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## **Constraints Faced by the Farmers and Their Remedies in Technological Adoption of Potato Production in Farrukhbad District (Uttar Pradesh)**

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### **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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### **ABSTRACT**

Potato is one of the main vegetable crops of the world. It is grown in the winter season in India. Potato production all over the world is about 382 million tonnes. Uttar Pradesh, West Bengal and Bihar are top three states for potato production in India. The objective of this study is to rank the constraints of using technology among farmers in India for potato production. In the adoption of potato production technology, the social constraints like lack of contact with extension personnel' had got ranked 1. In case of economic constraints, 'low profit had got ranked 1. Most of the suggestion being made because of the expressed opinion of the respondents, observation of the investigator. It may be said protection of crop should be ensured from animals and farmers training programme for increasing potato production farming started, and emphasis must be given to popularize and increase awareness about the production of potato.

**Keywords:** Potato growers; constraints and suggestion.

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## 1. INTRODUCTION

Potato (*Solanum tuberosum L.*) is tuberous crop grow in the winter season. [1,2] In India maximum state produce potato, but now this time top three states are Uttar Pradesh, West Bengal and Bihar. [3] It is an important crop of the world. [4,5] India is in the second position of potato production next to China. [6] India produced 4.5 million tonnes next to China with 9.3 million tonnes.

In Indian agriculture, potato production has assumed a significant place because of it handsome contribution in the national agrarian economy. [7] It accounts for nearly 2.2 percent share of the total agriculture income of the country to the national income from only 0.6 percent of potato cropped area. Potato is cultivated in 22 out of 35 states and union territories of the country. In India potato is cultivated in about 1.3 million hectares with the total production of 24.7 million tones. It is cultivated on a large scale in Uttar Pradesh, West Bengal, Bihar and Punjab. Uttar Pradesh alone produces nearly 41 percent of total potato produced in the country.

## 2. MATERIALS AND METHODS

This study was conducted in Farrukhbad district during the year 2013-14. Farrukhbad district comprises of 7 blocks in which one blocks namely Kayamganj were purposively selected. At first, the list of villages in the blocks was obtained from blocks headquarter. After that five villages were selected randomly from the list. Then a sample of 100 respondents from all five villages was selected by random sampling technique. The personal interview schedule was prepared in the light of decided objectives and variables undertaken. Constraints were measured by open-ended responses of the respondents with the help of a pre-tested schedule developed for the purpose. The data were collected through personal interview with the help of survey schedule. The data were analyzed and find out the percentage, mean and rank order.

## 3. RESULTS AND DISCUSSION

### 3.1 Social Constraints

The data of Table 1 demonstrated that the rank order of social constraints viz., 'lack of contact with extension personnels' was ranked I (3.15)

followed by 'it is more difficult to watch the crop and safeguard against the animals' ranked II (2.98), 'lack of proper guidance and supervision for modernized cultivation' ranked II (2.91), 'lack of interaction with scientist and progressive farmers' ranked IV (2.42), 'more risk involved in potato production' ranked V (2.74), 'lack of scientific knowledge about potato cultivation' ranked VI (2.70), 'risk orientation lack in farming community' ranked VIII (2.45) and 'scientific orientation lack in farming community' ranked IX (2.93). The score value for each constraint indicates that the seriousness of constraints is caused low adoption of technology.

### 3.2 Economic Constraints

The presented data show that the rank order of economic constraints viz. 'low profit was ranked I (2.16), followed by 'farmers purchasing power was poor' ranked II (3.11), 'corruption prevailing in financial institution, i.e. banking, cooperative etc.' ranked III (3.04), 'irrigation expenses area high due to costly diesel and electric charge' ranked IV (3.00), 'no subsidy on input purchase for potato cultivation' ranked V (2.95), 'more involvement of intermediaries in potato marketing' ranked VI (2.30), 'economic motivation lack among farm families' ranked VII (2.82), 'labours are hardly available for agriculture operation' ranked VIII (2.80), 'lack of money' ranked IX (2.70) and 'lack of credit facilities' ranked X (2.65) respectively. The score value for each constraint indicates the seriousness that caused low adoption.

### 3.3 Remedial Measures

It is evident from the Table 3 envisages on remedial measures for better potato production, the majority of the respondents suggested the points viz., 'Suitable approach for the safeguard of the crop against the animal (blue calf)' (73.33%) followed by 'A permanent source of information should be among the farmers related to crop production' (71.67%), 'Flexible source of credit must be there' (62.50%), 'Production procurement arrangement be made by government as in case of wheat and rice' (57.50%), 'Governmental irrigation facilities should be there' (55.0%), 'Reliable seed fertilizers and pesticide supply should be ensured' (46.67%), 'Potato processing unit should be established' (45.83%) and 'demonstrations of different cultural methods should be organized' (40.0%) ranked I, II, III, IV, V, VI, VII and VIII respectively.

**Table 1. Social constraints in potato production technology**

S. no.	Social constraints	Mean score value	Rank order
1.	Lack of contact with extension personnel	3.78	I
2.	It is more difficult to watch the crop and safeguard against the animal.	3.58	II
3.	Lack of proper guidance and supervision for modernized cultivation	3.50	III
4.	Lack of interaction with Scientist and progressive farmers	3.39	IV
5.	More risk involved in potato production	3.29	V
6.	Lack of scientific knowledge about potato cultivation	3.24	VI
7.	Risk orientation lack in farming community	3.00	VII
8.	Progressive farmers leadership lack in their village	2.95	VIII
9.	Scientific orientation lack in farming community	2.62	IX

**Table 2. Degree of serious of economic constraints**

S. no.	Economic constraints	Mean Score value	Rank order
1.	Low profit	3.80	I
2.	Farmers purchasing power is poor	3.74	II
3.	Corruption is prevailing in financial institution, i.e. Banking, Cooperative etc.	3.65	III
4.	Irrigation expenses are high due to costly diesel and electric charges	3.60	IV
5.	No subsidiary on inputs purchase for potato cultivation	3.55	V
6.	More involvement of intermediaries in potato marketing	3.48	VI
7.	Economic motivation lacks among farm families	3.39	VII
8.	Labours are hardly available for agricultural operations	3.36	VIII
9.	Lack of money	3.25	IX
10.	Lack of credit facilities	3.19	X

**Table 3. Remedial measures for better potato production**

S. no.	Suggestive measures	Percentage	Rank order
1.	The suitable approach for the safeguard of the crop against the animal (blue calf and Monkey).	73.33	I
2.	A permanent source of information should be among the farmers related to crop production.	71.67	II
3.	Flexible sources of credit must be there.	62.50	III
4.	Production procurement arrangement is made by government as in case of wheat and rice.	57.50	IV
5.	Government irrigation facilities should be there.	55.00	V
6.	Reliable seed fertilizers and pesticide supply should be ensured.	46.67	VI
7.	Potato processing unit should be established	45.83	VII
8.	Demonstrations of different culture methods should be organized.	40.00	VIII

#### 4. CONCLUSION

It is concluded from above study that most of the Potato growers were Faced Lack of contact with extension personnel, It is more difficult to watch the crop and safeguard against the animal, Lack

of proper guidance and supervision for modernized cultivation, Lack of interaction with Scientist and progressive farmers, Low profit, Farmers purchasing power is poor, Corruption prevailing in financial institution, i.e. Banking, Cooperative etc were the major constraints of the

potato growers. The investigators refer to Suitable approach for the safeguard of the crop against the animal (blue calf and Monkey), and a permanent source of information should be among the farmers related to crop production. Most of the suggestion protection of crop should be ensured from animals and farmers training programme for commercial farming should be organized and emphasis must be given to popularize and make more awareness about the value-added product of potato.

### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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