



## Credit use extent of adoption of modern farm technique of the borrowers and repayment and recovery pattern of the credit advanced through lead bank in district Jaunpur

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### ABSTRACT

An experiment was laid out on farmers field of Jaunpur district during the year of 1996-1998. The extent of adoption of modern farm technology was measured, under different heads of technology utilized in agriculture like soil preparation, fertilizer, irrigation, plant protection and post harvest technology. All these categories of borrowers were measured for adoption of technology before and after borrowing. It was found that the adoption of modern farm technology, the sample respondents was increased after borrowing. It was analyzed that there has been an increase of 77.8 per cent in adoption of soil technology, 148.8 per cent in soil treatment technology, 41.9 per cent in the case of fertilizer use technology, 63.2 per cent in adoption of storage technology and 67.9 per cent in adoption technology.

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### INTRODUCTION

Credit system plays a vital role. The need for institutional finance for agriculture development was felt long back, when grant of Takavi and land improvement loan were the only form of state help. The major efforts were made by the Reserve Bank of India to assess the magnitude of credit requirement and performance of existing credit organizations. The use of high yielding varieties of crops calls for more efficient and effective use of farm inputs like quality seeds, fertilizers, assured irrigation, plant protection measures and involvement of labour resulting, into an increased demand of credit to procure the desired inputs. The availability of finance in the major constraint limiting farmers ability to adopt the newly evaluated modern farm technologies.

The rural credit system has several stigma responsible for lower social status, coupled with poor social relation as this segment of farming population have no access to such public facilities. Another important factor associated with credit acceptance is that of commercial attitude.

### METHODOLOGY

The present investigation was conducted in Jaunpur district which not only suffers farm infrastructural development rather in the productivity of crops too, besides low level of income of the farmers. The farmers are not able to invest more on farm activities which result into low level of production and there by low earnings. The availability of finance is the major constraint limiting farmers ability to adopt the newly evolved modern farm technologies. The rural credit system has several stigma responsible for lower social status, coupled with poor social relations as this segment of farming population have no access to such public facilities.

The study was based on the credit/ advances supplied by the district lead bank branch (Union Bank of India). This was studied with the help of a schedule used to determine the credit need of respondents, amount applied and received, purchase or borrowing and rate of interest charged. The pattern of credit utilization of borrowers was analysed on the basis of amount of credit received, amount used for the purpose taken and the amount used for other purposes.

### Key words :

Agricultural  
technology,  
Credit, Borrowers

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**OBSERVATION AND ANALYSIS**

The experimental findings of the present study have been presented in the following sub heads:

**Credit use and extent of adoption :**

The impact of credit has been studied on adoption of modern farm inputs and technologies such as fertilizer, irrigations, plant protection, soil treatment, soil preparation and post harvest techniques.

The number and percentage of farmers adopting soil preparation techniques are given in Table-1. It is clear from the results that only 36per cent of the respondents were utilizing the soil preparation technology before, borrowing stage while this percentage increased up to 64 per cent after borrowing the credit. The enhancement in percentage was workout to 77.8 per cent over pre-borrowing stage. The category wise analysis indicates that the marginal farmers received 100per cent increase in the adoption of the technology as compared to 50 per cent and 133.3 per cent increase in the adoption by small and big farmers, respectively. No significant association was observed between status of loan and size of holding as per on soil preparation technology is concerned.

**Adoption percentage of soil treatment technology :**

The results presented in Table 2 indicate that only 28.7 per cent respondents were adopting the soil

treatment technology before pre-borrowing stage, while the percentage increased (71.3) after borrowing stage. The adoption of the soil treatment technology was worked out to 148.8per cent in the case of total sample of respondents. The category wise increased over pre-borrowing stage calculated to 175per cent, 142 per cent and 133per cent in case of marginal, small and big category of farmers, respectively. There was no significant association reflected by the data between study of borrowing and size of holding as far as adoption of soil treatment technology is concerned.

**Adoption percentage of fertilizer use technology :**

The number and percentage of respondents using fertilizer technology are presented in Table 3. It is evident from the data that only 62 respondents (41.3 per cent) were utilizing the fertilizer use technology before borrowing but after barrowing the number increased to 88 (58.7 per cent). An increase of 42 per cent in the adoption of fertilizer use technology was observed as the result of borrowing. Category wise increase of fertilizer use technology over pre-borrowing worked out 14.3, 60. per cent and 30.0 per cent in casre of marginal, small and big groups of farmers, respectively. The impact of fertilizer use technology is clearly visible among credit beneficiaries of the study area. No significant association was observed between status of borrowing on size of holding as far as adoption of fertilizer use technology is concerned.

<b>Table 1 : Number and percentage of farmers adopting soil preparation technology</b>				
Soil preparation technology	Marginal farmers	Small farmers	Big farmers	Total (n=150)
Pre -borrowing	25 (33.3)	26 (40.0)	3 (30.0)	54 (36.0)
Post- borrowing	50 (66.7)	39 (60.0)	7 (70.0)	96 (64.0)
% increase over pre- barrowing stage	25 (100.0)	13 (50.0)	4 (133.33)	42 (77.8)

<b>Table 2 : Adoption percentage of soil treatment technology</b>				
Particulars	Marginal	Small	Big	Total ( n=150)
Soil treatment technology				
Pre- borrowing	20 (26.7)	19 (29.2)	3 (30.0)	42 (28.7)
Post- borrowing	55 (73.3)	46 (70.8)	7 (70.0)	107 (71.3)
% increase over pre barrowing stage	35 (175.0)	27 (142.1)	4 (133.33)	64 (148.8)

<b>Table 3 : Adoption percentage of fertilizer use technology</b>				
Particulars	Marginal ( n = 75)	Small ( n=65)	Big ( n = 10)	Total (n=150)
Pre- borrowing	35 (46.7)	25 (38.5)	5 (20.0)	62 (41.3)
Post- borrowing	40 (53.3)	40 (61.5)	8 (80.0)	88 (58.7)
% increase over pre -borrowing stage	5 (14.3)	15 (60.0)	6 (300)	26 (41.9)

**Table 4 : Adoption percentage of irrigation technology**

Particulars	Marginal (n = 75)	Small (n = 65)	Big (n = 10)	Total (n = 150)
Pre-borrowing	30 (40.0)	23 (35.4)	4 (40.0)	57 (38.0)
Part -borrowing	45 (60.0)	42 (64.6)	6 (60.0)	93 (62.0)
Percentage increase over pre -borrowing stage	15 (50.0)	19 (82.6)	2 (50.0)	36 (63.2)

**Table 5 : Adoption of weedicide technology**

Particulars	Marginal (n = 75)	Small (n = 65)	Big (n = 10)	Total (n = 150)
Pre-borrowing	13 (17.33)	12 (18.5)	2 (20.0)	24 (16.0)
Past -borrowing	62 (82.7)	53 (81.9)	8 (80.0)	126 (84.0)
Percentage increase over pre-borrowing stage	49 (376.9)	41 (341.7)	6 (300.0)	102 (425.0)

**Table-6 : Adoption of storage technology**

Particulars	Marginal (n = 75)	Small (n = 65)	Big (n = 10)	Total (n = 150)
Pre-borrowing	27 (36.0)	28 (43.1)	4 (40.0)	59 (39.3)
Past- borrowing	48 (64.0)	37 (56.9)	6 (60.0)	91 (60.9)
Percentage increase over pre- borrowing stage	21 (77.8)	9 (32.1)	2 (50.0)	36 (61.01)

**Adoption percentage of irrigation technology:**

As far as adoption percentage in irrigation technology is concerned, 57 (38 per cent) respondents were adopting irrigation at pre-borrowing stage, while it increased to 93 (62 per cent) after borrowing. Impact of borrowing clearly reflects that the adoption of irrigation technology in three groups of farmers recorded to be 50 per cent for marginal, 82.6 per cent for small and 50 per cent in case of big farmers out of total beneficiaries selected (Table 4).

**Adoption of weedicide technology:**

It is evident that out of total 150 sample farmers, 24 (16 per cent) farmers were using recommended weedicide before borrowing stage. While the number increased to 126 (84 per cent) after harrowing stage (Table 5).

**Adoption of storage technology:**

The impact of borrowing on storage technology has been analysed and it was found that 59 (39.3 per cent) sample farmers were using the storage technique before borrowing. It increased to 91 (60.9 per cent) with the increase of 61.01 per cent over pre-borrowing stage. Analysis indicated that the marginal, small and big farmers who received the credit were fond with adoption increase over pre-borrowing stage to the tune of 77.8, 32.1 and 50 per cent in respective orders (Table 6).

As regarding the recovery pattern, about 65 per cent respondents were repaying the crop loan timely within 6

months while 35 per cent respondents recovered the loan within 6 months to one year period. Regarding term loan, 63.3 per cent of total respondents were repaying the loan timely within a set period of 1-5 years. About 36.7 per cent respondents were repaying the same late after 5 years.

**Conclusion:**

A positive relationship was found existing between farm credit utilization and extent of adoption of improved farm practices. Majority of respondents repayed their loan timely. Majority of small and marginal farmers preferred advances for fertilizers while big farmers sought medium term loan for pumpset and tractor etc.

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