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Training Needs Assessment of Farm Women in Hill Areas of Uttarakhand

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ABSTRACT: This paper identifies some training needs of women farmers underhill farming situation of Uttarakhand. Data was taken from six development blocks, namely Ukhimath, Jakholi and Agastyamuni of Rudraprayag and three development blocks, namely Berinag, Gangolihat and Kanalichina of Pithoragarh. Issues related to training needs for the socio-economic development of farm women through agriculture and allied activities were discussed. The structured interview schedule was conducted to collect information from one hundred and eighty-three (183) women farmers. Training needs of each specific topic were assessed using a three-point rating scale i.e., most needed, somewhat needed, and least needed and scaled as 3, 2 and 1, respectively. Improved varieties, seed treatment, the optimum dose of fertilizers on the basis of soil tests, preparation and application of compost/FYM, use of bio-fertilizers, integrated methods of insect pest management, button mushroom cultivation, management of white grub in potato, rain water harvesting techniques, micro-irrigation techniques, use & working of small tools and soil & water conservation practices were identified as most needed subject matters as far as cultivation of crops is considered. In the field of livestock, common diseases of farm animals & their control measures, preparation of balance ration, deworming of ruminants, importance of A.I., fodder cultivation round the year, and care & management of small ruminants were found with most needed subjects.

KEYWORDS: Training needs, women farmers, Agriculture production technology, subject matter

I. INTRODUCTION

The agricultural land in the hills of Uttarakhand is scattered and fragmented. The per capita land holding of Uttarakhand farmers is 0.2 ha, and about 36% of rural families live below the poverty line. Agriculture contributes around 37% to state gross domestic product. Total population of state is 10086292 and about 60 percent of it is engaged in various agriculture and other allied activities [1]. According to Saurabh [4], women in hill areas are busy in various enterprises like bee keeping, dairy, farming etc., and putting efforts in development of territory. Although Government has initiated various programmes, policies for the development of rural people but still in hill areas most of the women are facing various problems due to lack of knowledge, information and education on many aspects [5]. Agricultural and rural economic activities are essential for growth, economic upliftment and food security, especially for the poorer farm families in the hilly areas of the Uttarakhand state. The hilly and mountain areas have unique features with respect to topography, climate and production system. The undulated topography, rugged terrain, unfavorable cold climate and lack of production and marketing infrastructure have made the area poorest in terms of production and productivity of the crops [3].

Hill agriculture is women-centric as most of the agricultural operations and rearing of animals depends upon them. Training is one of the important methodologies for developing and enhancing the capacities of individuals to improve their performance and skill. Training farmers to enhance their knowledge, information, skills, and practices is a major investment. In India, training for farmers is offered by Krishi Vigyan Kendras (KVKs), Agricultural Technology

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Management Agency (ATMA), the Directorate of Extension of State Agricultural Universities (SAUs), Agriculture and Allied Departments at the state level, agribusiness companies, NGOs and Producer Organizations. Despite spending huge resources on farmer training, farming is increasingly turning out to be an unprofitable venture, with youth quitting farming. If the content and methodology of training are designed in a way that neither the trainer nor the trainee wants, it will not produce a desirable change in the behavior of people. In order to make training more meaningful and effective, the training needs of the farmers have to be identified prior to the training programmes being finalized so that the specific subject matter of training could be determined and prioritized on the basis of the needs of the farmers. Agronomical crops like Wheat, Rice, toria, mandua, ragi, kodon and amaranthus are found in major cropping areas. In the case of livestock, cattle, buffaloes, sheep and goats are reared commonly.

However, the yield of these crops, as well as livestock productivity, is very low irrespective of kind of crops, varieties and breeds of the animals. Lack of awareness of farmers regarding the latest agricultural know-how and do-how may be one of the important causes of low productivity, which can be mitigated by improving practices of the farmers through need-based training interventions[2]. With these facts, the attention of the authors is to undertake an investigation regarding the assessment of training needs of the farmers of the hills of Uttarakhand.

II. MATERIAL AND METHODS

The training needs of the farmers have been operationalized as felt need regarding various subject matter areas of agricultural production and dairy farming technologies which can be readdressed through specialized training programmes/interventions. In order to collect the data, 2 villages were selected randomly from each development block (3 blocks each of Rudraprayag and Pithoragarh district, a total 12 villages), and 183 women farmers were interviewed for the study. Only those farmers were selected as respondents of the investigation who grow predominantly any of the above-listed crops. The data were collected through a well-structured pre-tested interview schedule. Training needs of each specific subject matter areas were assessed using a three-point rating scale, i.e. Most needed, somewhat needed and least needed, and later it was quantified by assigning the scores as 3, 2 and 1, respectively. Mean scores were used to rate specific subject matter areas. Average mean scores were used to categorize the training needs into more or less important ones. Percentage analysis was carried out for simple comparison about the preference of farmers regarding time, duration, place and methodology of training.

III. RESULTS AND DISCUSSION

The data in table -1 indicated that mean training need scores and the extent of the importance of training need against each component of agricultural production technology. The extent of the importance of training need was worked out by calculating the average mean score of all components of each major farm practice, a specific area having its mean score value greater or less than the average mean score considered as criterion for more or less important areas respectively. The following subject matter areas were suggested by the respondents according to their importance for training under each major farm practice.

Table- 1. Training needs of hill farmers in agriculture production technology

S. No.	Farm Practices	Mean Score	Extent of Training Need	Rank
A	Agronomic Practices			
1.	Time of sowing	1.74	Less	V
2.	Line sowing	1.20	Less	VI
3.	Organic farming	1.80	Less	IV
4.	Seed treatment	2.40	More	II

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5.	Crop rotation	1.85	Less	III
6.	Improved varieties	2.70	More	I
	<i>Average mean score</i>	1.94		
B.	Manures and Fertilizers			
1.	Preparation & use of vermi-compost	1.66	Less	V
2.	Use of bio-fertilizers	2.01	More	III
3.	Optimum dose of fertilizers on the basis of soil tests	2.38	More	I
4.	Time & method of fertilizer application	1.75	Less	IV
5.	Preparation and application of compost/ FYM	2.15	More	II
	<i>Average mean score</i>	1.99		
C.	Plant Protection			
1.	Identification of insects and pests	2.12	Less	V
2.	Integrated methods of insect pest management	2.71	More	I
3.	Preparation of spray solution and application	1.68	Less	VI
4.	Management of white grub in potato	2.55	More	III
5.	Button mushroom cultivation	2.60	More	II
6.	Insect pest management through traditional methods	2.30	Less	IV
	<i>Average mean score</i>	2.32		
D.	Soil and water management			
1.	Use & working of small tools	2.48	More	III
2.	Rain water harvesting techniques	2.64	More	I
3.	Micro-irrigation techniques	2.52	More	II
4.	Techniques of LDPE tank construction	1.98	Less	V
5.	Soil & water conservation practices	2.43	More	IV
	<i>Average mean score</i>	2.41		
E.	Animal Husbandry Practices			
1.	Importance of artificial insemination	2.28	More	IV
2.	Preparation of balance ration	2.63	More	II
3.	Common diseases of farm animals & their control measures	2.76	More	I
4.	Deworming of ruminants	2.51	More	III
5.	Care & management of newly borne calves	1.97	Less	VII
6.	Benefits of silvi-pastoral system of farming	1.25	Less	X
7.	Preparation of silage & storage of hay	1.36	Less	IX
8.	Fodder cultivation round the year	2.21	More	V
9.	Animal shed and management	1.88	Less	VIII
10.	Care & management of small ruminants	2.28	More	VI
	<i>Average mean score</i>	2.11		

A) Training needs of hill farmers in various areas of agriculture production technology

i) Agronomic practices

The components 'improved varieties' and 'seed treatment' with a mean score of 2.70 and 2.40 respectively were assessed to be more important for training. The other areas were considered as less important for training. This may be due to the reasons that these aspects were considered to be more important for higher yields by the farmers.

ii) Manures and fertilizers

Manures and fertilizers are the major inputs that directly influence the yield of crops if applied in a balanced and optimum dose. The average mean score under this category was observed as 1.99. The data received on this aspect shows that 'optimum dose of fertilizers on the basis of soil tests', 'preparation and application of compost/FYM' and

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'use of bio-fertilizers' were considered as more needed areas with mean score of 2.38, 2.15 and 2.01 respectively whereas, 'time & method of fertilizer application' and 'preparation and use of vermicompost' were considered as less important training areas.

iii) Plant protection

It is evident from table-1 that the subject matter areas like 'integrated methods of insect pest management (2.71)', 'button mushroom cultivation (2.60)' and 'management of white grub in potato (2.55)' were identified as most needed areas of training. Whereas, 'insect pest management through traditional methods (2.30)', 'identification of insects & pests (2.12)' and 'preparation of spray solution and applications (1.68)' were found less important training areas. The respondent farmers might have shown high need in the above areas because the diagnosis and identification of the right cause may be a highly technical and skillful job. Further, if right cause of crop disorder is identified, the application part may be acquired through the literature supplied with plant protection chemicals and verbal advice of the dealers.

iv) Soil and water management

The data on the aspects of soil and water management shows that the 'rain water harvesting techniques (2.64)', 'micro-irrigation techniques (2.52)' and 'use & working of small tools (2.48)' were rated as more required training areas. Since the locale of the present investigation is rain-fed with deep slopes, the introduction of techniques and strategies which help in soil and water conservation were considered as important areas for training. Due to a lack of funds, farmers were found least interested in learning the techniques of LDPE tank construction.

v) Animal Husbandry Practices

Animal husbandry is an integral part of hill farming. Besides organizing training programmes for farmers on crop production technologies, there is a need to make them up-to-date knowledge on various aspects of animal husbandry through training, animal health camps, film shows, livestock shows and exhibitions etc. Animal Husbandry plays a vital role in adding to family income and generating additional gainful employment, particularly for the small and marginal farmers. In view of the above facts, 10 important dairy farming practices were identified for ascertaining the need for bringing improvement through training intervention. It is evident from table-1 that on the basis of average mean score the practices such as 'common diseases of farm animals & their control measures (2.76)', 'preparation of balance ration (2.63)', 'deworming ruminants (2.51)', 'the importance of artificial insemination (2.28)', 'fodder cultivation round the year (2.21)' and 'care and management of small ruminants (2.28)' were rated as more required training areas whereas 'care & management of newly borne calves (1.97)', 'preparation of silage & storage of hay (1.36)', 'animal shed management (1.88)' and 'benefits of silvi-pastoral system of farming (1.25)' were perceived as less important training areas.

B. Opinion of farmers regarding training programme organization

The training needs of the farmers are not only concerned with the contents of the training programme. In addition, a need-based training programme has to be in accordance with the choice of the farmers in terms of time, duration, place and methodology required for the training. In view of this, the respondents of the investigation were asked to give their preferences on all these aspects. The data are presented in table-2.

Table- 2. Preference of farmers regarding time, duration, place and methodology of training

S.No.	Aspects	Per cent age
1.	Duration of training	
	1 day	57
	2-3 days	23
	3-5 days	16
	7 days	04
2.	Information prior of training	

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	7 days	68
	15 days	26
	30 days	06
3.	Venue of training	
	Village level	64
	Nyay panchayat level	12
	Block level	08
	Agri. University level	16
4.	Methodology of training	
	Lecture cum discussion	24
	Training cum demonstration	44
	Training cum tour at district level	07
	Training cum exposure visit	25

1) Duration of training

Duration of training is considered as one of the important aspects for the success and effectiveness of the training programmes. The observations of the investigation revealed that vast majority (57%) of the respondents preferred the duration of training to be one day and long duration training programmes were disliked by the majority of the farmers. Hence, it can be concluded that training should preferably be of short duration ranging from two to five days if needed most.

2) Information prior of training

Regarding the information about the training programme fixation prior to conducting training, as many as 68 per cent of the respondents preferred a suitable time for training as 7 days before the commencement of activity. This concludes that if the farmers are informed well before they imparted training well in advance before the start of a particular activity, they will become capable of performing that activity in a better and effective manner.

3) Venue of training

So far as farmers' preference about the convenient place of the training is concerned, 64 per cent desired training to be organized at the village level, whereas the remaining 36 per cent preferred Nyay panchayat, block and Agriculture University level as the venue of the training. It seemed that farmers were not able to spare much time from their farm activities to participate in the training programme outside their village.

4) Methodology of training

The respondents were requested to give their preferences for different methods of imparting training. The findings in table-2 showed that the majority of the farmers (44%) wanted to be educated in various skills of agriculture and dairy technology through training cum demonstration method. The second preference of the farmers was training and exposure visit followed by lecture cum discussion and training cum tour at district level. This exhibits that farmers believe in 'learning while doing' and 'seeing is believing'. Tour provides them with exposure to different and better ideas and experiences which the farmers can put to use in their own field situations for enhancing production. Interestingly none of the farmers preferred to get training through lecture cum discussion method.

IV. CONCLUSION

The training programmes need to be organized in such a way that due care is required to be taken to incorporate all the subject matter areas having their mean score values greater than the average mean score. These steps can prove to be a milestone in improving the skills and competencies of the farmers in adopting modern agriculture production and dairy farming technologies, thereby raising the level of production. Also, in order to make the training more effective and efficient, the programmes need to be organised well in advance before the commencement of the particular activity.

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Short duration programmes in village situations would be many results-oriented. The farmers will be well exposed to different ideas and experiences if they are educated in various skills of agriculture production and dairy technology through training cum demonstration cum tour method.

REFERENCES

- [1] Agricultural Statistics: At a glance 2016. Ministry of Agriculture & Farmers Welfare.
- [2] Bhagat, G.R. and Nain, M.S. 2005. Training needs of farmers in Shivalik Hills of Jammu and Kashmir. Indian Res. J. Exten. Edu. 5(2).
- [3] Nirmal Chandra et al. 2013. Health and Nutritional Issues of Hill Farm Women: A Socio Economic Paradigm. International Journal of Agriculture and Food Science Technology. ISSN 2249-3050, Volume 4, Number 5 (2013), pp. 431-438. 3, 4, 5, 6 Scientist, Vivekananda Institute of Hill Agriculture, Indian Council of Agricultural Research, Almora- 263601, Uttarakhand, India.
- [4] Saurabh, S. 2015. International Journal of in Multidisciplinary and Academic Research (SSIIMAR), 1(2).
- [5] Sharma, A. and Singh, A.K. 2016. Information needs of Farm women for efficient farming in Uttarakhand. Journal of Agrisearch, 3(2):122-126. Census. 2011. data retrieved <http://www.censusindia.gov>