804	12.58
12.	Other	--	--	--	--	--	--	--	--	--
<b>B</b>	<b>Rabi</b>									
1.	Wheat	20,334	22,434	10.33	--	--	--	20,334	22,434	10.33
2.	Gram	--	--	--	--	--	--	--	--	--
3.	Sunflower	--	--	--	--	--	--	--	--	--
4.	Rapeseed & Mustard	6,065	8,411	38.61	--	--	--	6,065	8,411	38.61
5.	Vegetable	16,640	18,117	8.88	--	--	--	16,640	18,117	8.88
6.	Berseem	3,683	4,786	29.95	--	--	--	3,683	4,786	29.95
7.	Other	--	--	--	--	--	--	--	--	--
<b>C</b>	<b>Summer Season</b>									
1.	Maize	--	--	--	--	--	--	--	--	--
2.	Bajra	--	--	--	--	--	--	--	--	--
3.	Cowpea	--	--	--	--	--	--	--	--	--
4.	Other	--	--	--	--	--	--	--	--	--

### **III.8.: Production and Disposal Pattern on sample farms**

#### **III.8.1.: Production and Disposal Pattern on Marginal sample farms**

The production and disposal pattern on sample marginal farms worked-out in Table-III-8.1 shows that 35.67 qtls. of Paddy per farm were estimated to be produced of which 16.25 qtls. were sold to the Government agencies @ of Rs. 1,410 per qtl. and 15.65 qtls. were sold to private traders @ of Rs. 1,575 per qtl. and 4 qtls. were sold to millers/ processors of @ Rs. 1,600 per qtl. Thus the maximum quantity of paddy was disposed of to private traders and processors before the redemption of debt. While 33.67 qtls. of wheat were produced per form of which 13.73 qtls. were sold to govt. agencies @ Rs. 1,525 per qtl. and 13.26 qtls. were sold to private traders @ 1,650 per qtl. Thus almost equal quantity of wheat was disposed of to the Govt. agency and private traders in the area under study before the redemption of debt.

While after redemption of debt 38.67 qtls. of total paddy per form were produced of which 17.08 qtls. were sold to Govt. agencies @ Rs. 1,550 per qtl., 16.39 qtls. to private traders @ Rs. 1,660 per qtl. and 4.00 qtls. to millers @ Rs. 1,600 per qtl. Thus, after redemption paddy was sold in higher quantity and at higher prices indeed, almost equally to the Govt. agency and private agencies. In case of wheat the total quantity produced was estimated at 35.25 qtls. per farm of which 14.56 qtls. per form were sold to Govt. agency @ Rs. 1,735 per qtl. and 13.90 qtls. to private agency @ Rs. 1,760 per qtl. Thus, the quantity as well as prices of wheat were also higher after the redemption of debt. This very well confirms the impact of farm debt waivers scheme in the area under study. The percentage change after the redemption of debt in case of paddy produced was, therefore, by 8.41 percent in the total quantity, by 5.11 percent in the quantity sold to Govt. agency and by 9.93 percent prices and the quantity sold to private traders by 4.73 percent with prices by 5.40 percent. While in case of wheat of the sample marginal farms the percentage change in the total quantity produced was estimated by 4.69 percent, in quantity sold to Govt. agency by 6.05 percent with prices by 13.77 percent and in quantity sold to private agency by 4.82 percent with 3.70 percent in prices. Thus there were considerable change in the production and disposal pattern of paddy and wheat by the sample marginal farmers after redemption of the debt in the area under study. The related data area given in the table-III-8.1.



**Table-III-8.1**

**Production and Disposal pattern on Sample Marginal Farms**

*( Quantity in Qtls/farm)*

*(Price in Rs/Qtl)*

crop	Total qty. Produce	To whom and quantity sold in quintals							
		Govt. Agencies		Pvt. Trader or Money Lender		Processor/ Miller		Pvt. Company	
		Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price
<b>Before Redemption</b>									
Paddy	35.67	16.25	1,410	15.65	1,575	4.00	1,600	--	--
Wheat	33.67	13.73	1,525	13.25	1,650	--	--	--	--
Cotton	--	--	--	--	--	--	--	--	--
Maize	--	--	--	--	--	--	--	--	--
Sugarcane	--	--	--	--	--	--	--	--	--
Other___	--	--	--	--	--	--	--	--	--
<b>After Redemption</b>									
Paddy	38.67	17.08	1,550	16.39	1,660	4.00	1,600	--	--
Wheat	35.25	14.56	1,735	13.90	1,760	--	--	--	--
Cotton	--	--	--	--	--	--	--	--	--
Maize	--	--	--	--	--	--	--	--	--
Sugarcane	--	--	--	--	--	--	--	--	--
Other___	--	--	--	--	--	--	--	--	--
<b>Percent Change</b>									
Paddy	8.41	5.11	9.93	4.73	5.40	0.00	0.00	--	--
Wheat	4.69	6.05	13.77	4.82	3.70	--	--	--	--
Cotton	--	--	--	--	--	--	--	--	--
Maize	--	--	--	--	--	--	--	--	--
Sugarcane	--	--	--	--	--	--	--	--	--
Other___	--	--	--	--	--	--	--	--	--

**III.8.2.: Production and Disposal Pattern on Small sample farms**

The production and disposal pattern on the sample small farms before redemption worked-out in the Table-III-8.2 shows that total quantity of paddy on small farms was estimated to be produced as 39.67 qtls. per farm of which 23.26 qtls. were sold to Govt. agency @ Rs. 1,410 per qtl. and 16.41 qtls to private traders @ Rs. 1,560 per qtl. before the redemption of debt Thus, the quantity sold to Govt. agencies was comparatively higher before the redemption of debt. The quantity of wheat produced on small farms was estimated as 37.00 qtls. per farm of which the maximum i.e. 22.00 qtls. were sold to the Govt. agencies @ Rs. 1,525 per qtl. and

15.00 qtls to private traders @ Rs. 1,620 per qtl. before the redemption of debt. Thus it disposal comparatively higher quantity to Govt. agencies.

While after redemption of debt the quantity of paddy produced per farm was estimated as 47.67 qtls. of which 26.20 qtls. were sold to the Govt. agencies @ Rs. 1,550 per qtl. and 21.47 qtls. were sold to the private traders @ Rs. 1,660 per qtl. The quantity of wheat produced per farm was estimated as 39.50 qtls. of which 20.49 qtls were sold to Govt. agencies @ Rs. 1,735 per qtl. and 19.01 qtls. to private traders @ Rs. 1,760 per qtl. Therefore, the percentage change in the production and disposal pattern after the redemption of debt in cases of both the major crops indicates that the quantity of paddy produced per farm had changed by 20.17 percent after redemption of debt. The quantity of paddy sold to Govt. agencies had also changed by 11.75 percent with prices by 9.93 percent and the quantity sold to private traders had changed by 10.87 percent with the prices by 6.07 percent after redemption of debt. The quantity of wheat produced after redemption of debt had changed by 6.67 percent. The quantity of wheat sold to Govt. agencies had changed by 6.09 percent with the prices by 13.77 percent and quantity sold to private traders had changed by 9.81 percent with the prices by 8.57 percent after redemption of debt. This evidently confirms that there was considerable impact of debt waivers scheme on production and disposal of crops on the sample small farms. The related data are given in Table-III-8.2,

**Table-III-8.2**  
**Production and Disposal pattern on Sample Small Farms**

*( Quantity in Qtls/farm)*  
*(Price in Rs/Qtl)*

crop	Total qty. Produce	To whom and quantity sold in quintals							
		Govt. Agencies		Pvt. Trader or Money Lender		Processor/ Miller		Pvt. Company	
		Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price
<b>Before Redemption</b>									
Paddy	39.67	23.26	1,410	16.41	1,560	--	--	--	--
Wheat	37.00	22.00	1,525	15.00	1,620	--	--	--	--
Cotton	--	--	--	--	--	--	--	--	--
Maize	--	--	--	--	--	--	--	--	--
Sugarcane	--	--	--	--	--	--	--	--	--
Other___	--	--	--	--	--	--	--	--	--

Contd..

<b>After Redemption</b>									
Paddy	47.67	26.20	1,550	21.47	1,660	--	--	--	--
Wheat	39.50	20.49	1,735	19.01	1,760	--	--	--	--
Cotton	--	--	--	--	--	--	--	--	--
Maize	--	--	--	--	--	--	--	--	--
Sugarcane	--	--	--	--	--	--	--	--	--
Other___	--	--	--	--	--	--	--	--	--
<b>Percent Change</b>									
Paddy	20.17	11.75	9.93	10.87	6.07	--	--	--	--
Wheat	6.76	6.90	13.77	9.81	8.57	--	--	--	--
Cotton	--	--	--	--	--	--	--	--	--
Maize	--	--	--	--	--	--	--	--	--
Sugarcane	--	--	--	--	--	--	--	--	--
Other___	--	--	--	--	--	--	--	--	--

### **III.8.3.: Production and Disposal Pattern on All sample farms**

The production and disposal pattern on all sample farms worked out in Table-III-8.3 shows that on an average the total quantity of paddy produced per farm was estimated as 37.67 qtls. of which the maximum i.e. 23.84 qtls were sold to Govt. agencies @ Rs.1,480 per qtl. and 13.83 qtls. to private traders @ Rs. 1,610 per qtl. before redemption of debt. While the quantity of wheat was estimated to be produced as 35.33 qtls. per farm of which 21.69 qtls. were sold to Govt. agencies @ Rs. 1,525 per qtl. and 13.68 qtls. to private traders @ Rs. 1,635 per qtl. before redemption of debt.

After redemption of debt the quantity of paddy produced per farm was estimated as 43.17 qtls. of which the maximum i.e. 25.59 qtls were sold to Govt. agencies @ Rs. 1,550 per qtl and 17.58 qtls to private traders @ Rs. 1,660 per qtl. The quantity of wheat produced per farm after redemption of debt was estimated as 37.37 qtls. of which the maximum i.e. 23.68 qtls. were sold to Govt. agencies @ Rs. 1,735 per qtl. and 13.65 qtls to private traders @ Rs. 1,760 per qtl.

The percentage change after the redemption of debt in the quantity of Paddy produced had occurred by 14.60 percent per farm. The change in quantity sold to Govt. agencies was by 9.32 percent with prices by 9.93 percent and in quantity sold to private traders by 8.60 percent with prices by 5.73 percent. The percentage change in the quantity of wheat produced

was by 5.77 percent after redemption of debt. The changes in the quantity of wheat sold to Govt. agencies had occurred by 6.62 percent with prices by 13.77 percent and in the quantity sold to traders by 8.18 percent with the prices by 6.12 percent. Therefore, it is abundantly clear that there was considerable impact of debt waiver scheme on production and disposal pattern on all the sample farms. The related data are given in table Table-III-8.3

**Table-III-8.3**  
**Production and Disposal pattern on Sample All Farms**  
*( Quantity in Qtls/farm)*  
*(Price in Rs/Qtl)*

crop	Total qty. Produce	To whom and quantity sold in quintals							
		Govt. Agencies		Pvt. Trader or Money Lender		Processor/ Miller		Pvt. Company	
		Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price
<b>Before Redemption</b>									
Paddy	37.67	23.84	1,480	13.83	1,610	--	--	--	--
Wheat	21.69	35.33	1,525	13.66	1,635	--	--	--	--
Cotton	--	--	--	--	--	--	--	--	--
Maize	--	--	--	--	--	--	--	--	--
Sugarcane	--	--	--	--	--	--	--	--	--
Other___	--	--	--	--	--	--	--	--	--
<b>After Redemption</b>									
Paddy	43.17	25.59	1,550	17.68	1,660	--	--	--	--
Wheat	37.37	23.68	1,735	13.65	1,760	--	--	--	--
Cotton	--	--	--	--	--	--	--	--	--
Maize	--	--	--	--	--	--	--	--	--
Sugarcane	--	--	--	--	--	--	--	--	--
Other___	--	--	--	--	--	--	--	--	--
<b>Percent Change</b>									
Paddy	14.60	9.32	9.93	8.60	5.73	--	--	--	--
Wheat	5.77	6.62	13.77	8.18	6.12	--	--	--	--
Cotton	--	--	--	--	--	--	--	--	--
Maize	--	--	--	--	--	--	--	--	--
Sugarcane	--	--	--	--	--	--	--	--	--
Other___	--	--	--	--	--	--	--	--	--

### III.9.1.: Household Expenditure Pattern on Marginal Farms:

The household expenditure pattern on sample marginal farms worked-out in Table-III-9.1 shows that the total domestic expenditure per household per annum before the redemption of debt was estimated at Rs. 33,015 on an overall basis. While after redemption the total domestic expenditure had increased to Rs. 37,450 per household per annum on an average in case of marginal farmers. Therefore, the percentage change by 13.43 percent after redemption of debt in the domestic expenditure confirms the clear impact of debt waiver scheme on marginal farmers.

The item-wise analysis on domestic expenditure indicates that the maximum domestic expenditure i.e. Rs. 8,879 was incurred on grocery item per household per annum before redemption of debt which had increased to Rs. 10,954 after redemption of debt showing an increase by 23.37 percent. The other major items of expenditure were health care, education, house construction and electricity bill before the redemption of debt. But after the redemption of debt, the expenditure on health care had decreased by 5.93 percent but it increased on durable items by 30.15 percent, on electricity bill by 51.56 percent, on conveyance by 69.12 percent and on payment of loans etc. by 160.32 percent. This evidently proves that there was clear impact of debt waiver scheme in the area under study. The related data are contained in Table-III-9.1.

**Table-III-9.1**  
**Household Expenditure Pattern on Marginal Farms**  
**(Rs/annum/household)**

<b>Particular</b>	<b>Before redemption</b>	<b>After redemption</b>	<b>Percent change</b>
Grocery items	8,879	10,954	23.37
Durable items	2,451	3,190	30.15
Health care	4,467	4,202	(-) 5.93
Education ( <i>fees/books/uniform, IELTS coaching others</i> )	3,743	4,433	18.43
Entertainment ( <i>cable/Dish/internet charges etc.</i> )	1,077	1,021	(-) 5.20
Electricity bill	3,035	4,600	51.56
Phone bill	1,437	1,565	8.91
Conveyance fuel	1,017	1,721	69.12
Intoxicants	316	389	23.10
Social ceremonies	1,562	1,755	12.36
Any insurance payment (life/car/home etc)	934	638	(-) 31.69
House construction/Maintenance	3,320	1,871	(-) 43.64
Payment of any installment (debt, home loan, car etc)	305	794	160.32
Legal	78	64	(-) 17.95
Others	360	191	(-) 46.94
<b>Total Domestic Expenditure</b>	<b>33,015</b>	<b>37,450</b>	<b>13.43</b>

### III.9.2.: Household Expenditure Pattern on Small Farms:

The household expenditure pattern on sample small farms analysed in Table-III-9.2 indicates that on an average the total domestic expenditure per household per annum was Rs. 42,404 before the redemption of debt on small farms. While after the redemption of debt the total domestic expenditure had increased to Rs. 45,308 per household per annum. Thus, the domestic expenditure on small farms had increased by 6.85 percent after redemption of debt. It confirms that there was considerable impact of debt waiver scheme on small farmers in the area under study.

The item-wise analysis on domestic expenditure shows that on small farms too the main item was grocery on which the maximum i.e. Rs. 7,427 per household per annum was spent before redemption of debt. It increased to Rs. 8,908 per household per annum after the redemption of debt showing a change by 32.06 percent. The other major items of domestic expenditures were, healthcare, education, house construction and durable items on small farms which had changed by 11.00 percent, 19.67 percent, (-) 96.28 percent and 26.78 percent after the redemption of debt. Therefore, it is very well established that there has been considerable impact on small farmers too after the implementation of farm debt waiver scheme in Uttar Pradesh. The related data are contained in Table-III-9.2.

**Table-III-9.2**  
**Household Expenditure Pattern on Small Farms**  
(Rs/annum/household)

Particular	Before redemption	After redemption	Percent change
Grocery items	7,427	8,908	32.06
Durable items	4,798	6,083	26.78
Health care	5,240	5,848	11.60
Education ( <i>fees/books/uniform, IELTS coaching others</i> )	6,819	8,160	19.67
Entertainment ( <i>cable/Dish/internet charges etc.</i> )	1,318	2,005	52.12
Electricity bill	2,976	4,205	41.30
Phone bill	1,667	2,188	31.25
Conveyance fuel	1,236	1,880	52.10
Intoxicants	274	320	16.79
Social ceremonies	1,750	2,485	42.00
Any insurance payment (life/car/home etc)	692	727	5.06
House construction/Maintenance	6,583	245	(-) 96.28
Payment of any installment (debt, home loan, car etc)	1,538	0	100.00
Legal	0	0	0
Others	85	46	(-) 45.88
<b>Total Domestic Expenditure</b>	<b>42,404</b>	<b>45,308</b>	<b>6.85</b>

### III.9.3.: Household Expenditure Pattern on All Farms:

The household expenditure pattern on all sample farms worked-out in Table-III-9.3. shows that on an average the total domestic expenditure per household per annum was Rs.35,022 before redemption of debt. It has increased to Rs. 39,103 per household per annum after the redemption of debt. Therefore, there has been an increase of 11.65 percent after the redemption of debt on all farms on an average.

The item wise analysis on domestic expenditure on all farms indicates that grocery was the major item of domestic expenditure on which Rs. 8,564 per household per annum was incurred before the redemption of debt which had increased to Rs. 10,510 per household per annum after the redemption of debt. Thus, there was an increase of 22.72 percent on all farms after the redemption of debt. The other major items of domestic expenditure was health care education, electricity bill and payment of loans etc. on which the changes have been there as on healthcare it was by 18.82 percent, on electricity bill 39.51 percent and on payment on loans etc. there was a change by (-) 89.13 percent on all the farms on an average after the redemption of debt. The related data are given in the Table-III-9.3.

**Table-III-9.3**  
**Household Expenditure Pattern on All Farms**  
(Rs/annum/household)

<b>Particular</b>	<b>Before redemption</b>	<b>After redemption</b>	<b>Percent change</b>
Grocery items	8,564	10,510	22.72
Durable items	2,960	3,817	28.95
Health care	4,635	4,559	1.64
Education ( <i>fees/books/uniform, IELTS coaching others</i> )	4,410	5,240	18.82
Entertainment ( <i>cable/Dish/internet charges etc.</i> )	1,129	1,234	9.30
Electricity bill	3,022	4,514	39.51
Phone bill	1,487	1,700	14.32
Conveyance fuel	1,065	1,755	64.79
Intoxicants	307	374	21.82
Social ceremonies	1,603	1,913	19.34
Any insurance payment (life/car/home etc)	881	657	(-) 25.43
House construction/Maintenance	4,027	1,997	(-) 50.41
Payment of any installment (debt, home loan, car etc)	5,722	622	(-) 89.13
Legal	61	50	(-) 18.03
Others	300	159	(-) 47.00
<b>Total Domestic Expenditure</b>	<b>35,022</b>	<b>39,103</b>	<b>11.65</b>

### **III-10.1.- Nature and Extent of Institutional Loans credit structure on Marginal Farms:-**

The credit structure of marginal farms worked out in Table-III-10.1 shows that on an average Rs. 26,500 per farm was borrowed as crop loan from the co-operative bank before redemption of debt, wherein, Rs. 30,107 per farm was reported as outstanding loan amount before the redemption of debt. The amount borrowed as crop loan from commercial bank was reported as Rs. 87,229 per farm wherein, Rs. 91,789 per farm was reported as outstanding loan amount per farm before redemption of debt and the amount borrowed as crop loan from RRB was Rs. 65,323 per farm wherein, Rs. 70,963 per farm was reported as outstanding loan amount before the redemption of debt.

While after redemption of debt the amount borrowed as crop loan was reported as Rs. 30,000 per farm wherein the outstanding loan amount was reported as Rs. 33,000 per farm. The other type of loan was also reported as Rs. 30,000 per farm and the outstanding loan amount was reported as Rs. 33,000 per farm. The amount borrowed as crop loan from commercial bank was reported as Rs. 1,12,840 per farm and the outstanding loan amount was Rs. 24,950 per farm. While the amount borrowed as crop loan from RRB was reported as Rs. 76,474 per farm and the outstanding loan amount was reported as Rs. 44,419.

Thus, on marginal farms the change in the amount borrowed was by 13.21 percent and the change in outstanding loan amount was by 9.20 percent in case of cooperative bank after redemption of debt. In case of commercial bank the change in amount borrowed as crop loan was by 29.36 percent and the change in outstanding loan amount was by (-) 72.77 percent after the redemption of loan. While in case of amount borrowed as crop loan from RRB the change was by 17.07 percent and the change in outstanding loan amount was (-) 37.41 percent after the redemption of loan. This confirms the good impact of debt waiver scheme on credit structure on the marginal farms. The related data are given in Table-III-10.1.



**Table-III-10.1**  
**Nature and Extent of Institutional loans/ Credit Structure on Marginal farms**  
(Rs./farm)

Name of the agency	Amount borrowed	Outstanding loan amount
<b>Before Redemption</b>		
<b>Co-op. Society:</b> Crop loan	--	--
Other type of loan	--	--
<b>Co-operative Bank:</b> Crop loan	26,500	30,207
Other type of loan	--	--
<b>Commercial bank:</b>	87,229	91,789
Other type of loan	--	--
<b>RRB:</b> Crop loan	65,323	70,963
Other type of loan	--	--
<b>Total</b>	--	--
<b>After Redemption</b>		
<b>Co-op. Society:</b> Crop loan	--	--
Other type of loan	--	--
<b>Co-operative Bank:</b> Crop loan	30,000	33,000
Other type of loan	--	--
<b>Commercial bank:</b>	1,12,840	24,990
Other type of loan	--	--
<b>RRB:</b> Crop loan	76,474	44,419
Other type of loan	--	--
<b>Total</b>	--	--
<b>Percent Change</b>		
<b>Co-op. Society:</b> Crop loan	--	--
Other type of loan	--	--
<b>Co-operative Bank:</b> Crop loan	13.21	9.20
Other type of loan	--	--
<b>Commercial bank:</b>	29.36	(-) 72.77
Other type of loan	--	--
<b>RRB:</b> Crop loan	17.07	(-) 37.41
Other type of loan	--	--
<b>Total</b>	--	--

**III-10.2.- Nature and Extent of Institutional loans/credit structure on Small Farms:-**

The credit structure of small farms worked out in Table-III-10.2. shows that the amount borrowed from cooperative bank before redemption of debt was reported to be nil on the sample small farms. The amount borrowed from the commercial bank as crop loan was reported as Rs. 1,65,690 per farm before the redemption of debt and the outstanding loan amount was reported as Rs. 19,0,769 per farm. While the amount borrowed from RRB as

crop loan was reported as Rs. 93,400 per farm and the outstanding loan amount was reported as Rs. 10,255 per farm, before the redemption of debt on small farms.

While after redemption of debt the amount borrowed from cooperative bank on small farms was also reported to be nil. The amount borrowed as crop loan from commercial bank was reported as Rs. 2,63,800 per farm after redemption of debt and the outstanding loan amount was estimated as Rs. 2,90,180 per farm while the amount borrowed as crop loan From RRB was reported as Rs. 1,39,280 per farm and the outstanding loan amount was estimated as Rs. 1,53,208 per farm and the other type of loan from RRB was reported as Rs. 79,280 per farm and the outstanding loan amount was reported as Rs. 87,208 per farm after redemption of debt. Thus, the change in the amount borrowed from commercial bank was there by 15.10 percent and the change in outstanding loan amount was by 52.11 percent. The change in amount borrowed from RRB was by 49.12 percent and the change in the outstanding loan amount was nil after redemption of debt on the small farms. Thus, the impact of debt waiver scheme on the sample small farms was considerable in the study area of U.P. The related data are given in Table-III-10.2.

**Table-III-10.2**  
**Nature and Extent of Institutional loans/ Credit Structure on Small Farms**  
(Rs./farm)

Name of the agency	Amount borrowed	Outstanding loan amount
<b>Before Redemption</b>		
<b>Co-op. Society:</b> Crop loan	--	--
Other type of loan	--	--
<b>Co-operative Bank:</b> Crop loan	00	00
Other type of loan	--	--
<b>Commercial bank:</b>	16,56,907	1,90,769
Other type of loan	--	--
<b>RRB:</b> Crop loan	93,400	10,255
Other type of loan	--	--
<b>Total</b>		
<b>After Redemption</b>		
<b>Co-op. Society:</b> Crop loan	--	--
Other type of loan	--	--
<b>Co-operative Bank:</b> Crop loan	00	00
Other type of loan	--	--
<b>Commercial bank:</b>	2,63,800	2,90,180
Other type of loan	--	--
<b>RRB:</b> Crop loan	1,39,280	1,53,208
Other type of loan	79,280	87,208
<b>Total</b>	--	--

<b>Percent Change</b>		
<b>Co-op. Society:</b> Crop loan	--	--
Other type of loan	--	--
<b>Co-operative Bank:</b> Crop loan	0.0	0.0
Other type of loan	--	--
<b>Commercial bank:</b>	15.10	52.11
Other type of loan	--	--
<b>RRB:</b> Crop loan	49.12	0.00
Other type of loan	--	--
<b>Total</b>	--	--

### **III-10.2.- Nature and Extent of Institutional loans/credit structure on All Farms:-**

Nature and Extent of Institutional loans/credit structure on All Farms worked-out on Table-III-10.3 shows that on an average the amount borrowed as crop loan from the cooperative bank before the redemption of debt was reported as Rs. 8,655 per farm and outstanding loan amount was reported as Rs. 8,026 per farm on all sample farms on an overall basis before the redemption of debt. The amount borrowed as crop loan from commercial bank was reported as Rs. 1,04,208 per farm and the outstanding loan amount was estimated as Rs. 1,07,692 per farm before the redemption of debt while the amount borrowed as crop loan from RRB was reported as Rs, 71,704 per farm and the outstanding loan amount was estimated as Rs. 78,041 per farm before redemption of debt.

While after the redemption of debt the amount borrowed as crop loan from cooperative bank was estimated as Rs. 30,000 per farm and outstanding loan amount was nil. The amount borrowed as crop loan from commercial bank was estimated as Rs. 1,36,557 per farm and outstanding loan amount was estimated as Rs. 2,09,015 per farm . The amount borrowed as crop loan from RRB was estimated as RS. 1,08,083 per farm and the outstanding loan amount was estimated as Rs. 3,51,647.

Therefore the percentage change in the amount borrowed from commercial bank was (-) 50.13 percent after redemption of debt and the change in outstanding loan amount was by (-) 92.90 percent after redemption of debt. Similarly, the change in the amount borrowed as crop loan from RRB was by 23.82 percent and the change in the outstanding loan amount was by (-) 75.41 percent per farm on all sample farms after redemption of debt. Therefore, it is evidently clear that there was considerable impact of debt waiver scheme on all farms after

the implementation of this scheme in the state of U.P. The related data are given in Table-III-10.3

**Table-III-10.3**  
**Nature and Extent of Institutional loans/ Credit Structure on All Farms**  
(Rs./farm)

Name of the agency	Amount borrowed	Outstanding loan amount
<b>Before Redemption</b>		
<b>Co-op. Society:</b> Crop loan	--	--
Other type of loan	--	--
<b>Co-operative Bank:</b> Crop loan	8,655	8,026
Other type of loan	--	--
<b>Commercial bank:</b>	1,04,208	1,07,692
Other type of loan	--	--
<b>RRB:</b> Crop loan	71,704	78,041
Other type of loan	--	--
<b>Total</b>	--	--
<b>After Redemption</b>		
<b>Co-op. Society:</b> Crop loan	--	--
Other type of loan	--	--
<b>Co-operative Bank:</b> Crop loan	30,000	00
Other type of loan	--	--
<b>Commercial bank:</b>	1,36,557	2,09,015
Other type of loan	--	--
<b>RRB:</b> Crop loan	1,08,083	3,51,647
Other type of loan	--	--
<b>Total</b>	--	--
<b>Percent Change</b>		
<b>Co-op. Society:</b> Crop loan	--	--
Other type of loan	--	--
<b>Co-operative Bank:</b> Crop loan	0.00	0.00
Other type of loan	--	--
<b>Commercial bank:</b>	(-) 50.13	(-) 92.90
Other type of loan	--	--
<b>RRB:</b> Crop loan	23.32	(-) 75.41
Other type of loan	--	--
<b>Total</b>	--	--

**III-11.1.-Annual change in saving pattern on marginal farms :-**

Table-III-11.1 shows the annual change in saving pattern on sample marginal farms. Only one sample farmer had reported to have taken a Life Insurance Policy (LIC) with no details. The sample farmer also reported to continue this LIC policy after the redemption of debt. No

other means of saving was reported by any of the sample marginal farmers during the survey of the study. The related Table-III-11.1 shows the fact.

**Table-III-11.1**  
**Annual Change in saving Pattern on Marginal Farms**

(Rs./farm)

<b>Means of saving</b>	<b>Before Redemption</b>	<b>After Redemption</b>	<b>Percent Change</b>
Insurance	1 Farm	1 Farm	Nil
Mutual funds	NA	NA	NA
Recurring deposit	NA	NA	NA
Fixed deposit	NA	NA	NA
Chit funds	NA	NA	NA
Purchase of gold	NA	NA	NA
Lending to fellows on interest	NA	NA	NA
Others	NA	NA	NA

**III-11.2.-Annual change in saving pattern on Small farms :-**

Table-III-11.2 shows that on sample small farms too only one farmer had reported to have taken LIC policy, with no details and it was continued after redemption of debt also. No other means of saving was reported by any of the sample small farmers during the survey of the study. The Table-III-11.2 shows the fact.

**Table-III-11.2**  
**Annual Change in saving Pattern on Small Farms**

(Rs./farm)

<b>Means of saving</b>	<b>Before Redemption</b>	<b>After Redemption</b>	<b>Percent Change</b>
Insurance	1 Farm	1 Farm	Nil
Mutual funds	NA	NA	NA
Recurring deposit	NA	NA	NA
Fixed deposit	NA	NA	NA
Chit funds	NA	NA	NA
Purchase of gold	NA	NA	NA
Lending to fellows on interest	NA	NA	NA
Others	NA	NA	NA

### III-11.3.- Annual Change in saving pattern on all sample farms:-

No other means of saving except to LIC Policies, one each on Marginal Farm and small Farm was reported by any of the sample farms in the area during the survey of the study. The Table- III-11.3 shows the fact.

**Table-III-11.3**  
**Annual Change in saving Pattern on All Farms**

(Rs./farm)

<b>Means of saving</b>	<b>Before Redemption</b>	<b>After Redemption</b>	<b>Percent Change</b>
Insurance	2 Farm	2 Farm	Nil
Mutual funds	NA	NA	NA
Recurring deposit	NA	NA	NA
Fixed deposit	NA	NA	NA
Chit funds	NA	NA	NA
Purchase of gold	NA	NA	NA
Lending to fellows on interest	NA	NA	NA
Others	NA	NA	NA

## **Chapter-IV**

### **Constraints, Perceptions and Suggestions Regarding Farm Debt Waiver Scheme in the State of Uttar Pradesh**

The present Chapter deals with the extent of debt waived off on marginal, small and all sample farms, types of constraints/difficulties confronted in getting the benefits of scheme and the suggestions/perceptions regarding the farm debt waiver scheme implemented in the state of Uttar Pradesh. These are discussed in the following paragraphs:

#### **IV.1.: Extent of Debt Waived off**

##### **IV.1.1.: Extent of Debt Waived off on Sample Marginal Farms**

The extent of debt waived on sample marginal farms worked-out in Table-IV-1.1 shows that on an average the amount borrowed from banking institutions was estimated as Rs. 1,00,000 per farm before the redemption of debt and the outstanding loan amount was estimated as Rs. 1,07,000 per farm before the redemption of debt. The non-institutional borrowings was not reported on any of the sample marginal farmers. Thus, the total amount borrowed per farm in case of marginal farmers was estimated as Rs. 1,00,000 and outstanding loan amount was Rs. 1,07,000 per farm before redemption of debt. But after redemption of debt the amount borrowed per farm from banking institutions was estimated as Rs. 71,054.45 and the outstanding loan amount was estimated Rs. 76,028.28 per farm. The non-institutional borrowings was reported to be nil after redemption of debt. Thus, the total amount borrowed per farm was Rs. 71,054.45 and the outstanding loan amount was estimated as Rs. 76,025.28 per farm on marginal farms. Therefore, the percentage change in the amount borrowed was estimated by (-) 28.95 percent and the change in outstanding loan amount was estimated by (-) 28.95 percent after the redemption of debt in the area under study. This clearly shows that on the marginal farms the borrowings as well as outstanding amount both had decreased after the implementation of farm debt waiver scheme in the state of Uttar Pradesh. The related data are given in Table-IV-1.1.

**Table-IV-1.1**  
**Extent of Debt Waived on Marginal Farms**

(Rs./farm)

<b>Name of the agency</b>	<b>Amount borrowed</b>	<b>Outstanding loan amount</b>
<b>Before Redemption</b>		
Institutional	1,00,000	1,07,000
Non- Institutional	--	--
<b>Total</b>	<b>1,00,000</b>	<b>1,07,000</b>
<b>After Redemption</b>		
Institutional	71,054.45	76,028.28
Non- Institutional	--	--
<b>Total</b>	<b>71,054.45</b>	<b>76,028.28</b>
<b>Percent Change</b>		
Institutional	(-) 28.95	(-) 28.95
Non- Institutional	--	--
<b>Total</b>	<b>(-) 28.95</b>	<b>(-) 28.95</b>

#### **IV.1.2.: Extent of Debt Waived on Sample Small Farms**

The extent of debt waived on the sample small farms workedout in Table-IV-1.2 shows that on an average the amount borrowed per farm in case of small farmers from banking institutions before the redemption of debt was reported as Rs. 98,974.36 and the outstanding loan amount was reported as Rs. 1,05,902 per farm. The non-institutional borrowings were not reported by any of the sample small farmers before the redemption of debt and hence there was not any outstanding loan amount reported on any of the sample small farms. Thus, the total amount borrowed per farm was estimated as Rs. 98,974.36 before redemption of debt and the outstanding loan amount was estimated as Rs. 1,05,902 per small farm.

After redemption of debt the amount borrowed from the banking institutions was reported as Rs. 87,223.94 per farm and the outstanding loan amount was estimated as Rs. 93329.62 per farm after redemption. The non-institutional borrowings were not reported on any of the sample small farms after redemption and therefore, there was not any outstanding amount on any of the sample small farms. Thus, the total amount borrowed per farm was Rs. 87,223.94 and the outstanding amount per farm was Rs. 93,329.62 after redemption of debt.



Therefore, the change in the amount borrowed was (-) 11.87 percent and in the outstanding amount the change was (-) 11.87 percent after the redemption of debt. This negative decrease shows the impact of debt waiver scheme. The related data are given in Table-IV-1.2.

**Table-IV-1.2**  
**Extent of Debt Waived on Small Farms**

(Rs./farm)		
<b>Name of the agency</b>	<b>Amount borrowed</b>	<b>Outstanding loan amount</b>
<b>Before Redemption</b>		
Institutional	98,974.36	1,05,902
Non- Institutional	--	--
<b>Total</b>	<b>98,974.36</b>	<b>1,05,902</b>
<b>After Redemption</b>		
Institutional	87,223.94	93,329.62
Non- Institutional	--	--
<b>Total</b>	<b>87,223.94</b>	<b>93,329.62</b>
<b>Percent Change</b>		
Institutional	(-) 11.87	(-) 11.87
Non- Institutional	--	--
<b>Total</b>	<b>(-) 11.87</b>	<b>(-) 11.87</b>

#### **IV.1.3.: Extent of Debt Waived on All Sample Farms**

The extent of debt waived on all sample farms worked out in Table-IV-1-3 indicates that on an average the amount borrowed from the banking institutions before redemption of debt was reported as Rs. 99,778 per farm and the outstanding loan amount was estimated as Rs. 1,06,762 per farm. The borrowings from non-institutional banking agencies was reported to be nil. Thus, the total amount borrowed was estimated as Rs. 99,778 per farm and the total outstanding amount was estimated as Rs. 1,06,762 per farm before redemption of debt.

After redemption of debt the amount borrowed from financial institutions was estimated as Rs. 74,558 per farm and the outstanding amount was estimated as Rs. 79,777 per farm. The borrowings from non-financial institutions was nil on all the sample farms. Thus, the total amount borrowed was Rs. 74,558 per farm and the outstanding amount was Rs. 79,777 per farm after redemption of debt on all farms. Therefore, the change in amount borrowed as well as in the amount outstanding was negative by 25.28 percent and it confirms the impact of debt waiver scheme. The related data are given in Table-IV-1.3.

**Table-IV-1.3**  
**Extent of Debt Waived on All Farms**

(Rs./farm)

<b>Name of the agency</b>	<b>Amount borrowed</b>	<b>Outstanding loan amount</b>
<b>Before Redemption</b>		
Institutional	99,778	1,06,762
Non- Institutional	--	--
<b>Total</b>	<b>99,778</b>	<b>1,06,762</b>
<b>After Redemption</b>		
Institutional	74,558	79,777
Non- Institutional	--	--
<b>Total</b>	<b>74,558</b>	<b>79,777</b>
<b>Percent Change</b>		
Institutional	(-) 25.28	(-) 25.28
Non- Institutional	--	--
<b>Total</b>	<b>(-) 25.28</b>	<b>(-) 25.28</b>

#### **IV.2.: Types of Constraints /Difficulties Confronted in Getting the Benefits of Scheme**

The type of constraints/difficulties confronted in getting the benefits of scheme worked out in Table-IV-2 indicates that 26.24 percent of the sample marginal farmers had responded that getting benefits of the farm debt Waiver Scheme was cost incurring, 21.98 percent of the sample marginal farmers had told that many mandays were lost in getting the benefits of scheme. About 14.18 percent of marginal farmers had responded that lot of humiliation was faced in getting benefits of scheme and 37.58 percent marginal farmers had expressed different problems as other constraints such as bribe etc. in getting benefits of scheme.

Among the sample small farmers 5.12 percent had responded that getting benefits of scheme was time consuming, 38.46 percent told it cost incurring, 33.33 percent responded that many mandays were lost, 7.69 percent had confronted humiliation and the remaining 15.38 percent had told to face other difficulties such as bribe etc. in getting benefits of the scheme.

On an overall basis about 1.11 percent of all the sample of 180 farmers had responded that getting benefits of scheme was time consuming, 8.88 percent of all farmers had told it cost incurring, 24.44 percent had told that many mandays were lost in getting the benefits of scheme, 12.77 percent of all farmers had faced humiliation and 32.77 percent had expressed

different problems and other constraints such as bribe etc. in the area under study. The related information are contained in Table-IV-2.

**Table-IV-2**  
**Type of Constraints/Difficulties Confronted in getting the Benefits of Scheme**

(Percent multiple response)

<b>Particular</b>	<b>Marginal</b>	<b>Small</b>	<b>Overall</b>
Time consuming	0 (0.00)	2 (5.12)	2 (1.11)
Cost incurring	37 (26.24)	15 (38.46)	52 (28.88)
Mandays lost	31 (21.98)	13 (33.33)	44 (24.44)
Humiliation	20 (14.18)	3 (7.69)	23 (12.77)
Others (bribe etc)	53 (37.58)	6 (15.38)	59 (32.77)
Total	141 (100.00)	39 (100.00)	180 (100.00)

Note: Figures in parentheses are percentages to total

### **IV.3.: Suggestions/Perceptions Regarding the Farm Debt Waiver Scheme**

The suggestions/perceptions regarding the farm Debt Waiver Scheme in Uttar Pradesh worked-out in Table-IV-3 indicates that among the sample 141 marginal farmers the maximum i.e. 37.58 percent had responded that there was not any reduction in agrarian stress, 14.18 percent had vowed it as less, 21.99 percent told it moderate, 26.24 percent hold it low and not a single respondent holds told it huge. Regarding increased farm profitability 12.05 percent of marginal farmers had responded that farm profitability had not increased, 9.22 percent hold less, the maximum i.e. 39.72 percent had told it moderate, 34.75 percent had told it low and only 4.26 percent of marginal farmers had told that there was huge increase in the farm profitability. On the other hand the maximum i.e. 45.39 percent had responded that loan taken from money lenders should also be waived off, 18.44 percent had told it less, 32.20 percent told it moderate, 3.55 percent told it low and only 1.42 percent of marginal farmers had told it huge. As regards the decreased indebtedness 4.96 percent had told no, 21.28 percent told it less, the maximum i.e. 48.94 percent told it moderate, 17.02 percent told it low and only 7.80 percent had told it huge.

In case of small farmers out of the total 39 sample farmers the maximum i.e. 33.33 percent had told that there was no reduction in the agrarian stress, 5.13 percent told it less, 30.77 percent told it moderate, 30.77 percent told it low and no farmer had told it huge. Regarding increased farm profitability 15.39 percent had told no, 7.69 percent told it less, 33.33 percent had told it moderate, the maximum i.e. 38.46 percent had told it low and 5.13 percent had told it huge. Also 33.33 percent of small farmers had expressed their views that loans taken from money lenders should also be waived off, 10.26 percent had told it less, the maximum i.e. 48.72 percent had told it moderate, 7.69 percent told it low and no farmer had told it huge among the small farmers.

In case of all 180 sample farmers on an overall basis the maximum i.e. 36.67 percent had said no about the reduction in agrarian stress, 12.22 percent had told it less, 23.89 percent told it moderate, 27.22 percent told it low and no farmer had told it huge. About increased farm profitability 12.78 percent had said no, 8.89 percent told it less, the maximum i.e. 38.33 percent had told it moderate, 35.56 percent had told it low and only 4.44 percent had told it huge. About loans taken from money lenders should also be waived off, the maximum i.e. 42.78 percent had said no, 16.67 percent told it less, 35.00 percent told it moderate, 4.44 percent told it low and only 1.11 percent had told it huge. About decreased indebtedness 5.56 percent had said no, 18.33 percent told it less, the maximum i.e. 52.22 percent had told it moderate, 17.78 percent told it low and only 6.11 percent had told it huge in the area under study. The related data are contained in Table-IV-3.

**Table-IV-3**

**Suggestions/ Perceptions regarding the scheme**

<b>Particular</b>	(Percent)					
	<b>Huge (5)</b>	<b>Low (4)</b>	<b>Moderate (3)</b>	<b>Less (2)</b>	<b>No (1)</b>	<b>Total Farmers</b>
<b>Marginal Farmers</b>						
Reduction in agrarian stress	0 (0.00)	37 (26.24)	31 (21.99)	20 (14.18)	53 (37.59)	141 (100.00)
Increased farm profitability	6 (4.26)	49 (34.25)	56 (39.72)	13 (9.22)	17 (12.05)	141 (100.00)
Loans taken from money lenders should also be waived off	2 (1.42)	5 (3.55)	44 (31.20)	26 (18.44)	64 (45.39)	141 (100.00)
Decreased Indebtedness	11 (7.80)	24 (17.02)	69 (48.94)	30 (21.28)	7 (4.96)	141 (100.00)
<b>Small Farmers</b>						
Reduction in agrarian stress	0 (0.00)	12 (30.77)	12 (30.77)	2 (5.13)	13 (33.33)	39 (100.00)
Increased farm profitability	2 (5.13)	15 (38.86)	13 (33.33)	3 (7.69)	6 (15.39)	39 (100.00)
Loans taken from money lenders should also be waived off	0 (0.00)	3 (7.69)	19 (48.72)	4 (10.26)	13 (33.33)	39 (100.00)
Decreased Indebtedness	0 (0.00)	8 (20.52)	25 (64.10)	3 (7.69)	3 (0.69)	39 (100.00)
<b>Overall Farmers</b>						
Reduction in agrarian stress	0 (0.00)	49 (27.22)	43 (23.89)	22 (12.22)	66 (36.67)	180 (100.00)
Increased farm profitability	8 (4.44)	64 (35.56)	69 (38.33)	16 (8.84)	23 (12.78)	180 (100.00)
Loans taken from money lenders should also be waived off	2 (1.11)	8 (4.44)	63 (35.00)	30 (16.67)	77 (42.78)	180 (100.00)
Decreased Indebtedness	11 (6.11)	32 (17.78)	94 (52.22)	33 (18.33)	10 (5.56)	180 (100.00)

Note: Figures in parentheses are percentages to total

## Chapter-V

### Major Findings and Policy Implications

#### V.1.: Major Findings

- On 01-04-2019 the total farmers in Uttar Pradesh were reported as 44,54,064 beneficiaries under Farm Debt Waiver Scheme and the total amount paid was estimated as Rs. 24,821.23 Cr. as a whole.
- The maximum debts were waived off among marginal farmers and among small farmers only one fourth of the same was waived off.
- The majority of beneficiary farmers i.e. 62.22 percent were matured as they were in the age group of above 50 years.
- The maximum i.e. more than 26 percent of the sample farmers were illiterates and among literates the maximum i.e. 24 percent were matriculates only. The farmers having graduates and post graduates degrees were only about 6 percent.
- The status of education among both marginal as well as small farmers in the area under the study was much lower than the national average.
- The numbers of male adults were dominating among both marginal and small farmer families.
- The entire land, both owned and leased-in land, on all the sample farms was irrigated. No leasing-out land was practiced by sample farmers in the area under study.
- There was not any change in dairying as primary occupation after the redemption of debt. Non-agricultural labourers were not reported among small farmers.
- In secondary occupation after the redemption of debt a minor change by 10 percent was found among marginal farmers only.
- The annual household income had increased after redemption of debt on all farms. The small farmers were benefited significantly in the area under study.
- There was not any change in operational land on marginal farms. On small farms there were only nominal changes after the redemption of debt.
- The capital investments on machine, implements, irrigation structures and cattle sheds had increased after redemption of debt due to the effect of Farm Debt Waiver Scheme

in the area under study. This confirms the significant impact of scheme on capital investments on marginal farms.

- The capital investments on harrow, rotavators, threshers/chaff cutters, small tools and diesel engines had increased on all farms owing to Debt Waiver Scheme in the area under study.
- The capital investments on tractors, trolleys, cultivators and electric motors had decreased after redemption of debts on all farms showing adverse effect of the scheme.
- Among the indigenous cattle reared by marginal farmers the change was meagre showing the neutral impact of debt waiver scheme in the area under study.
- Among the crossbred cattle reared by marginal farmers there was significant change after the redemption of debt in the area under study.
- Among the buffaloes reared by marginal farmers there was tremendous change in the value of adult female buffaloes after redemption of debt which confirms the impact of scheme.
- Among crossbred cows and buffaloes reared by small farmers there was negative change which confirms that small farmers were not affected by the debt waiver scheme.
- On an overall basis, on the crossbred cattle and buffaloes reared by all the sample farmers there was clear impact of farm debt waiver scheme in the area under study affecting the total livestock inventory.
- On the cropping pattern of the sample marginal farms there was not any change after the redemption of debt.
- On the cropping pattern of the sample small farms there was minor change in the crop coverage which confirms the impact of scheme in the area under study.
- On all the sample farms on an overall basis there was a clear impact of debt waiver scheme in the area under study.
- The operational cost of cultivation on marginal farms during kharif season had increased considerably after redemption of debt showing clear impact of the scheme.
- In Rabi season too the operational cost of cultivation on marginal farms had increased by 31 percent after the redemption of debt which confirms the impact of debt waiver scheme on marginal farms.

- On small farms too, there were considerable changes in the operational cost of cultivation during kharif and rabi seasons due to the implementation of farm debt waiver scheme.
- On all sample farms also there was 13 percent increase in the cost of cultivation which shows a clear impact of farm debt waiver scheme in the area under study.
- As regards the production and disposal pattern on marginal farms larger quantity of paddy and wheat were sold on higher prices after the redemption of debt showing considerable changes.
- On sample small farms too the considerable changes were noted in the production and disposal pattern of main crop enterprises in western region of Uttar Pradesh showing the impact of scheme.
- Accordingly, on all sample farms too there was considerable impact of farm debt waiver scheme on production in the area under study.
- The percentage change by 13.43 percent in the domestic expenditure of marginal farmers after redemption of debt confirms the clear impact of debt waiver scheme in the area under study.
- The domestic expenditure on small farms had changed by 6.85 percent after redemption of debt which confirms the impact of scheme on small farmers too.
- There had been a change by 11.65 percent in the domestic expenditure of all the sample farmers after the redemption of debt on an overall basis in the area under study.
- There was clear impact of the scheme on credit structure of the scheme on credit structure of the marginal farmers as the change in amount borrowed was by 13.21 percent and in outstanding loan amount by 9.20 percent in case of loans from cooperative banks.
- In case of commercial banks the change in amount borrowed was by 29.36 percent and in outstanding loan amount by (-) 72.77 percent on marginal farms after redemption of debt showing clear impact on credit structure of marginal farmers.
- On small farms the change in amount borrowed from commercial banks was by 15.10 percent and in outstanding loan amount was by 52.11 percent. The change in amount borrowed from RRB was by 49.12 percent and in outstanding loan amount by 0.00 percent after the redemption of debt.



- On all sample farms the percentage change in amount borrowed from commercial banks was by (-) 50.13 percent and in the amount borrowed as crop loan from RRB was by 23.32 percent and in outstanding loan amount by (-) 75.41 percent after redemption of debt showing a considerable impact of the scheme on credit structure.
- Regarding annual change in saving pattern on marginal farms one farmer was reported to have taken LIC Policy before redemption of debt and which he continued after redemption too, but the details were not given by the farmer. Hence, the change was 0.00 percent. No any other means of saving was reported on any of the marginal farms.
- On the sample small farms too only one farmer was reported to have taken LIC Policy without giving details of it and which he continued after redemption too. No other means of saving was reported on small farms too. Hence, change was nil.
- No any means of saving was reported by any of the sample farmers in the area during the survey of the study.
- The total amount borrowed per farm in case of marginal farmers was Rs. 1,00,000 and the outstanding loan amount was Rs. 1,07,000 per farm before the redemption of debt.
- While after redemption of debt the amount borrowed from banking institutions was Rs. 71,054.45 and outstanding loan amount was Rs. 76,028 per farm.
- The percentage change in the amount borrowed was by (-) 28.95 percent and in outstanding loan amount was by (-) 28.95 percent after the redemption of debt showing the decrease in debt on marginal farms.
- As regards the extent of debt waived on small farms, the amount borrowed per farm was Rs. 74,558 and the outstanding loan amount was Rs. 79,777 after redemption of debt on all farms.
- Therefore, the percentage change in amount borrowed as well as in the amount outstanding was (-) 25.28 percent which confirms the impact of debt waiver scheme implemented in Uttar Pradesh.
- On an overall basis out of 180 sample farmers about 1.11 percent had told that getting benefits of scheme was time consuming, 8.88 percent told it cost incurring, 24.44 percent had told that many mandays were lost in getting benefits of scheme.
- Also 12.77 percent of all sample farmers had faced humiliation and 32.77 percent had viewed to face other constraints such as bribe etc. in the area under study.

- About perceptions on farm debt waiver scheme in Uttar Pradesh, out of 141 sample marginal farmers the maximum i.e. 37.59 percent had responded that there was not any reduction in agrarian stress, 14.18 percent told it less, 21.99 percent told it moderate, 26.24 percent told it low and no one told it huge.
- On the 39 sample small farms the change in amount borrowed was by (-) 11.87 percent and in outstanding loan amount also it was (-) 11.87 percent after redemption of debt. This confirms the impact of debt waiver scheme in the state of Uttar Pradesh.
- On all the sample farms the change in amount borrowed as well as in the amount outstanding was (-) 25.28 percent. This confirms the impact of debt waiver scheme in Uttar Pradesh.
- About constraints/difficulties confronted in getting the benefits of scheme, 21.98 percent of marginal farmers had told that many mandays were lost, 26.24 percent told it cost incurring, 14.18 percent responded lot of humiliation and 37.58 percent had viewed to confront bribing etc.
- Among small farmers 5.12 percent had told it time consuming, 38.46 percent told it cost incurring, 33.33 percent had told that many mandays were lost, 7.69 percent told to confront humiliation and 15.38 percent had faced bribing etc.
- On all sample farms, 100 percent had responded it time consuming, 8.88 percent cost incurring, 24.44 percent had told that many mandays were lost, 12.77 percent had faced humiliation and 32.77 percent viewed to face bribe etc.
- As regards suggestions, 37.59 percent of the marginal farmers responded that there was not any reduction in agrarian distress, 14.18 percent told it less, 21.99 percent told it moderate, 26.24 percent told it low and no one told it huge.
- About increased farm profitability 12.05 percent of marginal farmers responded that there was not any increase, 9.22 percent told it less, 39.72 percent told it moderate, 34.75 percent told it low and only 4.76 percent had told it huge.
- The maximum i.e. 45.39 percent of marginal farmers had responded that loans taken from money lenders should also be waived-off.
- As regards the decreased indebtedness 4.96 percent of marginal farmers had told it no, 21.28 percent told it less, 48.94 percent told it moderate, 17.02 percent told it low and only 7.80 percent had told it huge.

- On small farms 33.33 percent had told that there was not any reduction in agrarian distress, 5.13 percent told it less, 30.77 percent told it moderate, 30.77 percent told it low and no one told it huge.
- 33.33 percent of small farmers had also expressed their views that loans taken from money lenders should also be waived-off.
- On all farms 36.67 percent had said no about the reduction in agrarian distress, 12.22 percent had told it less, 23.89 percent told it moderate, 27.22 percent told it low and no farmer had told it huge.
- About increased farm profitability, 12.78 percent had said no, 8.89 percent told it less, 38.33 percent told it moderate, 35.56 percent had told it low and 4.44 percent told it huge.
- About decreased indebtedness, 5.56 percent had said no, 18.33 percent told it less, 52.22 percent had told it moderate, 17.78 percent told it low and only 6.11 percent had told it huge in the area under study.

## **V.2.: Policy Implications**

Based on the findings the following suggestions are being predicated/given for Policy Implications.

1. 100 percent marginal farmers must be benefited under farm debt waiver scheme and among small farmers only the farmers having poor resources or not having adequate resources may be benefited.
2. Status of education among both marginal and small farmers must be elevated for proper awareness about the Government Schemes for their benefits.
3. Marginal and small both types of farmers must be encouraged and assisted to shift from their primary occupation of agriculture to other allied and secondary occupations for doubling their incomes.
4. The subsidies on farm machines particularly tractors, electric motors, rotavators, diesel engines and power threshers must be increased to benefit more genuine farmers.
5. Both marginal and small farmers must be facilitated and encouraged for rearing crossbred cattles, buffaloes and improved breeds of goats on their farms.

6. Both marginal and small farmers must be provided incentives to diversify their farms for increasing the cropping intensity from 200 percent to atleast 300 percent.
7. Both types of farmers must minimize their operational cost of cultivation by opting for the modern techniques of farming as per their available resources.
8. For profitable disposal of their produce marginal and small farmers must adequately sensitized to take safeguards against mal-practices or illegal demands from any quarter.
9. Both marginal and small farmers must minimize their domestic expenditures on litigations and other consumptions.
10. For better credit facilities RRBs must be strengthen in the far off and remote villages to benefit poor farmers.
11. Farm Debt Waiver Scheme must be implemented transparently avoiding discriminations with the farmers who repay installments of loan regularly.
12. Loans taken from money lenders must also be waived off by the Government.
13. To alleviate indebtedness farm profitability of marginal and small farmers must be increased through modern and improved techniques of farming.

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## Annexure-I

### Comments on the report “Impact Evaluation of Farm Debt Waiver Scheme on Farmers Livelihood in Uttar Pradesh” submitted by AERC, Allahabad

1. **Title of the draft report examined:**  
**Impact Evaluation of Farm Debt Waiver Scheme on Farmers Livelihood in Uttar Pradesh**
2. **Date of receipt of the Draft report:** Feb. 13, 2020
3. **Date of dispatch of the comments:** Feb. 18, 2020
4. **Comments on the Objectives of the study:**  
The study addresses all the objectives set forth for the study.
5. **Comments on the methodology**

The study has adopted a common methodology proposed for the coordinating centre.

#### 6. **Comments on analysis, organization, presentation etc.**

Report is analytically good and presents the results in a lucid manner. For compilation/consolidation of the report, I request you to address to the following gaps and inadequacies, so that uniformity may be maintained which will immensely help in compilation/consolidation of the report by our centre.

- i. In Tables III-11.1, 11.2 and 11.3, the figures on Rs./farm basis may also be provided.
- ii. The references provided in Chapter-I may be shifted to the last.

The final report may be submitted after incorporation of the comments.

## Annexure-II

Comment wise Action Taken on Draft Report entitled “Impact Evaluation of Farm Debt Waiver Scheme on Famers’ Livelihood in Uttar Pradesh”

Sl. No.	Comment	Action Taken
1.	Title of the Draft report examined  Impact Evaluation of Farm Debt Waiver Scheme on Farmers’ Livelihood in Uttar Pradesh	Title of the draft report examined and corrected as “Impact Evaluation of Farm Debt Waiver Scheme on Farmers’ Livelihood in Uttar Pradesh”
2.	Date of receipt of the draft report	February 13,2020
3.	Date of dispatch of comments	February 18,2020
4.	Comments on the objectives of the study.	The study addresses all the objectives set under the desired.
5.	Comments on Methodology  The study has adopted a common methodology proposed by the coordinating centre.	The study has adopted a common methodology proposed for all the participating centre.
6.	Comments on inadequacies  i. In tables III- 11.1, 11.2 and 11.3, the figures on Rs./farm basis may also be provided.  ii. The references provided in Chapter- I may be shifted to the last.	In table III- 11.1 (marginal farmer) and III- 11.2 (small farmer) LICs have been taken but no details were reported hence the investments were treated as NA not zero, accordingly III- 11.3 (all farmers) were calculated as such.  The references have been provided/shifted in the last of the report.
7.	Final report may be submitted after incorporation of the comments.	The final report is here by submitted after incorporation of all the comments.