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TRAINING NEEDS OF MALAYALI TRIBAL FARMERS OF KOLLI HILLS IN TAPIOCA CULTIVATION

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Abstract

The tribal people are economically backward and deprived of opportunities available in the cities. The annual report of the Ministry of Tribal Welfare, Government of India 2011, admits, "The scheduled tribes are one of the most disadvantaged sections of the society". The latest available estimates of poverty made by The National Institute of Rural Development (NIRD) in its report on rural development statistics 2011- 2012, calculated the poverty among scheduled tribes rural and urban India for year shows that 47. 10 percent rural and 28.80 percent urban Scheduled Tribe population were still living below the poverty line. (Source: Statistical profile of scheduled tribes in India 2013). Training need exists when an individual lacks the knowledge and skills to perform an assigned task satisfactorily. Training needs are to be assessed to educate the Malayali tribal farmers about the various recommended technologies and to help them to gain more profit by improving the productivity and reducing cost of production through effective extension system. Therefore, to impart the training in a very effective manner the identification of training needs of the Malayali tribal farmers has been of prime importance. The respondents expressed high level of training needs in major subject matter areas of 'disease management' and 'pest management'. Under 'disease management, the respondents expressed most training need in four specific subject matter areas *viz.,* 'management of tuber rot', 'management of cercospora leaf spot' 'management of phoma disease' and management of mosaic disease. Under 'pest management' the respondents expressed most training needs in two specific subject matter areas, *viz.,* 'management of red spider and management of white fly. The findings on characteristics would help the extension personnel in understanding the Malayali tribal farmers and designing appropriate strategies to increase the tapioca production in kolli hills.

Keywords: Tribal farmers, Training needs, Agricultural extension

Introduction

In Tamil Nadu, the total tribal population is small and scattered all over the state. Like the rest of India, the tribal population in the state is found to occur mostly in around hilly tracts. Ministry of Tribal affairs presented a list of tribal communities in India for each state. Tamil Nadu contains 36 types of tribal communities. They are distributed in different districts in the forests and adjoining areas. The total population of Scheduled Tribes in Tamil Nadu is 2.2 percent in which 1.8 percent of tribals are in rural areas and 0.4 percent of tribals are living in urban areas as indicated by census of India, 2011.

'Transfer of technology' is a function of many factors of which training is a crucial one. So, any attempt to design a suitable training strategy for increasing the tapioca crop productivity requires a thorough understanding of the training needs as perceived by Malayali tribal farmers is also required. Hence, the present study was designed with the training needs of Malayali tribal farmers in tapioca cultivation.

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Materials and Methods

The present study was conducted in selected six villages of Kolli hills block of Namakkal district in the state of Tamilnadu.

A sample size of 300 Malayali tribal farmers was selected for the study. The data were collected from the respondents with the help of a well structured and pre-tested interview schedule.

A total number of fourteen independent variables, *viz.,* age, educational status, occupational status, annual

income, farm size, farming experience, social participation, extension agency contact, communication behaviour, innovativeness, economic motivation, risk orientation, scientific orientation and training programmes attended were identified to study the selection of major training areas in agriculture, training needs and relationship between the training needs and profile characteristics of Malayali tribal farmers.

The statistical tools used in the study were percentage analysis, cumulative frequency and zero order correlation coefficient and regression coefficient.

Selection of Major training areas in agriculture

It was felt necessary to identify major crop on which the Malayali tribal farmers felt the need for training need. Items were framed with major crops with the extension workers of the study area. The respondents were asked to indicate any one of the three responses against each major crop. The values thus summed up gave the total training need score for each of the major crop.

The results on training needs of Malayali tribal farmers on crop cultivation areas are presented in Table 1.

It could be revealed from Table 1 that the major training area was 'Tapioca' (MS 2.72), followed by 'Paddy' (MS 2.00), 'Ragi' (MS 1.83), 'Horse gram' (MS 1.72.), 'Coffee' (MS 1.71), 'Black pepper' (MS 1.67), 'Banana' (MS 1.64), Field bean' (MS 1.53) 'Fruits' (MS 1.52), 'Cardamom' (MS 1.22), 'Sorghum' (MS 1.18), 'Caster' (MS 1.17), 'Pearl millet' (MS 1.14), 'Sugarcane' (MS 1.12), 'Green gram' (MS 1.10), 'Coconut' (MS 1.09), 'Sunflower' (MS 1.07), 'Groundnut' (MS 1.06), 'Gingely' (MS 1.04), 'Chilli' (MS 1.03) and 'Cotton' (MS 1.01) were perceived in the descending order of importance.

Table 1: major training areas in crop cultivation.

S. No.	Crop cultivation areas	Mean score	Rank
1.	Tapioca	2.72	I
2.	Paddy	2.00	II
3.	Ragi	1.83	III
4.	Horse gram	1.72	IV
5.	Coffee	1.71	V
6.	Black pepper	1.67	VI
7.	Banana	1.64	VII
8.	Field bean	1.53	VIII
9.	Fruits	1.52	IX
10.	Cardamom	1.22	X
11.	Sorghum	1.18	XI
12.	Caster	1.17	XII
13.	Pearl millet	1.14	XIII
14.	Sugarcane	1.12	XIV
15.	Green gram	1.10	XV
16.	Coconut	1.09	XVI
17.	Sunflower	1.07	XVII
18.	Groundnut	1.06	XVIII
19.	Gingelly	1.04	XIX
20.	Chilli	1.03	XX
21.	Cotton	1.01	XXI

Training needs in tapioca cultivation

In this study training needs is operationalized as the felt need, by the perspective of the Malayali tribal farmers, when asked what they want.

The tapioca cultivation was selected as the major training area on which Malayali tribal farmers felt high level training need in agriculture. Training needs of Malayali tribal farmers were assessed in major subject matter areas as well as in specific subject matter areas.

Training needs on major subject matter areas in tapioca cultivation

The results on training needs of Malayali tribal farmers on major subject areas are presented in Table 2.

It could be revealed from Table 2 that the training needs for 'Disease management' (MS 2.33), followed by 'Pest management' (MS 2.26), 'Sett treatment', (MS 2.09)', 'Manures and fertilizers' (MS 2.06.), 'Inter cropping' (MS 1.97), 'Variety' (MS 1.94) 'Selection of setts' (MS 1.88)',Weed management' (MS 1.83), 'Harvesting' (MS 1.68), 'Sett rate' (MS 1.65), Micro nutrient management (MS 1.49), 'Spacing' (MS 1.48) 'Irrigation' (MS 1.43) and 'Planting methods' (MS 1.29) were perceived in the descending order of importance.

Relationship between profile Characteristics of Malayali Tribal Farmers with their training Needs

Table 2: Training needs on major subject matter areas in tapioca cultivation.

S.No.	Major subject matter areas	Mean score	Rank
1.	Disease management	2.33	I
2.	Pest management	2.26	II
3.	Sett treatment	2.09	III
4.	Manures and fertilizers	2.06	IV
5.	Inter cropping	1.97	V
6.	Variety	1.94	VI
7.	Selection of setts	1.88	VII
8.	Weed management	1.83	VIII
9.	Harvesting	1.68	IX
10.	Sett rate	1.65	X
11.	Micro nutrient management	1.49	XI
12.	Spacing	1.48	XII
13.	Irrigation	1.43	XIII
14.	Planting methods	1.29	XIV

in tapioca cultivation

It could be seen from table 3 that out of fourteen variables considered for the study, six variables *viz.,* age, educational status, occupational status, farm size, innovativeness and training programmes attended were found to be positive and significant at one per cent level of probability. One variable *viz.,* social participation showed positive and significant relationship at five percent level of probability and the other variable *viz.,* economic motivation showed negative and significant relationship at five percent level of probability.

Table 3: Zero order correlation co-efficient of independent Variables with their training needs of Malayali tribal farmers in tapioca cultivation (n=300).

Variable Number	Independent variables	Correlation co-efficient 'r' value
X1	Age	0.320**
X2	Educational status	0.188 **
X3	Occupational status	0.255**
X4	Annual income	0.003NS
X5	Farm size	0.177**
X6	Farming experience	0.039NS
X7	Social participation	0.124*
X8	Extension agency contact	-0.010 NS
X9	Communication behavior	-0.004 NS
X10	Innovativeness	0.263 **
X11	Economic motivation	-0.140*
X12	Risk orientation	-0.022 NS
X13	Scientific orientation	0.037NS
X14	Training programmes attended	0.341 **

*- Significant at 5 per cent level, ** - Significant at 1 per cent level, NS - Non- significant

Age showed a positive and highly significant relationship with training needs. This might be due to the reason that age makes it easier to acquire and understand, so they would be the higher adopt about the new technologies, which might be responsible for higher training needs. This finding is in contradictory with the findings of Jothiraj (1974).

Educational status showed positive and highly significant relationship with training needs. Farmers with higher educational status would have higher awareness on the recommended technologies, which in turn might have resulted in higher training needs about tapioca cultivation. This finding is in line with the findings of Mangesh Tekale *et al.,* (2013).

Occupational status showed positive and highly significant relationship with the training needs. Agriculture is the primary occupation for most of the farmers, which might be responsible for higher training needs. This finding is in line with the findings of Satheeshkumar (2007).

Farm size showed positive and highly significant relationship with the training needs. In general, the people who possess big farms would try to practice new technologies, which in turn requires efficient training. This finding is in line with the findings of Kadam (2002).

Social participation showed positive and significant relationship with the training needs. High level of social participation creates awareness about the tapioca cultivation, which might be responsible for the higher training needs. This finding is in line with the findings of Satheeskumar (2007).

Table 4: Multiple regression of independent variables with the Training needs of Malayali tribal farmers in tapioca Cultivation.

S. No.	Variables	Standardized Regression Co-efficient	Standard error	't' value
X1	Age	0.207	0.495	3.018 **
X2	Educational status	0.273	0.188	2.846**
X3	Occupational status	0.435	0.669	3.690**
X4	Annual income	-0.014	0.013	1.100 NS
X5	Farm size	0.674	0.538	4.152**
X6	Farming experience	-0.181	0.508	-0.357 NS
X7	Social participation	-0.192	0.324	4.013**
X8	Extension agency contact	0.039	0.097	-0.405 NS
X9	Communication behavior	0.046	0.062	-0.748 NS
X10	Innovativeness	-0.269	0.274	2.981**
X11	Economic motivation	0.052	0.107	-3.088**
X12	Risk orientation	-0.043	0.071	-0.598NS
X13	Scientific orientation	-0.058	0.079	-0.728 NS
X14	Training programmes attended	0.002	0.498	-2.755**

R^2=82.00, F = 6.840**, *=Significant at 5% level, **=Significant at 1% level, NS=Non Significant

Innovativeness showed positive and highly significant relationship with the training needs. Innovativeness creates awareness about the innovations in tapioca cultivation, which requires efficient training. This finding is in line with the findings of Vasanthakumar (2014).

Economic motivation showed a negative and significant relationship with the training needs. In general, the farmers who want to earn more, would be ready to adopt any innovation and

spend more money in tapioca cultivation. This might have resulted in higher training needs. This finding is contradictory to the findings of Mangesh Tekale *et al.,* (2013) Training programmes attended showed positive and highly significant relationship with knowledge level. Government and private organizations conduct free training at villages. The farmers attending training programmes could know the new cultivation technologies, which might be responsible for higher training needs. This finding derives support from the findings of Rajamanickam (2010).

Contribution of independent variables towards training needs on tapioca cultivation

It could be observed from the table 4 that all the fourteen variables together explained 82.00 percent of the variation in the training needs. The 'F' value was found to be significant. Hence, it could be concluded that a linear functional contribution between the independent and dependent variables could be established.

It could be seen from table 4 that out of fourteen variables considered for the study, six variables *viz.,* age, educational status, occupational status, farm size, social participation and innovativeness contributed significantly and positively at 0.01 level of probability towards training needs. Two variables *viz.,* economic motivation and training programmes attended contributed significantly and negatively at 0.01 level of probability towards training needs. None of the variables contributed significantly and positively at 0.05 level of probability towards training needs. All other variables were found to be non-significant.

Hence, it may be concluded that a unit increase in age (X1), educational status (X2), occupational status (X3), farm size (X5), social participation (X7), innovativeness (X10), economic motivation (X11) and training programmes attended (X14) would increase the training needs in tapioca cultivation by 3.018, 2.846, 3.690, 4.152, 4.013, 2.981, -3.088 and -2.755 units respectively.

Hence, it could be inferred that the training needs of Malayali tribal farmers could be positively influenced by their age, educational status, occupational status, farm size, social participation extension and innovativeness and negatively influenced by their economic motivation and training programmes attended. The positive and negative significant contribution of independed variables with training needs of Malayali tribal farmers may be discussed on the same line as already given under significant relationship of these variables with training needs in tapioca cultivation.

The prediction equation is as follows:

$$Y = 82.00+0.207X1 + 0.273\ X2 + 0.435\ X3 - 0.014X4 + 0.674\ X5 - 0.181X6 - 0.192\ X7 + 0.039\ X8 + 0.046\ X9 - 0.269\ X10 + 0.052\ X11 - 0.043\ X12 - 0.058X13 + 0.002\ X14.$$

Conclusion

While organizing training programmes for Malayali tribal farmers, special emphasis should be given to impart training in the major areas like disease management and pest management and specific subject matter areas like, 'management of tuber rot', 'management of cercospora leaf spot', 'management of phoma disease' and management of mosaic disease. Under 'pest management', the emphasis may be given for two specific subject matter areas, *viz.,* 'management of red spider' and management of white fly'. Malayali tribal farmers could be positively influenced by their must be considered. While designing training programmes for Malayali tribal farmers, the factors like.. age, educational status, occupational status, farm size, social participation extension and innovativeness economic motivation and training programmes.

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