

TRAINING NEEDS OF POTATO GROWERS TOWARDS IMPROVED PRODUCTION TECHNOLOGY IN UTTAR PRADESH

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ABSTRACT: The present study was carried out during the year 2024-25 in Uttar Pradesh to know the training needs of the potato growers their preference time, duration, place of training and training of methodology, for this study the data was collected from 192 Potato growers through personal interview schedule. After analyses of data, it was found that agronomical training needs shows higher priorities of improved varieties reported by 59.37% respondents, with mean score of 2.51, after this fertilizer based on soil testing recommendation needs reported by 47.91% of the respondents with mean score of 2.40 and regarding needs of Potato processing reported by 33.85% respondents with mean score of 2.18. These needs were place Ist, IInd and IIIrd respectively. Regarding time of training 46.35% respondents preferred one to two weeks before cropping season start, 64.58% respondents preferred one to three days training, 44.27%, respondents preferred place of training at village level and 47.92% respondents preferred lecture cum demonstration cum tour programme training methodology.

KEYWORDS: Potato growers, priorities of package & practices and preference time of training

INTRODUCTION

Training is essential to induce motivation, create confidence and inculcate efficiency in an individual. Training is also inevitable for imparting new knowledge and updating the skills of the farmers. Training of farmers had assumed further importance and urgency in the context of the high yielding varieties and improved practices in agriculture and allied fields. (Kumar *et al.*, 2017). Thus, training plays a very important role for human resource development. Potato is an integral part of daily diet in all walks of society. They are cheaper and are better source of protective foods. Daily consumption of sufficient potato (vegetables) could help to prevent major diseases such as

cardio-vascular diseases and certain cancers. The present production could be increased considerably of the available technology is effectively transferred to the farmers. Training has become a critical input especially in view of the growing sophistication in agricultural technology as well as its cost intensive nature.

However, no training programme would bring desirable changes in the knowledge, skill, attitudes, and other behavioral components unless it is a need-based programme. Our training programmes need to focus more on transferring of new technologies from the confines of laboratories and research institutes to the farmers and make them result oriented (Lynton R.P. Pareek, U. 2011) Its profitability

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needs to be enhanced further, but still profitability of potato growing is beset with many constraints faced by the potato growers due to production and marketing. So, therefore the potato grower's needs to be properly trained in the latest improved cultivation practices for realizing more productivity and production of crop. (Verma. S.L. and Ansari, M.N. (2013).

Research methodology

The present study was conducted in Uttar Pradesh, the Uttar Pradesh consists of 18 divisions out of which three divisions were selected purposively i.e. Agra, Aligarh and Meerut for the investigation. From each division one district was selected for the investigation from each district two blocks were selected purposively for the investigation. Thus, the total 06 blocks were selected for the investigation from each block two villages were selected randomly. A list of potato growers from selected villages were made and those farmers were selected who were growing potato not only for their personal consumption but for commercial purpose. From prepared list 16 potato growers were selected by stratified random sampling from each village to make a sample size of 192 respondents for investigation. The data was collected through personal interview and collected data was coded, then analyzed using relevant statistical tools & techniques to find out frequency, percentage, arithmetic mean, standard deviation and coefficient of correlation and the results were then interpreted.

RESULTS AND DISCUSSION

The data presented in (Table 1) revealed that among soil and land preparation practices, soil selection had the highest mean score of 1.48. very few respondents preferred most needed making within this category, while

other activities like ploughing and field leveling were least needed. In agronomic practices, improved varieties had high preference with a mean score of 2.51, the respondents 59.37% reported most needed. followed by seed treatment (2.30) and seed rate (2.21), highlighting the growers strong demand for training on seed quality and management (Gupta, S. (2020). Within fertilizer practices, fertilizer application based on soil test recommendations scored highest (2.40), 47.79% respondents were reported most needed emphasizing the importance of soil-specific nutrient management, followed by optimum fertilizer doses (2.15) was found IInd place in this category (Meena, R.K. and Chauhan, M.S. (2002). For irrigation management, rainwater storage (2.04) and drip irrigation (1.75) received the highest mean scores, reflecting growing interest in water conservation techniques. In plant protection, insect identification and control measure had a mean score of 1.89 in this category 42.18% respondent were reported less need priorities, closely followed by disease management (1.81), showing concern for pest and disease control. Regarding weed control, inter-culture operation scored highest (1.94), indicating the priority of mechanical weed management, while knowledge of herbicides and spray preparation scored slightly lower. Finally, in the harvesting and post-harvest category, processing mean score was found highest (2.18) and marketing/storage (2.04) were the most needed areas for training, suggesting a desire to improve value addition and market linkages. The lowest mean scores generally corresponded to routine or well-understood practices, reflecting farmers' focus on areas they perceive as directly impacting productivity and income (Das, Rajib and Jha, K.K. (2017).

The data presented in (Table 2) revealed that majority of farmers 46.35% preferred receiving training 1–2 weeks before the

cropping season start, indicating their inclination toward timely and actionable knowledge. Short-duration training of 1–3 days was favored by 64.58% of respondents,

Table 1. Distribution of respondents according to practices wise training need preference as perceived by potato growers.

S. No.	Area of Training	Most needed		Needed		Least needed		Mean score	Rank
		F	%	F	%	F	%		
A.	Soil and land preparation								
	a. Soil Selection	4	2.08	85	44.27	103	53.64	1.48	I
	b. Field leveling	2	1.04	20	10.41	170	88.54	1.12	III
	c. Ploughing	1	0.52	19	09.89	172	89.58	1.10	IV
	d. Application of FYM/Compost	3	1.56	39	20.31	150	78.12	1.23	II
B.	Agronomic Practices								
	a. Improved varieties	114	59.37	62	32.29	16	08.33	2.51	I
	b. Seed rate	60	31.25	113	58.85	19	09.89	2.21	III
	c. Sowing time	12	06.25	62	32.29	118	61.45	1.44	V
	d. Method of sowing	21	10.93	85	44.27	86	44.79	1.66	IV
	e. Seed treatment	98	51.04	55	28.64	39	20.31	2.30	II
	f. Spacing	00	0.00	66	34.37	126	65.62	1.34	VI
C.	Fertilizer practices								
	a. Identification of important fertilizer	37	19.27	101	52.60	54	28.12	1.91	III
	b. Optimum dose of fertilizer	65	33.85	92	47.91	35	18.22	2.15	II
	c. Application of fertilizer at Basal, Top dressing and spraying.	20	10.41	77	40.10	95	49.47	1.60	IV
	d. Fertilizer based on Soil Test recommendation.	92	47.91	86	44.79	14	07.29	2.40	I
D.	Irrigation Management practices								
	a. Storage of Rain Water for future use	55	28.64	91	47.39	46	23.95	2.04	I
	b. Flood Irrigation in Potato Crops	16	08.33	38	19.79	138	71.87	1.36	III
	c. Furrow irrigation in potato crops	05	02.60	09	04.68	178	92.70	1.09	IV
	d. Drip Irrigation	39	20.31	67	34.89	86	44.79	1.75	II
E.	Plant protection Practices								
	a. Identification of disease and control measures	42	21.87	72	37.05	78	40.62	1.81	II
	b. Identification of insects and control measures	45	23.43	81	42.18	66	34.37	1.89	I
	c. Preparation of spray solutions and application	30	15.62	59	30.72	103	53.64	1.61	III
F.	Weed Control								
	a. Identification of weeds	10	05.20	28	14.58	154	80.20	1.25	IV
	b. Knowledge of herbicide	33	17.18	82	42.70	77	40.10	1.77	II
	c. Preparation of spray solution and application	41	21.35	65	33.85	86	44.79	1.76	III
	d. Inter-culture operation	47	24.47	88	45.83	57	29.68	1.94	I
G.	Harvesting and post harvesting technology								
	a. Time and method of harvesting	8	4.16	12	06.25	172	89.58	1.14	IV
	b. Processing	65	33.85	97	50.52	30	15.62	2.18	I
	c. Marketing of storage	54	28.12	92	47.91	46	23.95	2.04	II
	d. Seed production	44	22.91	76	39.58	72	37.05	1.85	III

Table 2. Distribution of respondents according to time, duration, place and training methodology preferred.

S. No.	Particulars	No. of respondents (F)	Percentage (%)
Time of Training			
1.	1-2 week before cropping season start	89	46.35
2.	2-3 week before cropping season start	65	33.85
3.	3-4 week before cropping season start	38	19.80
Duration of Training			
1.	1 to 3 days	124	64.58
2.	3 to 5 days	57	29.69
3.	5 to 7 days	11	05.73
Place of Training			
1.	At krishi vigyan kendra	62	32.29
2.	At village level	85	44.27
3.	At block level	27	14.06
4.	At district level	18	09.38
Training Methodology			
1.	Lecture cum discussion	05	2.60
2.	Lecture cum demonstration	65	33.85
3.	Lecture cum demonstration cum tour	92	47.92
4.	Lecture cum skill training	30	15.63

highlighting the importance of concise and time-efficient learning sessions given the growers' busy schedules (Rai, D.P. and Singh, K. 2008). In terms of location, 44.27% preferred training at the village level, followed by 32.29% at Krishi Vigyan Kendra, suggesting that accessibility and minimal travel are important considerations for participation. Regarding the training methodology, nearly half 47.92% of the farmers preferred a "lecture cum demonstration cum tour" approach, emphasizing their interest in experiential learning and field exposure (Bajpai *et al.* (2007). This was followed by 33.85% who favored lecture cum demonstration sessions. the least preferred training needs were also notable (Dangi, R. and Bairthi, R. (2006).

Only 19.80% of respondents favored training 3–4 weeks before the cropping season start, suggesting reduced relevance or recall of information if provided too early. Long-duration training 5–7 days was the least preferred in terms of time commitment with only 5.73% supported, likely due to constraints on farmers' availability. Training conducted at the district level (9.38%) and block level (14.06%) also saw low preference, indicating challenges related to distance, travel, and time. Among training methodologies, the least favored was the "lecture cum discussion" by only 2.60% of respondents. Notably, theoretical or discussion-based methods were the least preferred. Overall, the findings underscore the need for training programs that are brief, well-timed, locally accessible, and practically oriented to effectively engage potato growers and enhance the adoption of improved production technologies (Dangi, R. 2004).

CONCLUSION

It may be concluded that training should be based on the needs and interest of the farmers and their priority areas. The most priority area was reported by the farmers as like improved varieties, fertilizer based on soil test recommendation, optimum dose of fertilizer and post-harvest processing and the training programme organized well in advance before the cropping season start. The training programme should be organized at village level, this was the requirement of most of trainees, one to three days duration of training and lecture cum demonstration cum tour programme methodology of training should be followed so the farmers knowledge, skills, understanding and confidence can be enhanced.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest

ETHICAL STATEMENT

This article does not contain any studies with human participants or animals performed by any of the authors

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