HERD SIZE AND CREDIT ORIENTATION OF DAIRY FARMERS UNDER CO-OPERATIVE SECTOR IN KERALA

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ABSTRACT

A study was conducted to analyse the herd size and credit orientation of dairy farmers in Kerala. The target groups were members of dairy co-operatives, enrolled under Direct Benefit Transfer (DBT) scheme of the Government of Kerala. Using stratified multistage random sampling procedure, 350 farmers were selected with representation from small, medium and large categories of farms. Out of the 13,023 dairy households enumerated, small sized farms were predominant with a share of 78.80 per cent, followed by medium (20.40 per cent) and large farms contributed merely 0.70 per cent to the total. The average herd size calculated based on standard animal units were $3.13 \pm \pm 0.08$, $9.52 \pm \pm 0.30$ and $36.38 \pm \pm 3.65$ in small, medium and large farms respectively. The overall herd size observed in the study was $12.08 \pm \pm 1.05$. It was observed that credit orientation was high among 41.1 per cent, medium among 32.6 per cent and low among 26.3 per cent of total farmers. As per farm size, in medium and large farms the proportion of farmers with high level of credit orientation was 32.0 and 52.0 per cent respectively. Among small farms, farmers with high credit orientation was only 41.7 per cent.

Keywords: Dairy farming, Herd size, Credit orientation

INTRODUCTION

The milk economy of India supports more than 70 million rural households many of whom are of small and marginal farmers or landless labourers. Data available with agencies of Kerala government indicate that small holders (1-2 cattle) constitute majority of milk producers in the state. Medium (up to 10 cattle) and large enterprises (>10 cattle) also appear as significant players. The apex planning body of India NITI Aayog projects India's milk production to grow to 330 million tonnes by 2033. The National Action Plan for Dairy has set a

target of 254.5 million tonnes by 2022, and 300 million tonnes by 2023-24, which envisages an annual growth rate of 8.5 per cent in milk production. It also envisages per capita availability of milk to grow to 515 grams/day in 2022 and to 592 grams/day in 2023-24. India's milk production is characterised by production by masses and not by mass production. It is also important to note that nearly 95 per cent of milk producers in India hold only one to five animals per household. The rising incomes and a change in dietary preferences are propelling a greater demand for milk and milk products. To meet all these aspirations, dairying is slowly and visibly changing to a commercial activity dependent on external inputs. This raises farmers' dependence on external borrowings to meet their working capital requirements and to make investments in infrastructure. Timely and adequate flow of institutional credit to agriculture has always been the goal of successive governments. But the credit extended to animal husbandry and dairying is critically low with only 4-5% of the total institutional credit flowing to agriculture and allied fields (Vedamurthy and Sirohi, 2016). Usually there is a mutual lack of trustworthiness between bankers and farmers. The present study was undertaken to analyse the herd size of dairy units and credit orientation of farmers running small, medium and large dairy farms.

MATERIALS AND METHODS

The study was conducted in order to assess the herd size and credit orientation of dairy farmers. The respondents were dairy farmers who were members of the dairy co-operatives and were enrolled in the Direct Benefit Transfer (DBT) scheme of the Government of Kerala. As the total population of milk producers and DBT members were nearly two lakhs, a total sample of 350 farmers was selected for the present study. 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 (KVASU, 2016) into small holder or subsistence farms (1-2 cows), medium (3-10 cows) and large farms (more than 10 cows). Out of 350 farmers selected for the study, the numbers of small, medium and large farms were fixed as 175, 100 and 75 respectively. The sample size for each category of farms in each block was determined in proportion to the number of farmers belonging to each category (probability proportion to size technique).

For this all the farmers in the selected blocks were enumerated and classified into small, medium and large farms based on number of cows. The respondents in each group were selected randomly in each block proportional to their number in each block. Primary data was collected using in-depth interview and pre tested questionnaire. Herd size was measured in terms of the number of various categories of cattle kept on the homestead. The actual numbers were converted into standard animal units as per Kumbhare, *et al*. (1983). The results were analysed using simple statistical tools like frequencies and percentage. Credit orientation was operationalised as the respondents' orientation to avail and utilise the loan/credit facilities of different organisations for running and expanding their enterprises. It was measured with the help of a scoring scale adopted by Sethy (1982), based on which the credit orientation of respondents was low (Score = 2 or less), medium (Score = 3) or high (Score = 4 or more). The scoring scale is presented in Table 1.

RESULTS AND DISCUSSION

The details of distribution of small, medium and large farms and their herd size are presented in Table 2. The results indicated that out of the 13,023 dairy households enumerated in 10 blocks, small sized farms were predominant with

Table 1. Scoring scale

Response by the respondents	Score
Borrowing money and re-borrowing money from a public credit institution after making timely repayment	5
Only borrowing money and not re-borrowing the same though making timely repayment	4
Borrowing money delaying payment but not borrowing again	2
Borrowing money from a public credit institution and remaining defaulter in repaying the same for a long time	1
Borrowing money from more than one institution and repaying the loan in time	5
Borrowing money from a credit institution, repaying if after borrowing money from some other institution and continuing the claim involving several credit institution	1
Willing to borrow money but could not borrow due to ignorance or some other reasons	3
Making efforts to borrow loan but could not due to various reasons	3
Not willing to borrow money from any public institution due to various reasons	3
Borrowing money only from village money lenders and not from any public credit institution	2

Table 2. Distribution of types of farms and composition of herd

Type of farm	Distribution (n=Frequency)		Type of farm (N=Number of farms sampled)	Herd size (Mean±SE)
Small	n	10266	Small N=175	3.13±0.08
	%	78.80		
Medium	n	2660	Medium N=100	9.52±0.30
	%	20.40		
Large	n	97	Large N=75	36.38±3.65
	%	0.70		
Total		13023	Overall N=350	12.08±1.05

a share of 78.80 per cent, followed by medium (20.40 per cent) and large farms contributed merely 0.70 per cent to the total farms of Kerala. Unlike in most other leading milk-producing countries where large milk farms with hundreds of cows drive the production, nearly 95 per cent milk producers in our country hold only one to five animals per household. An NSSO Land and Livestock survey revealed that the average house hold in India owned 1.8 heads of cattle. The notable presence of medium dairy farms with 3-10 milch cattle proved the suitability of dairying as a commercial venture. The overall herd size observed in the study was 12.08 ± ± 1.05. The average herd sizes calculated based on standard animal units were 3.13 ± ± 0.08, 9.52 ± ± 0.30 and 36.38 ± ± 3.65 in small, medium and large farms respectively. Report by Ghule *et al*. (2012) indicated

that herd size in small (10.55) and medium farms (14.11) in Ahmed Nagar district of Maharashtra was higher while herd size in large farms (34.66) was marginally lower than that observed in the present study.

Table 3 shows the distribution of farmers according to their credit orientation. The overall picture showed that credit orientation was high among 41.1 per cent, medium among 32.6 per cent and low among 26.3 per cent of farmers. As per farm sizes, high credit orientation was observed among 41.7 per cent of the small farmers. In medium and large farms, the proportion of farmers with high level of credit orientation was 32.0 and 52.0 per cent, respectively. The results indicated that irrespective of farm sizes, less than half of the dairy farmers were having a high level of credit orientation. A slightly high proportion credit orientation

Table 3. Distribution of farmers according to their credit orientation

Farm Type	Number / Per cent	Credit Orientation		
		Low	Medium	High
Small	Number	45	57	73
	Per cent	25.7%	32.6%	41.7%
Medium	Number	31	37	32
	Per cent	31.0%	37.0%	32.0%
Large	Number	16	20	39
	Per cent	21.3%	26.7%	52.0%
Overall	Number	92	114	144
	Per cent	26.3%	32.6%	41.1%

in large farmers may be an indication of higher capital investment needed for such enterprises. Credit orientation is a measure of the respondents' attitude to avail and utilise the loan/credit facilities of different organizations for running and expanding their enterprises. So much more effort is needed to improve the credit orientation of farmers, especially medium and large ones to improve infrastructure and production. Vedamurthy *et al.* (2015) analysed the institutional credit for dairying and pointed out that the dairy sector received bare minimum credit support. The policymakers should focus on formulating measures to support dairying through adequate credit to induce private investment, to tackle the issue of accessibility of credit need. For bankers, there is the need for close monitoring of units for better utilisation of dairy credit so that it generates enough income and help farmer to repay the credit in time.

SUMMARY

The results clearly revealed the predominance of small farms in the dairy sector of Kerala. The proportions of small, medium and large farms in Kerala were 78.80, 20.40 and 0.70 per cent respectively. The average herd size calculated based on standard animal units were $3.13 \pm \pm 0.08$, $9.52 \pm \pm 0.30$ and $36.38 \pm \pm 3.65$ in small, medium and large farms, respectively. The overall picture showed that high credit orientation was high among 41.1 per cent, medium among 32.6 per cent and low among 26.3 per cent of farmers. As credit orientation measures the respondents attitude to avail and utilise the loan/credit facilities, much more effort is needed from the part of policy makers, bankers and dairy farmers themselves to improve the credit orientation of farmers which will assure much needed capital investment for achieving the targets of milk production.

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