

Challenges and Constraints Faced by Potato Growers Regarding Farm Credit Acquisition

ABSTRACT

Potato (*Solanum tuberosum* L.), widely considered as 'The king of vegetables', has been the most commonly cultivated food crop after rice, wheat and maize.(Hong *et al.*, 2017). Potato growers were unable to meet the large expenses for cultivation from their own sources and they are bound to take credit from different sources due to high capital intensive nature of the crop (Arun *et al.*, 2007). 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 method were adopted to determine 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. From the study area it was found that still lots of small and marginal farmers meet their credit needs from the non institutional sources and they are forced to 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 financial institutes should come forward to meet the credit constraints and challenges faced by the potato farmers. Necessary steps must be taken care to reduce the rate of over-dependence on non-institutional sources by expanding its outreach to the corner most villages. The co-operative societies need to be expanded and strengthened to achieve maximum outreach to the small and marginal farmers. Repayment behavior needs to be inculcated to the borrowers to reduce willful default. Banks and co-operatives must regularly render counseling to the distressed farmers, which could sort out many of their constraints.

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

1. INTRODUCTION

Potato (*Solanum tuberosum* L.), widely considered as 'The king of vegetables', has been the most commonly cultivated food crop after rice, wheat and maize.(Hong *et al.*, 2017). At world level, total potato production is 365.36 million tonnes with acreage of about 19.28 million hectare. New Zealand ranked first in production with 50.14 t/ha followed by USA (45.82 t/ha) and Belgium (45.42 t/ha) respectively (FAO, 2015). India stands 3rd in area and 2nd in production in the world behind China. India had produced approximately 53.69 million tonnes of production within an area of 2.25 million hectare during the fiscal year 2021-22. 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). West Bengal is predominantly an agrarian state with a total geographical area of 8.875 million hectares and 30 per cent of state's incomes obtain from agriculture. There are about 71.23 lakhs farm

families out of which 96 per cent are small and marginal farmers. The average size of land holding is only 0.77 ha (Statistical abstract, 2015). Failure of timely availability of farm credit during peak season derails the farming activities. The fact remains that the majority of the common farmers cannot afford to acquire modern inputs and agricultural implements from their own source which are essential for adoption of improved technology in agriculture. Sometimes poor farmers have to borrow from the village money lenders at exorbitantly high rate of interest which badly affect the farmers. Also there is a limited study on access to farm credit and constraints faced by small and marginal farmers. Hence forth, it is a felt need to analyze the major challenges faced by the potato growers regarding farm credit acquisition from the institutional and non-institutional sources of their financing. The present study was an attempt to generate data on this issue of vital importance with the following specific objective. To identify the constraints and challenges faced by potato growers during farm credit acquisition and to suggest the policy measures for overcoming the constraints.

2. METHODOLOGY

The present 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 method were adopted to determine and evaluate the major constraints 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 the total score is divided by total number of respondents to get respective mean scores. The lowest mean value indicates the most important problematic constrain among all.

Garrett Scoring Technique Formula

$$\text{Per cent position} = \frac{100 (R_{ij} - 0.5)}{N_j}$$

Where, R_{ij} = Rank given for the individual constraint.

N_j = total numbers of constraints.

Using the table given by Garrett, the percent position was then converted into respective scores. Order of merit rank given by each of the respondents was converted into scores. Then for each constraint the respective individual scores were summed up and finally divided by the total number of respondents. Mean scores for all constraints were arranged and ranks were given accordingly. Maximum score will be the ranked first.

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.

$$r = 1 - \frac{6\sum d^2}{n(n^2-1)}$$

Where, r = rank correlation coefficient

n = Numbers of observations

d = difference between two rank of each observation

3. RESULTS AND DISCUSSION

Potato crop is widely considered as highly capital-intensive crop and very often the potato growers were unable to meet the large expenses for cultivation from their own sources and they are bound to take credit from different 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, per unit cost of cultivation was found higher for small farmers in comparison 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

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.

SI .no.	Factors	Mean Score	Rank
1.	Lengthy paper work	5.96	VI
2.	Insufficient credit limit	2.90	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	7.30	IX
2.	Illiterate/ lack of information	6.10	VI
3.	No proper land records	2.76	I
4.	Collateral issues	3.68	III
5.	Fear of repayment/becoming defaulter	4.10	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. Similar results were observed by Sahoo *et al.* (2020) in their respective study. 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

From the study area it was found that still lots of small and marginal farmers meet their credit needs from the non institutional sources and they are forced to 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 from 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.

Sl .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 coefficient 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 large numbers of small and marginal farmers were still unable to receive credit from the financial institutes. Hence the study suggests that financial institutes should come forward to meet the credit constraints and challenges faced by the potato farmers. Necessary steps must be taken care to reduce the rate of over-dependence on non-institutional sources by expanding its outreach to the corner most villages. The existing scale of finance provided by the financial institutes must be formulated taking into consideration with the increasing cost of inputs to help the farmers for optimal levels of inputs use and increase the productivity of crops. The co-operative societies need to be expanded and strengthen to achieve maximum outreach to the small and marginal farmers. Repayment behavior needs to be inculcated to the borrowers to reduce willful default. Banks and co-operatives must regularly render counseling to the distressed farmers, which could sort out many of their constraints.

Consent

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

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