



# CONSTRAINTS PERCEIVED BY DAIRY FARMERS OF KERALA AFFECTING THE SUSTAINABILITY OF THE DAIRY SECTOR \*

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## Abstract

*The study was conducted in among the dairy farmers of Kerala, with a view to find out the perception of the farmers regarding the major constraints in dairy farming. The constraints were grouped as five major areas of dairying viz. Feeding, breeding, health care, policy related and marketing constraints. Data was collected from 350 farmers using a structured schedule, by personal interview technique. The farmers/farm households were categorized into small or subsistence farms (1-2 cows), medium (3-10 cows) and large farms (more than 10 cows). Price of concentrate feed was the major constraint in all the farm sizes and in overall the overall ranking. The price of concentrate, infertility, high cost of veterinary medicine and inadequate price of milk were the major constraints perceived by the dairy farmers in different areas of production in Kerala.*

**Key words:** Constraints, dairy farmer

Dairy farming offers significant opportunity for employment in India. In Kerala

has a distinction in dairy sector as more than 80 percent of animals are crossbreds having potential for higher productivity. But several constraints hinder the farmers from reaching optimum production which can be considered as constraints in dairy farming. The availability of quality animals with high genetic capacity for production determines the maximum possible production in any system. But to achieve this maximum, farmers are facing several technical constraints which may be related to feeding, breeding, health care, policy matters, marketing problems etc. the reduction in cattle population. The article attempts to classify and prioritise the major constraints as perceived by the dairy farmers in the state.

## Materials and Methods

The dairy farms in the state of Kerala was categorized into small farms (1-2 cows), medium farms with 3-10 cows and large dairy farms with more than 10 cows. The samples will be selected by stratified multistage random sampling. The state of Kerala was stratified into five agro-climatic zones (NARP, 1989) and one

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district from each zone (strata) was selected at random, after which two blocks was selected at random. For the present study the respondents selected 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. As the total population of milk pourers and DBT members were nearly two

**Table 1.** Number of farmers selected for study under different farm sizes in each block (Sampling design)

Sl. No.	Agro-Climatic Zone	District	Name of block	Small	Medium	Large	Total
1	South	Pathanamthitta	Parakode	12	5	2	19
2			Pandalam	6	3	1	10
3	Central	Thrissur	Ollukkara	12	6	3	21
4			Irinjalakuda	3	2	3	8
5	North	Palakkad	Kuzhalmannam	20	5	6	31
6			Chittur	30	44	32	106
7	Problem Zone	Alappuzha	Haripad	6	5	3	14
8			Veliyanad	2	2	3	7
9	High Range	Wayanad	Mananthavady	51	17	16	84
10			Kalpetta	33	11	6	50
			<b>TOTAL</b>	<b>175</b>	<b>100</b>	<b>75</b>	<b>350</b>

**Table 2.** Feeding Constraints

Small farms			Medium farms			Large farms		
Constraint	Mean	Overall Rank	Constraint	Mean	Overall Rank	Constraint	Mean	Overall Rank
Price of Concentrate feed	2.98	1	Price of Concentrate feed	2.98	4	Price of concentrate feed	2.96	8
Green fodder availability	2.24	11	Price of Paddy Straw	2.74	15	Green fodder availability	1.73	25
Price of Paddy Straw	2.18	13	Quality of feed	2.67	19	Price of Paddy Straw	1.55	27
No grazing land	1.83	18	No grazing land	2.63	20	No grazing land	1.25	31
lack of knowledge in ration balancing	1.62	25	Green fodder availability	2.51	22	Dry Fodder	1.03	35
Quality of feed	1.62	26	Dry Fodder availability	1.23	36	lack of knowledge in ration balancing	1.03	36
Dry Fodder availability	1.45	30	Lack of knowledge in ration balancing	1	43	Quality of feed	1.01	38

The constraints in the area of breeding are presented in table (3). Infertility was the major constraint in all farm sizes.

**Table 3.** Breeding constraints

Small Farms			Medium Farms			Large Farms		
Constraint	Mean	Overall Rank	Constraint	Mean	Overall Rank	Constraint	Mean	Overall Rank
Infertility	2.61	7	Infertility	2.88	11	Infertility	2.77	12
Distant location of AI centre	1.43	31	Non availability of AI service in time	2.88	35	Distant location of AI centre	2.45	14
Non availability of AI service in time	1.41	34	Distant location of AI centre	1.19	37	Calving problems	1.99	22
Cost of AI	1.17	40	Calving problems	1.01	42	Non availability of AI service in time	1.89	24
Calving problems	1.06	41	Cost of AI	1.00	44	Cost of AI	1.03	37

**Table 4.** Animal health constraints

Small farms			Medium farms			Large farms		
Constraint	Mean	Overall Rank	Constraint	Mean	Overall Rank	Constraint	Mean	Overall Rank
Diseases	1.97	15	High cost of medicine	2.94	6	High cost of medicine	3.00	3
High cost of medicine	1.86	17	High cost of veterinary service	2.94	13	High cost of veterinary service	2.19	18
High cost of veterinary services	1.62	24	Diseases	2.67	18	Disease	1.71	26
Distant location of vet. Hospital	1.59	27	Non availability of vet. service in time	2.03	23	Lack of knowledge about diseases	1.03	33
Lack of knowledge about diseases	1.42	32	Lack of knowledge about diseases	1.82	30	Distant location of vet. hosp.	1.01	39
Outbreak of diseases	1.42	33	Outbreak of diseases	1.72	33	Outbreak of diseases	1.01	40
Non availability of veterinary service in time	1.26	38	Distant location of vet. Hospital	1.02	39	Non availability of veterinary service in time	1.00	41
Non availability of vaccine in time	1.02	43	Non availability of vaccine in time	1.00	45	Non availability of vaccine in time	1.00	45

**Table 5.** Policy, social and finance related constraints

Small farms			Medium farms			Large farms		
Constraint	Mean	Overall rank	Constraint	Mean	Overall rank	Constraint	Mean	Overall rank
Change in cropping pattern	1.98	14	Low social participation	2.76	14	High Labour cost	2.73	13
Climate change	1.87	16	Land shortage for fodder	2.72	16	High Interest rates	2.31	15
Non avail. of family labour	1.83	19	Lack of credit	2.69	17	Non avail. of hired labour	2.25	16
Lack of training and knowledge	1.82	20	Family health	2.53	21	Lack of credit	2.24	17
Non avail. of quality animals	1.79	21	Non avail. Of hired labour	2.02	24	Waste management	2.07	19
Lack of Interest of young generation	1.78	22	Policy to purchase animals from outside states	2.01	25	Socio-psychological constraints	2.01	20
Family health	1.75	23	Climate change	1.96	26	Land shortage for fodder	2.00	21
Waste management	1.52	28	Change in cropping pattern	1.92	27	Low social participation	1.99	23
Lack of credit	1.5	29	Lack of mechanisation	1.9	28	Policy to purchase animals from outside states	1.49	28
Non avail. Of hired labour	1.4	35	Non avail. Of family labour	1.83	29	Climate change	1.29	29
Socio-psychological constraints	1.38	36	Socio-psychological constraints	1.78	31	Lack of training and knowledge	1.27	30
High Labour cost	1.34	37	Lack of training and knowledge	1.73	32	Change in cropping pattern	1.25	31
Policy to purchase animals from outside states	1.25	39	Lack of Interest of young generation	1.71	34	Lack of mechanisation	1.04	32
Lack of mechanisation	1.05	42	Waste management	1.17	38	Lack of Interest of young generation	1.03	34

**Table 06.** Marketing constraints

Small farms			Medium farms			Large farms		
Constraint	Mean	Overall rank	Constraint	Mean	Overall rank	Constraint	Mean	Overall rank
Milk price from society	2.96	3	Milk price from society	3.00	2	Milk price from society	3.00	2
Low Fat & SNF	2.77	5	Low Fat & SNF	2.92	7	Low Fat & SNF	2.93	9
No society	1.00	47	Low demand during flush season	1.02	41	No society	1.00	44
Poor marketing facilities	1.00	48	Poor marketing facilities	1.00	46	Low demand during flush season	1.00	46
Low demand during flush season	1.00	49	No society	1.00	47	Poor marketing facilities	1.00	47

lakhs, a total sample size of 350 farmers was selected for the present study. (175 small farms, 100 medium farms and 75 large farms). The number of farmers belonging to each category present in the selected blocks was enumerated completely. The number of farms was selected for study based on their proportionate number in the selected blocks and the respondents were selected randomly from each group. The number of farmers selected for study under different farm sizes in each block is presented in Table (1). The objectives of the study were accomplished through the collection, processing and analysis of primary data using a pre tested structured interview schedule.

The procedure adopted by Jayalekshmi et al. (1997) was used to ascertain the importance of the constraints as perceived by farmers as follows. The response to each constraint long with its nature of problems were obtained on a three point continuum viz. Very serious, Serious and not Serious with weights of 3, 2 and 1 respectively. For each constraint, the frequency of the response under each category was multiplied with its respective weightage and added up to get the total score of that particular constraint. The obtained score was divided by the total number of respondents and the number of items in a particular constraint to arrive at the mean score of the constraint. The constraints were then ranked based on the mean scores so obtained. The mean score of each problem under a constraint was arrived at the total score for it and then dividing by the number of respondents. The statistical analysis

was performed using SPSS v21.

## Results and discussion

The constraints perceived by farmers as those pertaining to feeding, breeding, animal health, policy, social and finance related and marketing are presented in tables 2-6. In each table constraints in the particular area are arranged according to their rank within that area based on mean score under different farm size. They are also given an overall rank irrespective of grouping of constraints

The Table (2) describes the feeding constraints perceived by the farmers under different farm sizes. The price of the concentrate feed was perceived as the major constraint in the feeding irrespective of farm size.

The constraints related with animal health are presented in table (4). The high cost of veterinary medicine was the major constraint in medium and large farms whereas the small farmers considered diseases as their major problem in animal health management.

Policy, social and finance related constraints are presented in table (5) which showed the low price for milk as the major constraint in all farm sizes.

The inadequate price obtained from the co-operative society was the major constraint in marketing area irrespective of farm size which are presented in Table (6).

In small farms, irrespective of grouping of constraints, the overall top constraints were the high price of concentrate feed, low market price for milk, and low productivity of animals, low fat and solids-not-fat (SNF) in the milk, high interest rate and infertility in animals. In medium sized farms low market price for milk, high capital requirement, price of concentrate feed, low productivity, cost of medicine and low fat and SNF were the overall top constraints. In large farms, the low market price for milk, high cost of veterinary medicine, non-availability of quality animals and family labour, high capital investment and cost of concentrate feed were the major constraints. The overall picture irrespective of farm size revealed that price of concentrate feed, infertility, high cost of medicine, low milk price in market and non-remunerative price offered by the society were the number one constraint in respective constraint groups.

The results obtained in this study are almost in agreement with the earlier studies done by various researchers both in Kerala and in various parts of India (Nagrle et al. (2015); Jha and Singh (2015); Kant et al. (2015). The constraints faced by the dairy farmers of Kerala should be discussed from special points as focus since the state faces unique problems socially, economically and also in the area of agriculture.

## Conclusion

The identification and prioritisation of constraints perceived by dairy farmers of Kerala was explored in the study. Farmers unanimously cited inadequate pricing of milk and high price

of inputs as the most important constraints faced by the sector. The sustainability of dairy sector depends on the interventions in these areas from the part of the government, research and extension agencies to find out appropriate policy, research and extension approaches considering the socio-economic and agricultural situation of Kerala in particular.

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