Training Needs of Paddy Cultivators in Nagaland

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ABSTRACT

The study was conducted in Medziphema RD block of Dimapur district in Nagaland to identify the training needs of the paddy cultivators. Seven villages were selected randomly under Medziphema RD block and finally 110 households were selected based on proportionate random sampling procedure. A list of 12 major areas of training needs in relation to improved package of practices of paddy cultivation was prepared. The training areas were ranked based on Training Importance. Scores were measured on three-point continuum as Most Essential, Essential and Not Essential by giving scores of 3, 2 and 1 respectively. The primary data were collected using a pre-tested structured interview schedule by conducting personal interview. Findings revealed that majority of the farmers had medium level of training needs. Plant protection measures, subject matter relating to loan and intercultural operation were the top most training needs of the farmers and the least training need was identified in the subject related to nursery raising. The variables age and cultivation experience had negative and significant relationship with the training needs. The present study suggested that young farmers having less exposure in requisite training related to improved package of practices of paddy cultivation may be given preference for imparting training in the prioritised areas of training as identified.

Key words: *Training needs; Dimapur Distt.; Paddy cultivation;*

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. Thus training plays a very important role for human resource development. In order to make any training meaningful and effective, it is imperative on the part of the training organizers to identify the training needs of the farmers based on which a suitable training module can be developed so that the appropriate training is given to the right people, in the right form, at the right time so that higher degree of productivity and profitability can be achieved. Rice is one of the most important crops of Nagaland. It is grown throughout the state under varying conditions and situations, viz., rainfed upland/ Jhumlands, rainfed lowland and wetland terrace cultivation under irrigated conditions. The total area under paddy cultivation is 1,64,660 ha with a total production of 2,63,520 tonnes and the average yield per hectare is estimated as 1.590 tonnes. (*Anonymous 2006-07*). The Department of Agriculture, Government of Nagaland imparts training to the farmers from time to time pertaining to the aspects of production and management of rice crop, but average productivity is considerably low. Keeping this in view, the present study was undertaken with the following specific objectives:

1. To identify the main areas of training in relation to improved paddy cultivation practices
2. To study the relationship of selected personal, socio-economic and psychological characteristics of the respondents with their training needs in relation to improved paddy cultivation practices.

METHODOLOGY

The state of Nagaland consists of eleven districts. Out of these, Dimapur district has the highest area (35,080 ha) under paddy cultivation (Anonymous 2006-07). Therefore, Dimapur district was purposively selected for the present study. Medziphema rural development block having the highest number of 66 villages and 9767 households, out of total four blocks

of Dimapur district, was selected for the present study. From a total number of seven villages under Medziphema block consisting of 429 households, about twenty five percent of them comprising 110 households were finally selected based on proportionate random sampling procedure. A list of 12 major areas of training needs in relation to improved package of practices of paddy cultivation was prepared. Training needs of farmers in paddy cultivation was worked out with the help of a *Training Need Quotient* (TNQ) developed by *Sidhu (1973)*. The formula for calculating Training needs Quotient is: TNQ = ? {OTi g / MTS } x 100 ; Where, OTig = Sum of the observed training scores of the items of the ith respondent. MTS = Sum of maximum scores attributed to the items rated by the ith respondents. Based on the TNQ scores obtained, the respondents were categorized into three groups viz High, Medium and low levels using mean (m) ± sd values. The *Training Importance Score* (TIS) of each item was calculated with the help of the following formula as suggested by *Tantry (1989)* as : TIS = Cumulative training importance score over all respondents / Total number of respondents .The training areas were ranked based on Training Importance Score values. In the present study, training importance score of each area was measured on three-point continuum as Most Essential, Essential and Not Essential by giving scores of 3, 2 and 1, respectively. The primary data were collected using a pre-tested structured interview schedule by conducting personal interview. Data so obtained was tabulated, classifieds and analysed by percentage, mean, standard deviation, simple correlation analysis etc using SPSS software.

RESULTS AND DISCUSSION

Training needs in relation to improved package of practices of paddy cultivation: Table 1 revealed that majority (70.90%) of the respondents in Medziphema block had medium level of training need in relation to improved paddy cultivation practices, followed by high level of training need comprising of 20.90 percent of the respondents and only 8.18 per cent of them had low level of training need.

*Important training need areas identified with respect to improved paddy cultivation practices:*Table 2 revealed that training needs of the farmers based on overall mean score obtained was found most essential in the field of plant protection measures having mean score of 2.04 and ranked I, followed by subject matter relating to loan with mean score of 1.92 having rank II. Training was found as essential in the areas of subject relating to intercultural operations with mean score of 1.78 having rank III followed by manures and fertilizers with mean score of 1.5 having rank IV. The area of improved farm implements with mean score of 1.47 was ranked V followed by seed selection and treatment and water management with mean scores of 1.43 and 1.34 having VI and VII rank respectively. The areas of harvesting and post harvest measures had the equal mean scores of 1.22 and were ranked VIII. The areas of transplanting and land preparation had the mean scores of 1.1 and 1.05, and were ranked IX and X respectively. The least essential training need area was identified as nursery raising having mean score of 1.03 and was ranked at XI position with respect to other training need areas. Thus it may be inferred that the highest rank in order of training needs of the paddy cultivators in Medziphema block of Dimapur district was found in respect of plant protection measures and the lowest rank was found in the area of nursery raising. This may be due to the fact that the selected paddy cultivators were not exposed to relevant trainings. The findings also revealed that only 41.82 percent of the respondents had the exposure of undergoing one day training related to paddy cultivation. These findings were in agreement with the findings of *Bhople and Patki (1992),* and *Selvarani and Manoharan (2003).*

Table: 1. Distribution of respondents according to their training needs in relation to improved package of practices of paddy cultivation. (N = 110)

S. No.	Level of training needs	Score range	N	%age
1	Low	Up to 43.24	9	8.18
2	Medium	43.25 to 51.45	78	70.90
3	High	51.46 and above	23	20.90

$\mu = 47.35$ $\sigma = 4.11$

Table 2. Classification of the training needs areas in relation to improved paddy cultivation practices

S. No	Areas of training need	MS	Rank	Overall MS	Rank
1	*Land preparation*			1.05	X
i	Time for land preparation	1.03	III		
ii	Depth of plough/hoe	1.09	I		
iii	Puddling	1.04	II		
iv	Levelling	1.04	II		
2	*Seed selection and treatment*			1.43	VI

i	Suitable varieties of paddy	1.52	II				techniques of sprayer /other plant protection equipments.				
ii	Seed rate per hectare	1.35	III								
iii	Time of sowing	1.03	IV			iv	Identification of beneficial bio-agents to control pests.	2.29	III		
iv	Seed treatment	1.81	I								
3	*Nursery raising*			1.03	XI						
i	Methods of making nursery seed bed	1.01	II			v	Time for using Tricho cards to control stem borers.	1.24	IV		
ii	Days required for keeping seedlings in nursery before transplanting.	1.06	I								
						8	*Intercultural operations*	1.78	III		
						i	Identification of Weedicides	1.70	II		
4.	*Transplanting*			1.1	IX						
i	Age of the seedlings for transplanting.	1.07	IV			ii	Doses of Weedicides	1.67	III		
ii	Spacing for transplanting.	1.10	II			iii	Appropriate time for application of Weedicides	1.54	IV		
iii	Depth of planting seedlings	1.14	I								
						iv	Biological weed control	2.21	I		
iv	Number of seedlings per hill	1.09	III								
						9	*Improved farm implements*			1.47	V
5	*Water management*			1.34	VII						
i	Level of water at the time of transplanting	1.16	II			i	Making of animal drawn plough	1.09	III		
ii	Irrigation at critical stages	1.80	I			ii	Identification of paddy threshers for efficient work.	1.55	II		
iii	Drainage to prevent water logging	1.06	III								
						iii	Repair and maintenance of farm tools and implements	1.76	I		
6	*Manures & fertilizers*			1.5	IV						
i	Application of FYM and their quantity	1.09	VII								
ii	Knowledge of chemical fertilizers	1.50	III			10	*Loan*	1.92	II		
						i	Financing agencies and types of loan available for farming community.	1.56	II		
iii	Doses of chemical fertilizers.	1.37	IV								
iv	Methods of fertilizer's application	1.24	VI								
v	Time of fertilizer's application.	1.27	V			ii	Exposure about procedures for availing loan with terms and condition for repayment.	2.28	I		
vi	Knowledge of Bio-fertilizers and their doses of application.	2.08	I								
						11	*Harvesting*			1.22	VIII
vii	Methods of Bio-fertilizers application	1.92	II			i	Optimum time of harvesting	1.06	I		
						ii	Economic and efficient method of threshing	1.39	I		
7	*Plant protection measures*			2.04	I						
i	Identification of diseases and their control measures.	2.60	II			12	*Post harvest measures*			1.22	VIII
						i	Drying of harvested paddy	1.06	III		
ii	Identification of pests and their control measures.	2.68	I			ii	Storage of harvested paddy	1.18	II		
iii	Proper handling	1.40	V			iii	Storage of seeds	1.41	I		

Table 3. Relationship between the selected independent variables and the dependent variable Training Needs of the respondents in relation to improved package of practices of paddy cultivation.

S. No	Selected independent variables	Correlation coefficients 'r'	't' value
1.	Age	– 0.236	– 2.525*
2.	Educational level	0.116	1.215 NS
3.	Family size	– 0.166	– 1.749 NS
4.	Economic status	– 0.003	– 0.031 NS
5.	Farm size	0.001	0.013 NS
6.	Status of land ownership	– 0.082	– 0.855 NS
7.	Cultivation experience	– 0.216	– 2.299*
8.	Social participation	– 0.025	0.249 NS
9.	Information sources	– 0.024	– 0.260 NS
10.	Training exposure	0.034	0.354 NS
11.	Knowledge level	– 0.110	– 1.151 NS

* Significant at 5% α
** Significant at 1% α
NS - Non Significant

Relationship between the selected independent variables and the dependent variable Training Needs of the respondents in relation to improved package of practices of paddy cultivation: It was evident from Table 3 that independent variables age, and cultivation experience had negative and significant association with the training needs of the respondents. The negative and significant association of these variables implied that higher the age and cultivation experience of the farmers lower is the level of his training needs. It can be further explained that young aged farmers need more training in relation to improved package of practices of paddy cultivation, because they are enthusiastic and new to the farming profession and they also lack requisite farming experience. This was in agreement with the findings of *Bhaskaran and Mahajan (1968), Saini* and *Satnam (1996), Padmarathi et al (1998).*

Moreover, the independent variables namely, educational level, family size, economic status, farm size, status of land ownership, social participation, information sources, training exposure and knowledge level were found to be non-significant.

CONCLUSION

It may be concluded that majority of the respondents in Medziphema block had medium level of training need in relation to improved paddy cultivation practices. Most important training need area was identified in the field of plant protection measures followed by the areas of sanction of loan and intercultural operations respectively. Farmers were found ignorant about identification of diseases and pests and therefore suffered loss in their farming enterprise. They were also ignorant about provision of appropriate crop loan schemes and procedure to obtain the same. Though farmers were found adopting improved package of practices, they lacked exposure and expertise in relevant intercultural operations. Independent variables age, and cultivation experience had negative and significant association with the training needs of the respondents. Thus young farmers having less exposure in requisite training in relation to improve package of practices of paddy cultivation may be given preference for imparting training in the prioritised areas of training as evident from the study.

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