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Training needs of agricultural labourers on modern agricultural practices

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Abstract

The present study aims to understand the training needs of agricultural labourers. The study area is college of agriculture, Vellayani under Kerala Agricultural University in Trivandrum district of Kerala state and the study is conducted during 2023. The study area is taken purposively, as it predominantly undertakes agriculture and allied activities. A Sample size of 70 agricultural labourers based on random sampling method is taken for the study. The data was collected through well structured interview schedule. Using statistical tools like SPSS, the interpretation of data was done. The study revealed that most of the agricultural labourers were middle aged, having education upto matric level, less than ten years of experience as agricultural labour and less than six years of farming experience, having agricultural labour alone as occupation, annual income less than 225000, medium social participation, mass media exposure, scientific orientation, innovativeness and achievement motivation. Majority of the agricultural labourers had medium (52.86%) level of knowledge, 34.29 per cent had low level of knowledge and only 12 per cent of them had high level of knowledge. Almost half the agricultural labourers (51.43%) had medium training needs whereas 24.29 per cent each had high and low training needs. The agricultural labourers gave highest emphasis on hitech farming, polyhouse construction, drip irrigation, precision farming and mechanisation etc. regarding the training needs on different areas. Among twelve characteristics studied, social participation, mass media, scientific orientation, innovativeness, achievement motivation and knowledge were found positively and significantly correlated with training needs. College farm as the venue for training, 10- 20 members as size of training group, three days training as duration and demonstration and field trip as the method of training were the suggestions provided by respondents on the training aspects.

Keywords: Agricultural labourers, training needs

Introduction

Unlike industrial labour, agricultural labour is difficult to define. The reason is that unless capitalism develops fully in agriculture, a separate class of workers depending wholly on wages does not come up. According to the National Commission on Labour "an agricultural labourer is one who is basically unskilled and unorganised and has little for its livelihood, other than personal labour." Mishra and Puri have stated that "All those persons who derive a major part of their income as payment for work performed on the farms of others can be designated as agricultural workers.

In today's world the agricultural sector employs half of the world's labour force with an estimated 1.3 billion workers active in agricultural production worldwide. In developing countries like India, agriculture and agricultural related activities provide livelihood for the majority of the population in rural areas. In agriculture sector, along with other inputs, manual labour plays a significant role. The agricultural production not only depends on the landholding farmers alone but also on the landless labourers who contribute their physical labour. The traditional agricultural practices were mostly confined to manual labour and the intervention of heavy machinery alone but the in recent

times, farms activities involve modern practices which is not so popular among the labours. Appropriate training programmes can play a critical role in providing labours with the new skills and technical knowledge necessary to implement improved methods and to make informed decisions about the best options to suit their conditions. Effective training of any kind requires comprehensive knowledge of the training needs of the target group. It is important to identify training needs before trying to implement any training solutions. In many cases, the training needs of target groups are identified by organizations or individuals, often at the national level, without taking into account the specific needs and preferences of members themselves. This often leads to a mismatch between training programmes and methods and the specific requirements of members in terms of skills, knowledge and interest. Hence it is important to understand the training needs of agricultural labourers.

Objective of the Study

The present study aims to make the profile characteristics, understand training needs of the agricultural labourers, the correlation between them and also the suggestions regarding

the training aspects as perceived by the labourers.

Methodology

The study was conducted during 2023 in college of agriculture, Vellayani, in Trivandrum district of Kerala by adopting Ex-post-facto research design. A sample of 70 agricultural labourers were selected based on random sampling method. The data was collected through well structured interview schedule, which was coded, tabulated, analysed and presented. Various statistical measures such as frequency, percentage and correlation coefficient were used. The findings were suitably interpreted and conclusions and interference were drawn.

Assessment of training needs

Areas on which agricultural labourers needed training were identified for the study purpose. Training needs were assessed in 20 areas. A three point continuum consisting of 'most needed', 'needed' and 'least needed' was used to measure the training needs of agricultural labourers in main areas and a score of three, two, and one was given respectively for quantification. The respondents were asked to indicate anyone of three alternative response against each item of the main areas depending upon the degree of training they are in need.

The total training need score of particular item was worked out considering the response expressed by all respondents. For instance for one particular item i.e. plant protection, frequency of response against each point was 83 in most needed 20 in needed and 17 in least needed multiplying the frequency by their respective score value.

The total score of this particular item was worked out as 306, the mean score of this particular item was worked out by dividing the total score of the item with total number of respondents. Therefore the mean score of the plant protection item obtaining is 2.55.

The mean score values, were obtained separately for all

main areas. Items were ranked according to mean score values. Highest mean score will get 1st rank, next highest mean score will get the next rank, like that all the ranks were worked out.

Results and Discussion

Profile characteristics of agricultural labourers

The data of table 1 revealed that majority of the agricultural labourers belonged to middle age group (48.57%) while 42.86 per cent and 8.57 percent belonged to young age and old age respectively. 61.43 per cent of them had education upto matric, 14.29 per cent had upper primary education, 12.86 per cent had lower primary education. 7.14 per cent had above matric education and 2.86 per cent functionally literate. 1.43 per cent of the respondents each were illiterate and of graduated. Most of the agricultural labourers (88.57%) had less than 10 years of experience as agricultural labourer followed by 10 to 19 years (7.14%) and more than 19 years (5.71%). About 37.14 per cent had less than 6 years of farming experience, while 32.86 per cent had 6 to 10 years, 17.14 percent had 11 to 15 years, 10.00 per cent had 16 to 20 years and only 2.86 percent had 20 years of farming experience. Based on the findings majority of the respondents had agricultural labour work as their occupation where, 35.71 per cent had agricultural labour + other services and 10.00 per cent had agricultural labour + business. It is noticed that more than half of the respondents (57.14%) had less than Rs 225000 of annual income, while 24.29 per cent had annual income between Rs 225000- Rs 275000 and 18.57 per cent had annual income more than Rs 275000. 42.86 per cent of the labourers had medium social participation, followed by low (30.00%) and (high (27.14%) social participation. A great majority (70.00%) of the agricultural labourers had medium mass media exposure, followed by high (20.00%) and low (10.00%).

Table 1: Personal and socio economic characteristics of agricultural labourers (N=70)

Sl.no.	Variables	Frequency	Percentage
	Age		
1.	Young age	30	42.86
2.	Middle age	34	48.57
3.	Above	6	8.57
	Education		
1.	Illiterate	1	1.43
2.	Functionally literate	2	2.86
3.	Lower primary	9	12.86
4.	Upper primary	10	14.29
5.	Upto matric	43	61.43
6.	Above matric	5	7.14
7.	Graduation	1	1.43
	Experience as agricultural labourer		
1.	< 10 years	62	88.57
2.	10 -19years	5	7.14
3.	> 19 years	4	5.71
	Experience in farming		
1.	< 6 years	26	37.14
2.	6-10 years	23	32.86
3.	11-15 years	12	17.14
4.	16-20 years	7	10.00
5.	> 20 years	2	2.86

	Occupation		
1.	Agricultural labour	38	54.29
2.	Agricultural labour + other services	25	35.71
3.	Agricultural labour + Business	7	10.00
	Annual income		
1.	< 2,25000	40	57.14
2.	2,25000 - 2,75000	17	24.29
3.	>2,75000	13	18.57
	Social participation		
1.	Low	21	30.00
2.	Medium	30	42.86
3.	High	19	27.14
	Mass media		
1.	Low	7	10.00
2.	Medium	49	70.00
3.	High	14	20.00
	Scientific orientation		
1.	Low	16	22.86
2.	Medium	38	54.29
3.	High	16	22.86
	Innovativeness		
1.	Low	13	18.57
2.	Medium	47	67.14
3.	High	10	14.29
	Achievement motivation		
1.	Low	8	11.43
2.	Medium	35	50.00
3.	High	27	38.57

Knowledge level of agricultural labourers on modern agricultural practices

Table 2: Distribution of agricultural labourers based on their knowledge on modern agricultural practices (N=70)

Sl.no.	Extent of knowledge level	Frequency	Percentage
1.	Low	24	34.29
2.	Medium	37	52.86
3.	High	9	12.86

The data of table 2 indicates that majority of the agricultural

labourers had medium (52.86%) level of knowledge, 34.29 per cent had low level of knowledge and only 12 per cent of them had high level of knowledge.

Table 3: Distribution of agricultural labourers based on training needs on modern agricultural practices (N=70)

Sl.no.	Extent of knowledge level	Frequency	Percentage
1.	Low	17	24.29
2.	Medium	36	51.43
3.	High	17	24.29

Table 4: Training needs of agricultural labourers on modern agricultural practices as perceived by themselves

Sl. No.	Main areas of training	Least Needed		Needed		Most Needed		Mean score	Rank
		F	%	F	%	F	%		
1.	Land preparation	40	(57.14)	19	(27.14)	11	(15.71)	1.59	XX
2.	Seed treatment	33	(47.14)	22	(31.43)	15	(21.43)	1.74	XV
3.	Nursery management	37	(52.86)	15	(21.43)	18	(25.71)	1.73	XVII
4.	Grafting and budding	28	(40.00)	15	(21.43)	27	(38.57)	1.99	VII
5.	Topiary	34	(48.57)	19	(27.14)	17	(24.29)	1.76	XIII
6.	Weed management	35	(50.00)	19	(27.14)	16	(22.86)	1.73	XVI
7.	Preparation and use of biofertilizers	30	(42.86)	25	(35.71)	15	(21.43)	1.76	XIV
8.	Preparation and use of biopesticides	34	(48.57)	18	(25.71)	18	(25.71)	1.80	IX
9.	Identification of symptoms of plant disease and pest attack	35	(50.00)	15	(21.43)	20	(28.57)	1.79	X
10.	Handling of plant protection equipments	37	(52.86)	17	(24.29)	16	(22.86)	1.70	XVIII
11.	Intercropping	40	(57.14)	13	(18.57)	17	(24.29)	1.67	XIX
12.	Drip irrigation	24	(34.29)	15	(21.43)	31	(44.29)	2.1	III
13.	Mechanisation	22	(31.43)	23	(32.86)	25	(35.71)	2.04	V
14.	High Density Planting	23	(32.86)	23	(32.86)	24	(34.29)	2.01	VI
15.	Hitech farming	19	(27.14)	21	(30.00)	30	(42.86)	2.16	I
16.	Polyhouse construction	19	(27.14)	22	(31.43)	29	(41.43)	2.14	II
17.	Precision farming	22	(31.43)	22	(31.43)	26	(37.14)	2.06	IV
18.	Vermicompost production	34	(48.57)	18	(25.71)	18	(25.71)	1.79	XI
19.	Mushroom cultivation	30	(42.86)	20	(28.57)	20	(28.57)	1.86	VIII
20.	Processing activities	33	(47.14)	21	(30.00)	16	(22.86)	1.76	XII

A study on the training needs revealed that majority of the agricultural labourers (51.43%) were under medium training needs category, 24.29 per cent each had high and low training needs. It indicates that the labourers were not familiar with various modern practices and also were not aware about the training programmes conducted by various agencies and their importance. The farmers should be inculcated the spirit of attending the training programmes for their benefit. Training programmes should be designed that suits the needs of the labourers. This was in line with the Mande and Nimbalkar (2010) [4].

Data regarding the training needs of different aspects of modern agricultural practices are given in table 4. Table 4 reveals the training needs of agricultural labourers based on the overall mean score and rank obtained. Hitech farming having mean score 2.16 is ranked I, followed by polyhouse construction with mean score of 2.14 having rank II. Training was found essential in the areas like drip irrigation with mean score of having rank III followed by Precision farming (rank IV), mechanisation (rank V), High Density Planting (rank VI), Grafting and budding (rank VII), Mushroom cultivation (rank VIII), Preparation and use of biopesticides (rank IX), Identification of symptoms of plant disease and pest attack (rank X), Vermicompost production (rank XI), Processing activities (rank XII), Topiary (rank XIII), Preparation and use of biofertilizers (rank XIV), Seed treatment (rank XV), Weed management (rank XVI), Nursery management (rank XVII), Handling of plant protection equipments (rank XVIII), Intercropping (rank XIX), Land preparation (rank XX).

The agricultural labourers gave highest emphasis on hitech farming, polyhouse construction, drip irrigation, precision farming and mechanisation, this can be on account of the interest shown by the new generation farmers (as majority of respondents are middle and young aged) on hitech agriculture and highly productive technologies. And also due to the job demand in these arenas. Moreover the State Government highly promote hi tech farming techniques in the state to attain self efficiency in vegetable production and so the requirement of skilled labour in these areas are high. The knowledge level and skill of agricultural labourers on the above mentioned areas is very low and so they show keen interest to get trained in these areas. Considering the high population density, farm labour shortage, and low per capita holding size in Kerala, the only solution to ensure food security is high tech with mechanisation. Also poly houses find an important place in this era of drastic climate change. With this awareness, the training needs of agricultural labourers turned to be the one having highest rank for hitech farming. These factors may have motivated them to assign top ranks for them.

Further the respondents expressed the training needs on high density planting, grafting and budding, mushroom cultivation, preparation and use of biopesticides, identification of symptoms of plant disease and pest attack, vermicompost production, processing activities and topiary as they lack skills in such activities.

The respondents had least training needs on preparation and use of biofertilizers, seed treatment, weed management, nursery management, handling of plant protection equipments, intercropping and land preparation.

Correlation between selected variables and their training needs

To examine this relationship, correlation coefficient (r) value was computed, the results of which are presented in table 5

The data depicted in table 5 show that among twelve characteristics studied, mass media, scientific orientation, achievement motivation and knowledge were found positively and significantly correlated with training needs at 0.01 level of probability. Whereas, social participation and innovativeness were correlated positively and significantly at 0.05 level of probability. Further it was noticed that age, education, experience as agricultural labourer, experience in farming, occupation and annual income had insignificant relationship with the training needs.

Table 5: Relationship between training needs of agricultural labourers and selected independent variables

Sl. No.	Independent variables	Correlation coefficient
1.	Age	-.164
2.	Education	.038
3.	Experience as agricultural labourer	.121
4.	Experience in farming	-.054
5.	Occupation	.082
6.	Annual income	.047
7.	Social participation	.239*
8.	Mass media	.314**
9.	Scientific orientation	.332**
10.	Innovativeness	.270*
11.	Achievement motivation	.385**
12.	Knowledge	.570**

The general exposure of the agricultural labourers was improved due to enhanced social participation which will improve their self-confidence and they seek more information and show interest in learning new things. This result was in line with the findings of Janani *et al* (2014) [1]. Exposure to mass media increases the awareness amongst the individuals about the latest developments in the fields of their working. This will encourage them to get trained on important aspects. This result was in line with the findings of Kullayappa (2006) [3]. Respondents having more scientific orientation will have more training needs as they better understand scientific practices and importance of training. Innovativeness encourages the respondents to adopt new ideas. So whenever the innovativeness is high, the training needs will be high. This was in accordance with Verma *et al* (2014) [6]. Achievement motivation will increase the risk orientation and gives better confidence to go for new ideas. Hence the training needs seems to be high for the ones who have better achievement motivation. Knowledge creates an essentiality to enquire more on the critical aspects of a particular new idea or technology. And so the knowledge and the training needs are positively correlated.

Suggestions made by the agricultural labourers for making training programmes more effective

Suggestions of agricultural labourers on various aspects of training such as type, size of training group, duration, month, method and place of training programmes. For the

training to be more effective the above mentioned aspects should also be covered, as it describes the interest and convenience of the agricultural labourers in effective participation of training programmes.

Table 6: Suggestions made by the agricultural labourers for making training programmes more effective (N=70)

Sl. No.	Training aspects	Frequency	Percentage
Venue of training			
1.	College farm	49	70.00
2.	Farmers' field	16	22.86
3.	KVK	5	7.14
Size of training group			
1.	Below 10 members	8	11.43
2.	10- 20 members	43	61.43
3.	21-30 members	19	27.14
Duration of training			
1.	One day training	15	21.43
2.	Two days training	22	31.43
3.	Three days training	26	37.14
4.	Training for one week	7	10.00
Method of training			
1.	Lecture and discussion	19	27.14
2.	Demonstration and field trip	43	61.43
3.	Audio visual aids	4	5.71
4.	Tour	4	5.71

Venue of training: Most of the agricultural labourers (70.00%) preferred college farm for the training purpose, as 22.86 percent choose farmers' field and 7.74 per cent KVKs. This might be due to the ease of accessibility.

Size of training group: Majority (61.43%) of the respondents had the opinion that 10- 20 members were ideal for effective training. 27.14 per cent felt 21-30 members is good to conduct the training while 11.43 per cent preferred members below 10. Medium group size will help the trainees as well as the trainers to interact effectively.

Duration of training: Majority (37.14%) of the respondents preferred three days training whereas, 31.43 per cent suggested two day training, 21.43 per cent one day training and 10.00 per cent one week training. Respondents feel three days of training could give them a better understanding of the ideas.

Method of training: Demonstration and field trip was the method preferred by most of the respondents (61.43%), while 27.14 per cent showed interest in lecture and discussion, 5.71 per cent each for audio visual aids and tour. Majority preferred demonstration and field trip method as it provides them better understanding by seeing the techniques or practices directly.

Conclusion

It is concluded from the investigation that majority of the agricultural labourers expressed high training needs on hitech farming, polyhouse construction, drip irrigation, Precision farming and mechanisation etc. The analysis of selected characteristics like social participation mass media, scientific orientation, innovativeness, achievement motivation and knowledge were found positively and significantly correlated with training needs. Most of the

agricultural labourers suggested college farm as venue for training, 10-20 members as size of training group, three days training as duration and demonstration and field trip as the method of training.

The training needs identification and providing training according to needs of a labourer sharpens the hidden skills and acts as medium to imbibe any new knowledge or skill in a given profession. The extension personnel and policy makers and scientists shall keep the results of this study in view while taking decisions as regards to what the contents of technological information regarding modern agricultural practices should be taken to the agricultural labourers. Further, they should concentrate on major areas, identified by study for deciding the training programmes for the agricultural labourers.

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