



ORIGINAL ARTICLE

Knowledge Level of Potato Growers Regarding Potato Production Technology in Western Uttar Pradesh

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ARTICLE HISTORY Received: 14.01.2018 Revised 16.02.2018 Accepted 03.03.2018	ABSTRACT <i>The present study was conducted in Hapur district of Uttar Pradesh. A study was conducted with 80 respondents five villages were selected from one block of one districts for the study. The finding is that 55.00 per cent respondents were the field preparation 56.25 per cent the improved varieties, 50.00 per cent respondents were seed rate, 62.50 per cent respondents were method of sowing time, 47.50 per cent respondents were seed treatment, 57.50 per cent respondents were reported plant to plant distance, 58.75 per cent respondents were row to row distance, 36.25 per cent respondents were knowledge of sowing time, 65.00 per cent respondents were method of sowing ,60.00 per cent of weed management, 42.50 per cent respondents were reported use of F.Y.M, 47.50 per cent respondents were belonging to the medium level of knowledge major insect pest and their management ,42.50 per cent respondents were reported under low level of knowledge about the major disease, 57.50 per cent respondents were under high level of knowledge category of Irrigation practices, 58.75 per cent respondents were under high level of knowledge category of harvesting crops and 63.75 per cent respondents were reported under medium level of knowledge yield per hectare of the potato crop.</i> Key words: Sampling, Respondents, Knowledge, Potato, Per centage, Frequency
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INTRODUCTION

Potato (*Solanum tuberosum* L.) popularly known as 'The king of vegetables', has emerged as fourth most important food crop in India after rice, wheat and maize. Indian vegetable basket is incomplete without Potato. Because, the dry matter, edible energy and edible protein content of potato makes it nutritionally superior vegetable as well as staple food not only in our country but also throughout the world. Now, it becomes as an essential part of breakfast, lunch and dinner worldwide. Being a short duration crop, it produces more quantity of dry matter, edible energy and edible protein in lesser duration of time than cereals like rice and wheat. Hence, potato may prove to be a useful tool to achieve the nutritional security of the nation (Anonymous, 2013).

Uttar Pradesh is the fifth largest State in the country in terms of area and first in terms of population. The State is bounded by Nepal on the north, Uttrakhand on the north-east, Himachal Pradesh on the northwest, Haryana on the west, Rajasthan on the south-west, Madhya Pradesh on the south and southwest and Bihar on the east. It spreads over a large area, and the plains of the State are quite different from the high mountains in the north. State is blessed with rich climatic condition, ideal for growing a large variety of horticultural crops. The sector which includes fruits, vegetable, floriculture, plantation crops, spices & medicinal and aromatic plants, has gained importance in term of enhancing income per unit area, providing nutritional security, source of raw materials for many food processing industries,

earning considerable amount of foreign exchange leading to socio-economic improvement of the people of the State.

The State ranks second in vegetable production among all States. It is a leading State in production of Potato. Major vegetables are Potato, Peas & Cabbage. In India, potato is cultivated in almost all states and under very diverse agro climate conditions. About 85 per cent of potatoes are cultivated in Indo-Gangetic plains of North India. The states of Uttar Pradesh, West Bengal, Punjab, Bihar and Gujarat accounted for more than 80 per cent share in total production.

Potato is a favourable uneatable food crop for most of the poor families but the before time it was a long distance away from middle poor family. Generally its price remains Rs. 10-15 per Kg but during the year June -August its price increased up to Rs 20 per Kg 'so most of the families could not purchase potato for their consumption.

Potato has attained the status of the most important cash and food crop in Uttar Pradesh as well as in India. It is rightly named as King of useable in the world. Producer of potato in India.Uttar Pradesh along produces nearly 43 per cent of India's total production of potato. It has more special feat me such as wide Regional and seasonal adoptability and suitability to various type of soil pH and structure, capability to produce economic biomass in the shortest possible time, suitability in a wide crop rotation and the highest yield in terms of energy, biological nutritive value, protein and carbohydrate per hectare per day which are not present in any crop.

It is suitable time to carry the technology, developed by the agricultural universities and research station to the farmer's field and to convert it into production. The main task today is to narrow this gap so that the farmers in general may get the same level of production as is obtained at the research station and can accelerate their socio-economic standard.

Food value and other uses

Potato can supplement the food needs of the country in a substantial way. It has proved its worth in feeding the nation in emergency. It is an important crop for the high population areas of Asia because it produces more dry matter food, well balanced protein and more calories from per unit area of land and time than other food crops. The problem of malnutrition and it can be largely solved, if potato is accepted as major food and not merely as a vegetable in our country. Potato is a nutritional food and it contains practically all the essential dietary constituents like cereals, carbohydrates which are the major constituents of potato. Besides, it contains essentials nutrients as proteins and minerals like Calcium, Phosphorus, Iron, and Vitamins. About 50% of potato produced in the World is utilized as human food.

The extension service has always been interested with this work of transfer of information and new technologies. But so long, the extension service has not made an approachable and desirable progress in this matter. The efforts of scientists, extension workers and N.G.Os, are to maximize agricultural production.

Change in production pattern will depend on the evolution of new technology and its transfer and adoption by the farming community. But the question arises when generated technology fails to optimize the yield of crop in production area therefore, there are definitely gaps between generated and adopted technology by the farmers.

The use of high yielding varieties, seed treatment, seed rate, fertilizer application, irrigation management, weedicide and plant protection measures and also soil reclamation process in problematic soil with appropriate guidance and technological know-how is provided to the farmers in their own situation. There are more innovations towards the adoption of new technology. Adoption of improved agricultural practice by farmers depends on a great extent of the capacity and ability to acquire and digest the information and then put into practice.

RESEARCH METHODOLOGY

In the study ex-post facto research design of social research was used. The study was carried out in purposively selected Hapur district of Western Uttar Pradesh during 2015-16. Hapur district comprise of 4 blocks in which one block namely Hapur was purposively selected. The revenue villages was arrange in descending order based on the number of potato growers, top five revenue villages were selected from Hapur block. Thus the total numbers of 5 villages were selected for the investigation. From the selected each village's 16 respondents were selected randomly, thus the total of 80 farmers were selected as a study sample. Structured pre-tested interview schedule was developed and used for data collection. The data were collected with help of personal interview method. For data analysis mean, frequency, per centage and rank order statistics were used to draw the meaningful conclusion.

RESULTS AND DISCUSSION**Table-1 Knowledge level of the potato growers regarding potato production technology. N=80**

S.No.	Statements	Low Knowledge		Medium Knowledge		High Knowledge	
		F	P	F	P	F	P
1	Field preparation	07	8.75	44	55.00	29	36.25
2	Improved Varieties	09	11.25	45	56.25	26	32.50
3	Seed Rate	16	20.00	40	50.00	24	30.00
4	Seed depth	14	17.50	50	62.50	16	20.00
5	Seed Treatment	25	31.25	38	47.50	17	21.25
6	Plant to Plant Distance	08	10.00	46	57.50	26	32.50
7	Row to Row Distance	06	07.50	47	58.75	27	33.75
8	Sowing Time	17	21.25	29	36.25	34	42.50
9	Method of Sowing	07	08.75	52	65.00	21	26.25
10	Weed Management	14	17.50	48	60.00	18	22.50
11	Recommended quantity of Farm Yard manure	19	23.75	34	42.50	27	33.75
12	Fertilizer Management	26	32.50	38	47.50	16	20.00
13	Major Insect Pest and Their Management	32	40.00	28	35.00	20	25.00
14	Major Disease and Their Management	34	42.50	25	31.25	21	26.25
15	Irrigation Practices	08	10.00	26	32.50	46	57.50
16	Proper Harvesting time	11	13.75	22	27.50	47	58.75
17	Yield per hectares	09	11.25	51	63.75	20	25.00

F=Frequency

P=Per centage

Field preparation – The data in the table 1 showed that the most of the respondents were medium level of knowledge about field preparation of the potato crop production. Among the total sample size 36.25 per cent respondents were reported under high level of knowledge about field preparation and remaining 08.75 per cent respondent was reported that low level of knowledge about field preparation. Maximum 55.00 per cent respondents were reported under medium level of knowledge about the field preparation of the potato crop.

Improved variety of the potato- The data in the table 1 showed that the most of the respondents were medium level of knowledge about the improved varieties of the potato. Among the total sample size 32.50 per cent respondents were reported under high level of knowledge about improved varieties and remaining 11.25 per cent respondents was reported under low level of knowledge about improved potato varieties. Maximum 56.25 per cent respondents were reported under medium level of knowledge about the improved varieties of the potato.

Seed Rate –The data in the table 1 showed is that the most of the respondents were reported to the medium level knowledge of the seed rate of the potato crop among the total sample size followed by 30.00 per cent respondents were belonging to the high level of knowledge and remaining 20.00 per cent respondents were reported to the low level knowledge of the seed rate of the potato crop, maximum 50.00 per cent respondents were under medium level of knowledge category of seed rate potato crop.

Seed Depth–It is clear from the table 1 that most of the respondents were medium level knowledge about the seed depth in potato sowing method. Among the total sample size 20.00 per cent respondents were reported under high level of knowledge and 17.50 per cent respondents were reported under low level of knowledge about the proper sowing method. Maximum 62.50 per cent respondents were reported under medium level of knowledge about the proper sowing method.

Seed Treatment–The data in the table 1 showed that most of the respondents were medium level of knowledge about the Seed treatment of the potato crops. Among the total sample size 21.25 per cent respondents were reported under high level of knowledge and 31.25 per cent respondents were reported under low level of knowledge about the seed treatment of the potato crops. Maximum 47.50 per cent respondents were reported under medium level of knowledge about the seed treatment of the potato crops.

Plant to Plant distance–The data in the table 1 observed that most of the respondents were medium level of knowledge about the plant to plant distance of the potato plant. Among the total sample size 32.50 per cent respondents were reported under high level of knowledge and 10.00 per cent respondents were reported under low level of knowledge about the plant to plant distance of the potato plant. Maximum 57.50 per cent respondents were reported under medium level of knowledge about the plant to plant distance of the potato plant.

Row to Row distance –The data in the table 1 observed that most of the respondents were medium level of knowledge about the row to row distance of the potato plant. Among the total sample size 33.75 per cent respondents were reported under high level of knowledge and 15.00 per cent respondents were reported under low level of 07.50 about the row to row distance of the potato plant. Maximum 58.75 per cent respondents were reported under medium level of knowledge about the row to row distance of the potato plant.

Sowing time -The data in the table 1 Indicate that the most of the respondents were reported to the medium level of knowledge of the time of sowing of the potato crop. Among the total sample size 42.50 per cent respondents were under high level of knowledge category of time of sowing potato crop followed and remaining 21.25 per cent respondents were reported to the low level of knowledge of the time of sowing of the potato crop. Maximum 36.25 per cent respondents were belonging to the medium level of knowledge sowing time of the potato crop.

Method of Sowing –The data in the table 1 observed that the most of the respondents were reported to the medium level of knowledge of the method of sowing of the potato crop among the total sample size, followed by 26.25 per cent respondents were belonging to the high level of knowledge and remaining 08.75 per cent respondents were reported to the low level of knowledge of the method of sowing of the potato crop maximum 65.00 per cent respondents were under medium level of knowledge category of method of sowing potato crop.

Weed management -The data in the table 1 observed that most of the respondents were medium level of knowledge about the weed management. Among the total sample size 22.50 per cent respondents were reported under high level of knowledge and 17.50 per cent respondents were reported under low level of knowledge followed Maximum 60.00 per cent medium level knowledge of weed management respectively.

Recommended quantity of farm yard Manure - The data in the table 1 showed that most of the respondents were medium level of knowledge about the use of Farm yard manure in potato crops. Among the total sample size 33.75 per cent respondents were reported under high level of knowledge and 23.75 per cent respondents were reported under high level of knowledge about the use of F.Y.M in potato crops. Maximum 42.50 per cent respondents were reported under medium level of knowledge about the use of F.Y.M in Potato crops.

Fertilizer per hectare –The data of the table 1 showed that most of the respondents were reported to the medium level of knowledge of the fertilizers of the potato crop among the total sample size 32.50 per cent respondents were under high level of knowledge category of selection of seed potato crop followed by and remaining 20.00 per cent respondents were reported to the low level of knowledge of fertilizers of the potato crop Maximum 47.50 per cent respondents were belonging to the medium level of knowledge of the potato crop.

Major Insect pest and their management - The data in the table 1 showed that most of the respondents were low level of knowledge about the major insect pests and their management. Among the total sample size 25.00 per cent respondents were reported under high level of knowledge and 35.00 per cent respondents were reported under medium level of knowledge about major insect, pests and their management. Maximum 40.00 per cent respondents were reported under low level of knowledge about the major insect pest and their management in potato crop.

Major disease and their management - The data in the table 1 observed that most of the respondents were low level of knowledge about the major diseases of the potato and their management. Among the total sample size 26.25 per cent respondents were reported under high level of knowledge and 31.25 per cent respondents were reported under medium level of knowledge about major disease of the potato and their management. Maximum 42.50 per cent respondents were reported under low level of knowledge about the major disease of the potato and their management procedure.

Irrigation practices-The data in the table 1 observed that most of the respondents were reported to the high level of knowledge of the water management of the potato crop among the total sample size, followed by 10.00 per cent respondents were belonging to the low level of knowledge and remaining 32.50 per cent respondents were reported to the medium level of knowledge of the water management practices of the potato crop maximum 57.50 per cent respondents were under high level of knowledge category of Irrigation practices potato crop.

Proper harvesting time-The data in the table 1 observed that most of the respondents were reported to the high level of knowledge of the harvesting of crops among the total sample size, followed by 27.50 per cent respondents were belonging to the medium level of knowledge and remaining 13.75 per cent respondents were reported to the low level of knowledge of the harvesting of the potato crop maximum 58.75 per cent respondents were under high level of knowledge category of harvesting crops.

Yield per hectare-The data in the table 1 showed that most of the respondents were medium level of knowledge about the Yield of the potato crop. among the total sample size 25.00 per cent respondents were reported under high level of knowledge and 11.25 per cent respondents were reported under low level of knowledge followed maximum 63.75 per cent respondents were reported under medium level of knowledge yield per hectare of the potato crop.

CONCLUSION

The knowledge level of potato growers regarding potato production technology, the most of the potato growers regarding potato cultivation practices were having medium level and regarding plant protection practices were having at low level.

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