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AN ANALYSIS OF LEVEL OF EXPERIENCE AND CAPACITY BUILDING OF DAIRY FARMERS UNDER CO-OPERATIVE SECTOR IN KERALA

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ABSTRACT

A study was conducted in 10 blocks representing five agro-climatic zones of Kerala to analyse the experience level and pattern of capacity building by dairy farmers. The target group was members of dairy co-operatives enrolled under the Direct Benefit Transfer (DBT) scheme of the Government of Kerala. Using a stratified multistage random sampling procedure, 350 farmers were selected with representation from small, medium, and large categories of farms. The results indicated that 70-80 percent of the farmers had not received any special training in dairying in all farm sizes. The results revealed that government departments played an important role in imparting training to dairy farmers. The average duration of training received by the farmers was 1.05 ± 0.13 days. Analysis of farmers' participation in extension programmes showed that 41.1, 67.0, and 68.0 percent, respectively from small, medium and large farms did not participate in any extension programmes during the previous year of study. The results indicated that most of the farmers and their families were having a medium level of experience in dairying in all farm sizes. The extent of information utilisation by the farmers from different communication or mass media sources was observed to be at medium level. Results indicated that 70.3, 23.4, and 6.3 percent of the farmers had low, medium and high levels of social participation, respectively.

Keywords: Dairy Farming, Experience level, Training

INTRODUCTION

Dairying has been identified as one of the most potential and viable occupations for small, marginal farmers and agricultural labourers. The cattle population of Kerala peaked in 1987 (34.24 lakhs) and dropped to 12.11 lakhs female

cattle in 2012 (BAHS, 2012). George and Nair (1990) studied the livestock economy of Kerala and the socio-economic profile of the farmers. The socio-economic profile of farmers and management practices adopted at the farm level affect the productivity of the animals. The extent of adoption of standard management practices by farmers helps to maintain bio-security, reduce the incidence of diseases and assure maximum production from the animals with genetic capacity for higher production. Data available with Government agencies indicate that smallholders (1-2 cattle) constitute the majority of milk producers in the state. Medium (up to 10 cattle) and large enterprises (>10 cattle) also appear as significant players. Further, it was reported that increasing market demand for milk, entry of private processing industries, growing role for non-farm in the economy, poor participation of youth in agriculture, and policy changes are transforming smallholder enterprises (Kumar and Thirunavukkarasu, 2016).

Dairy extension services play significant role in increasing the awareness of farmers about changes in policies, improved technologies and encourage farmers to alter the management accordingly to optimise profit. The article discusses findings regarding the participation of dairy farmers in extension programmes, experience in dairying, the extent of information utilisation, and social participation of dairy farmers enrolled under the Direct Benefit Transfer (DBT) scheme during 2016-17.

MATERIALS AND METHODS

The study was conducted to assess the occupational attitude of dairy farmers. The respondents were dairy farmers who were members of the dairy co-operatives and enrolled in the Direct Benefit Transfer (DBT) scheme of the Government of Kerala. A stratified multistage random sampling procedure was used to select the area of study and respondents. In the first stage, the state of Kerala was stratified into five agro-climatic zones (NARP, 1989). In the second stage, one district from each zone (Strata) was selected at random. Further, two blocks were randomly selected from each district and the study was performed across 10 blocks of the state. The farmers/farm households were categorised into smallholder or subsistence farms (1-2 cows), medium (3-10 cows), and large farms (more than 10 cows), as described by the package of practices recommendations (KAU, 2010). Out of 350 farmers selected for the study, the numbers of small, medium, and large farms were fixed as 175 (50%), 100 (28.57%), and 75 (21.53%), respectively. Primary data was collected using a pre-tested questionnaire. The experience in dairying

and family experience index were the tools used to assess the experience level and the extent of information utilisation, social participation, special training received, agency and duration of the training, and participation in extension programmes to evaluate the pattern of capacity building by the farmers. The methodologies used for recording these variables are presented below.

a. Participation in extension programmes

The number of extension programmes in which the respondents participated in the previous year was considered, and attendance in one programme was given one point. Respondents were classified based on total points obtained by them into seven categories (0-7).

The number of respondents who received special training on dairying conducted by an agency for a particular duration was considered. Based on this, two categories were drawn, and scores of 1 and 0 were given to recipients and non-recipients. The agency which offered the training was classified as either Government or Non-Government Organization (NGO). The average duration of the training received in days was noted.

b. Experience in dairying

Years of experience in dairying referred to the number of years that the respondents had been rearing cattle. The respondents were given scores based on the years of experience in dairying and were further classified into those with low, medium, and high experience. Details are presented in Table 1.

c. Family Experience Index

The scores of each adult member in the dairy farmers' family who participated in farming were added to get the family experience score. The family experience index was calculated using the formula given below (Khan, 2006).

$$\text{Family experience index} = \frac{\text{Family experience score}}{\text{No. of adult members}}$$

Table 1. Scoring of years of experience

Sl. No.	Years of experience	Score	Category
1	No experience	0	Low
2	Less than 5 years	1	
3	5 - 10 years	2	Medium
4	10 - 20	3	
5	20 - 30	4	
6	Above 30	5	High

Based on the family experience index score, the households were classified into those with low experience (score ≤ 1), medium experience (score between 1 and 3), and high experience (score ≥ 3).

d. Extent of information utilization

It was operationalised as the utilisation of the number of sources providing information regarding dairy farming and frequency of exposure of sources. It was measured by assigning scores of 5, 4, 3, 2, and 1 to daily, weekly, fortnightly, monthly and occasional contact, respectively with various sources of information as per the procedure adopted by Senthilkumar (2003). The final score was arrived at by summing up the scores for each source. The farmers were grouped as those with low information utilisation when scores were less than or equal to six. Farmers with scores greater than 18 were grouped in high information utilisation, and those with scores between 7 and 17 were categorised into the medium information utilisation group.

e. Social Participation

Social participation in this study referred to the degree of involvement of the respondent in formal organisations whether as a member or as an office-bearer. A scoring system followed by Pareek and Trivedi (1964) was used to quantify the social participation of the respondents. The participants were assigned a score of zero, when they are not members of any organisation. Scores of one or two were given to those who were members of one organisation and those who were members in more than one organisation, respectively. The score assigned to office bearers of any organisation was three.

RESULTS AND DISCUSSION

The present study indicated that irrespective of the farm size, most farmers/ famer families had medium level of experience in dairying. Observations of the present study are presented in Table 2. Among small, medium and large farms, the farmers with medium level of experience were 69.7, 72.0 and 40.0 percent, respectively. Irrespective of farm sizes medium level of experience was dominant. The small dairy farmers are traditional farmers with long period of experience in dairying, while in large farms, the farmers are new entrants. Low family experience index was observed in 10.9, 16.0, and 57.3 percent of small, medium and large farms, respectively.

Analysis of data indicated that government agencies conducted most of the training available for dairy farmers. It could be noted that NGOs in the state were not actively involved in the dairy sector. On average, dairy farmers who participated in

Table 2. Distribution of farmers according to the experience in dairying

Farm Type	Number / Percent	Experience			Family Experience		
		Low	Medium	High	Low	Medium	High
Small	Number	14	122	39	19	121	35
	Percent	8.00	69.70	22.30	10.90	69.10	20.00
Medium	Number	14	72	14	16	68	16
	Percent	14.00	72.00	14.00	16.00	68.00	16.00
Large	Number	42	30	3	43	26	6
	Percent	56.00	40.00	4.00	57.30	34.70	8.00
Overall	Number	70	224	56	78	215	57
	Percent	20.00	64.00	16.00	22.30	61.40	16.30

the study received 1.05 ± 0.13 days (Mean ±SE) of training. Observations in this regard are presented in Table 3. The results indicated that 70-80 percent of the farmers had not received any special training in dairying in farms of all sizes.

The results revealed that 41.1, 67.0, and 68.0 percent of farmers, respectively belonging to small, medium, and large dairy units did not participate in any extension programme. Among small farms, only 0.6 percent of the farmers attended six extension programmes in the particular year. In medium and large farms, the corresponding values were zero and 0.3 percent. The overall picture showed that 54.3 and 30.9 percent of farmers attended one and two extension programmes, respectively, in the previous year. Further details are provided in Table 4.

The result was surprising since even medium and large farmers who were considered entrepreneurs did not attend any special training in dairying. The low participation of farmers in the extension programmes could be discussed from two points of view. The present extension programmes either failed to attract or were not beneficial to real farmers. The second reason might be that, since dairying was a daylong job, the farmers could not spare time for participation. It was also reported that lack of need-based training was a significant constraint faced by the dairy farmers in Kerala (Smitha *et al*., 2019). These observations point to the need to revamp the present extension system to reach the farmers.

Medium level of information utilisation was observed in all types of farms and the respective values were 62.3, 63.0, and 76.0 percent in small, medium, and large farms. The situation in Belgaum district of Karnataka also appeared similar with 65.28 percent adoption level (Mali *et al*., 2014). Higher adoption levels (71.5 %)

Table 3. Conduct and duration of trainings for dairy farmers

		Statistic	Farm Size			Overall
			Small	Medium	Large	
Special training	Received	Number	27	17	22	66
		Percent	15.40	17.00	29.30	18.90
	Not Received	Number	148	83	53	284
		Percent	84.60	83.00	70.70	81.10
Agency	Government	Number	24	17	19	60
		Percent	36.92	26.15	29.23	92.30
	NGO	Number	5	0	0	5
		Percent	17.20	0.0	0.0	8.30
Duration (days)		Mean ± SE	0.99 ± 0.19	0.89 ± 0.22	1.40 ± 0.29	1.05 ± 0.13

Table 4. Distribution according to the number of extension programmes attended in the previous year

Farm Size	Number/ Percent	No. of Extension programmes						
		0	1	2	3	4	5	6
Small	Number	72	68	22	7	3	2	1
	Percent	41.1	38.9	12.6	4.0	1.7	1.1	0.6
Medium	Number	67	23	6	2	1	1	0
	Percent	67.0	23.0	6.0	2.0	1.0	1.0	0.0
Large	Number	51	17	3	2	2	0	0
	Percent	68.0	22.7	4.0	2.7	2.7	0.0	0.0
Overall	Number	190	108	31	11	6	3	1
	Percent	54.3	30.9	8.9	3.1	1.7	0.9	0.3

were reported from Maharashtra (Bhise *et al*., 2018). In large farms, only 6.7 percent of farmers were having a low level of information utilisation. Observations from the present study are given in Table 5.

The result of the study regarding information utilisation was disappointing since most farmers were not properly utilising communication sources or the information available. This resulted in low awareness and adoption level of new technologies in dairying.

In small farms, 57.7, 35.4, and 6.9 percent of farmers showed low, medium and high social participation, respectively. In medium farms, the corresponding figures were 79.0%, 16.0% and 5.0% and in large farms, 88.0%, 5.3%, and 6.7% respectively. The results were similar to observations from Villupuram and Salem districts of

Table 5. Distribution of farmers according to their extent of information utilisation

Farm Type	Number/Percent	Information utilisation		
		Low	Medium	High
Small	Number	35	109	31
	Percent	20.0	62.3	17.7
Medium	Number	20	63	17
	Percent	20.0	63.0	17.0
Large	Number	5	57	13
	Percent	6.7	76.0	17.3
Overall	Number	60	229	61
	Percent	17.1	65.4	17.4

Table 6. Distribution of farmers according to their social participation

Farm Type	Number/Percent	Social participation		
		Low	Medium	High
Small	Number	101	62	12
	Percent	57.7	35.4	6.
Medium	Number	79	16	5
	Percent	79.0	16.0	5.0
Large	Number	66	4	5
	Percent	88.0	5.3	6.7
Overall	Number	246	82	22
	Percent	70.3	23.4	6.3

Tamil Nadu, where only 40 percent of the respondents had membership in one organisation (Gopi *et al*., 2017). Details are presented in Table 6.

Similar results as were reported by Varghese *et al.* (2000), Pradeep and Rajkamal (2009), and Vidya *et al.* (2009) among the dairy farms of Kerala. Datta and Singh (2013) investigated the communication behaviour of innovative dairy farmers in Haryana and concluded that the innovative farmers regularly used mass media as the source of communication.

SUMMARY

The results indicated that 70-80 percent of the farmers had not received any special training in dairying in all farm sizes. Government departments played significant role in imparting training to dairy farmers. The results showed that 1.05 ±± 0.13 days was the average duration of training received by farmers and that 54.3 percent of farmers did not participate in training during the study. It was observed that 20, 64.0, and 16.0 percent of farmers were respectively having low, medium, and

high experience in dairying. The family experience index was lowest (8 percent) among large-sized farms. A medium level of information utilisation was predominant in all types of farms. The overall picture showed that 70.3, 23.4 and 6.3 percent of farmers had low, medium and high level of social participation. The findings of the present study points to the need to the revamp of present extension system so that it would reach the farmers.

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