

# **Original Research Article**

## **Challenges and Constraints Faced by Potato Growers Regarding Farm Credit Acquisition**

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### **ABSTRACT**

Potato (*Solanum tuberosum* L.), is one of the most commonly cultivated tuber crop and fourth most important food crop, after wheat, rice and maize (Hong *et al.*, 2017). As the potato is a capital-intensive cash crop, the growers become unable to manage large cost of cultivation from their own sources. They borrow credit in cash and kind from a number of sources. Coochbehar –II block has been selected purposively and a total of 100 potato growers were selected randomly from 5 villages. Primary data were collected using a pre-tested structured schedule. Ranking method and Garrett Ranking technique were adopted to analyze the problems and challenges encountered by potato growers with regards to farm credit acquisition. Among the institutional borrowers the main challenge is the unavailability of farm credit on time followed by insufficient credit limit, high interest rates charged by the financial institutes and delay in loan approval/disbursement, respectively. The small and marginal farmers, tenants and agricultural labourers depend upon the non institutional sources to meet their credit needs and pay a very high interest rate. For non institutional borrowers the major challenge is the fear of repayment/becoming defaulter followed by no proper land records, Small land holdings/no extra income source and collateral issues, respectively. The study suggests that banks and co-operatives should come forward to rescue the potato farmers. The dependence on non-institutional sources should be reduced by expanding the outreach of formal sources of credit to the every corner of the villages. The existing scale of finance needs to be reoriented in light of the higher cost of inputs so that farmers can use the ideal levels of inputs and generate the maximum profit.

*Keywords: Constraints analysis, Garrett ranking, ranking method, Spearman's correlation coefficient, Potato cultivation constraints, credit constraints.*

### **1. INTRODUCTION**

Potato (*Solanum tuberosum* L.), is one of the most commonly cultivated tuber crop and fourth most important food crop, after wheat, rice and maize (Hong *et al.*, 2017). At world level, about 365.36 million tonnes of potato is produced over an area of about 19.28 million hectare. New Zealand occupied first rank in production of potato with 50.14 t/ha followed by USA (45.82 t/ha) and Belgium (45.42 t/ha) respectively (FAO, 2015). India ranks 3<sup>rd</sup> in area and 2<sup>nd</sup> in production in the world after China. India had achieved approximately 43.42 million tonnes of production within a limited area of 2.12 million hectare during the year 2015-16. Maximum potato production takes place in Uttar Pradesh (13.85 million tonnes) followed by West Bengal (8.43 million tonnes) and Bihar (6.34 million tonnes) respectively. Productivity is highest in Gujarat (31.58 t/ha) followed by Punjab (25.83 t/ha) and Haryana (24.91 t/ha) (National Horticultural Research and Development Foundation). Potato is a capital intensive crop which needs huge inputs in limited time (Arun *et al.*, 2007). Keeping in view the shrinking cultivable land and burgeoning population in India, potato is a better alternative to deal with the rising food demand. Majority of the potato cultivators are small and marginal and hence, it is important to analyze the major challenges faced by the potato growers regarding farm credit acquisition from the institutional and non-institutional sources of their financing.

## 2. METHODOLOGY

The study was undertaken in Coochbehar district of West Bengal during rabi season of 2020-21. From the selected district, Coochbehar –II block have been selected purposively and a total respondents of 100 potato growers were selected randomly from 5 villages namely Anrakata, Pundibari, Bag Bhandar, Hoglabari and D K Kuthi. Primary data were collected using a pre-tested structured schedule. Both the institutional and non institutional farm credit borrowers were considered for the present study. Lists of major challenges were identified through interaction with the potato growers. Ranking method and Garrett Ranking technique were adopted to analyze the problems and challenges encountered by potato growers with regards to farm credit acquisition in the study area. Ultimately, the ranks for each problem in both the methods were compared using spearman's rank correlation test.

Ranking method is the simplest method to measure the relative position of the constraints for the potato growers in the district of Cooch Behar. In this method, a rank score is assigned to each indicator according to their relative importance as opined by the farmers. Finally the rank scores of all the constraints are summed up to obtain a total rank score. Then all the constraints are again ranked in ascending order to their mean scores. The lowest value indicates the most important problematic constrain among all.

### Garrett Scoring Technique Formula

Per cent position =  $100 (R_{ij} - 0.5) / N_j$

Where,  $R_{ij}$  = Rank given for  $i^{th}$  item by the  $j^{th}$  individual  
 $N_j$  = Numbers of items ranked by  $j^{th}$  individual

The percent position was then converted into scores by referring to the table given by Garrett. Following this procedure, order of merit given by each of the respondents as the problems in getting farm credit from institutional and non institutional agencies was converted into scores. Then for each reason, the scores of individual respondents were added together and divided by the total number of respondents were added. These mean scores for all reasons were arranged in descending order and ranks were given. By this method, the accuracy in determining the preference was obtained.

Spearman's rank correlation coefficient has been worked out to check the degree of associations between the ranks obtained from two different ranking methods from the following formula.

$$r = 1 - 6 \sum D^2 / (n (n^2 - 1))$$

Where,  $r$  = coefficient of rank correlation

$n$  = Numbers of pairs

$D^2$  = squared rank differences between  $R_1$  and  $R_2$

## 3. RESULTS AND DISCUSSION

Potato being a capital-intensive crop very often the potato growers were unable to manage large cost of cultivation amount from their own sources and they take credit, in cash and kind, from a number of sources (Arun *et al.*, 2007). Detail estimates of cost of cultivation of potato (Rs/ha) of Cooch Behar district has been presented in Table 1. Operational costs (Cost A1) are Rs 139703.96/ha and Rs. 143981.47/ha for marginal and small farmers respectively. Within the cost components, Seed has incurred major share of costs and this is

followed by cost of fertilizers and manures and hired labour respectively. Average figure of total operational cost of cultivation is Rs. 139452.9/ha. Total cost of cultivation for marginal farmers comes to Rs. 189393.81/ha and for small farmers, it is Rs 193869.66/ha. At aggregate level, the total cost of cultivation stands at Rs. 189116.7/ha. Thus, cost of cultivation is higher for small farmers compared to marginal farmers. However, as per Govt. record the estimated cost of cultivation of Potato in West Bengal (2018-19) is Rs. 147423.40/ha. Thus, total cost of cultivation (Cost C2) of Potato is seemed to be on higher side for the sample farmers compared to govt. estimates. Farmers usually consider the operational cost (Cost A1) only to judge the economic efficiency of the farming.

**Table 1: Cost of cultivation for potato in Coochbehar district during 2020-21 (Rs/Ha)**

Inputs	Marginal	Small	Total
Hired Labour	17307.41	17485.53	17294.3
Machinery Charges	9615.74	9809.21	9588.75
Seeds	45186.11	46464.47	45094.5
Manure	16694.44	17676.32	16739.63
Fertilizer	27645.28	28310.53	27565.91
Plant Protection	4449.07	4598.68	4428.75
Irrigation	3898.14	3986.84	3847.5
Miscellaneous Charges	7000	7500	7000
Interest@ 12 Per Annum	7907.77	8149.89	7893.56
Cost A1	139703.96	143981.47	139452.9
Interest on fixed cost@10	2500	2500	2500
COST B1	142204	146481.5	141952.9
Rental value(owned land)	15000	15000	15000
COST B2	157204	161481.5	156952.9
Family labour	32189.81	32388.16	32163.8
COST C1	174393.81	178869.66	174116.7
COST C2	189393.81	193869.66	189116.7

### 3.1 USING RANKING METHOD:

From the study it reveals that the potato growers faced numerous challenges while acquiring credit from financial institutes. Table-2 shows the major challenges faced by institutional farm credit borrowers from the study area. Among the constraints, high interest rates ranked first with mean score of 2.74 followed by unavailability of farm credit on time (2.76) and insufficient credit limit (2.90) respectively.

**Table 2: Challenges faced by institutional farm credit borrowers.**

Sl .no.	Factors	Mean Score	Rank
1.	Lengthy paper work	5.96	VI
2.	Insufficient credit limit	2.9	III

3.	High interest rate	2.74	I
4.	Farm credit not available on time	2.76	II
5.	Difficulty in opening bank account	7.12	VII
6.	Difficulty in withdrawal	7.74	IX
7.	Less duration of repayment period	3.98	IV
8.	Delay in the loan approval/ disbursement	3.98	IV
9.	Lack of awareness/ motivation from the bank officials	7.66	VIII

All the potato growers in the study area are unable to receive credits fully from financial institutes. Some of the farmers obtain credit from non institutional sources and the major challenges faced during the credit acquisition are listed below in table-3. Among the challenges no proper land records ranked first with mean score of 2.76 followed by delayed in disbursement (3.66), collateral issues (3.68), fear of repayment (4.1) and high interest rate (4.74) respectively.

**Table 3: Challenges faced by non institutional farm credit borrowers.**

SI .No.	Factors	Mean Score	Rank
1.	Trust issue/only society members can take the credit	7.3	IX
2.	Illiterate/ lack of information	6.1	VI
3.	No proper land records	2.76	I
4.	Collateral issues	3.68	III
5.	Fear of repayment/becoming defaulter	4.1	IV
6.	Small land holdings, no extra income source	6.14	VII
7.	Delay in disbursement	3.66	II
8.	Lengthy paper work	6.36	VIII
9.	High interest rates	4.74	V

### 3.2 USING GARRETT RANKING:

The study has revealed various problems faced by the potato growers during acquisition of farm credit from available financial institutes. Table-4 indicates that among the institutional borrowers the first major challenge faced is the unavailability of farm credit on time with the mean score of 131.3 indicating that the small and marginal farmers faced non availability of credit during the time of seasonal farm activities. Unavailability of timely credit hampers the optimal use of high-cost inputs. Non-availability of loan in appropriate time was ranked as the most important one which caused inconvenience to the beneficiaries in obtaining the credit (Sahoo *et al.*, 2020). Insufficient credit limit (125.73) ranked second among the challenges indicating that credit limit needs to be revised in accordance to the rising prices of the inputs in the prevailing markets. Third is the high interest rates charged by the financial institutes (125.65). The prevailing 7 per cent rate of interest is considered relatively high for the small and marginal farmers. A slight reduction in interest rate may be beneficial and feasible as stated by the potato growers. Fourthly, delayed in loan approval/disbursement (110.08) is one of the major hindrances signifying that sanctioning of farm credit must be according to the timely need of the potato growers. Less paper work, quick approval was

highly recommended by the respondents. Less duration of repayment period (106.82) is also revealed as one of the problem for institutional credit as expressed by the potato growers. At present 6 months (1 year) of repayment period is highly criticized by majority of the potato growers as they are unable to sell the entire harvested product during the period. Moreover, bank authorities increase the interest rate once the repayment period is over thereby they became defaulters. Extra duration of repayment is highly recommended as stated by the potato growers. Other major challenges includes Lengthy paper work (87.14), Difficulty in opening bank account (72.71), Difficulty in withdrawal (61.76) and Lack of awareness/ motivation from the bank officials (61.10), respectively were also recorded and analyzed from the study area during the period.

**Table 4: Challenges faced by institutional farm credit borrowers.**

SI .no.	Factors	Mean Score	Rank
1.	Lengthy paper work	87.14	VI
2.	Insufficient credit limit	125.73	II
3.	High interest rate	125.65	III
4.	Farm credit not available on time	131.37	I
5.	Difficulty in opening bank account	72.71	VII
6.	Difficulty in withdrawal	61.76	VIII
7.	Less duration of repayment period	106.82	V
8.	Delay in the loan approval/ disbursement	110.08	IV
9.	Lack of awareness/ motivation from the bank officials	61.10	IX

The small and marginal farmers, tenants and agricultural labourers are still heavily depending upon the non institutional sources to meet their credit needs and pay a very high interest rate. Table-5 indicates that the major challenges faced by non institutional borrowers in the study area. Among the list of challenges, fear of repayment/becoming defaulter with the mean score of 126.15 has been ranked first. Here the potato growers have a common perception that with a small land holding, minimum income level and seasonal labour works, they are unable to make repayment in time which may basically make them defaulters. Proper land record (122.77) is the important issue in obtaining the credit form the non-institutional sources of credit. Potato growers are denied to avail credit due to lack of proper documents of land ownership. Small land holdings/no extra income source (119.92) is also important issue implying that most of the potato growers. Fourthly, Collateral issues (112.31) are the major challenge. Some financial institutes demand for collaterals like gold, money, land records for security purpose failing which farmers don't get the credit. Delay in disbursement (101.46) ranked followed by high interest rates (85.15), lengthy paper work (72.23), trust issue/only society members can take the credit (62.46) and Illiterate/ lack of information (59.92) are the other constraints as pointed out in the study.

**Table 5: Challenges faced by non institutional farm credit borrowers.**

SI .no.	Factors	Mean Score	Rank
1.	Trust issue/only society members can take the credit	62.46	VIII
2.	Illiterate/ lack of information	59.92	IX

3.	No proper land records	122.77	II
4.	Collateral issues	112.31	IV
5.	Fear of repayment/becoming defaulter	126.15	I
6.	Small land holdings, no extra income source	119.92	III
7.	Delay in disbursement	101.46	V
8.	Lengthy paper work	72.23	VII
9.	High interest rates	85.15	VI

**Table 6: Spearman's rank correlation coefficients between Ranking method and Garrett ranking method**

	Institutional	Non Institutional
r	0.92	0.60

The comparison of correlation coefficients of two ranking method is shown in table-6. For institutional borrowers there is high correlation between the ranking values of the challenges faced during farm credit acquisition (0.92) indicating that similar constraint are faced in both methods. Whereas, for non institutional borrowers correlation value is slightly lesser (0.60) than the institutional borrowers. Less similarity of the constraints faced is observed between the two ranking methods.

#### 4. CONCLUSION

Potato growers are constantly hindering with the high input cost and rapid fluctuation in prices of the harvested products. For managing activities and necessary input cost during the farm operations they access credit either from institutional and non institutional sources to meet their requirements. They often face lots of challenges in acquiring credit from both the sources. The major challenges faced by the institutional credit borrowers are the unavailability of farm credit on time, high interest rates, insufficient credit limit, less duration of repayment period, and delayed in loan approval/disbursement respectively. For non institutional borrowers, the main challenges faced are no proper land records, fear of repayment/becoming defaulter, delayed in disbursement, small land holdings/ no extra income source, collateral issues were observed.

From the study it was found that still a lot of potato growers are outside the ambit of formal sources of credit. Hence the study suggests that banks and co-operatives should come forward to disburse the credit to the potato farmers. The over-dependence on non-institutional sources should be reduced by all the formal sources of credit by expanding its outreach to the corner most villages. Banks should revise the existing scale of finance taking into consideration the increased cost of inputs to help the farmers to use optimal levels of inputs and increase productivity of crops. The co-operative societies should be strengthened. Mechanisms need to be in place to recover the over dues resulting from willful default. Banks and co-operatives can also render counseling to the distressed farmers, which could sort out many of their difficulties.

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