
FEEDING PRACTICES OF VECHUR CATTLE FARMERS OF KERALA

Anjali, K.B.* and Senthilkumar, R.

*Directorate of Entrepreneurship,
Kerala Veterinary and Animal Sciences University, Mannuthy, Thrissur, Kerala – 680 651*
**Corresponding author: anjalikbabu2015@gmail.com*

ABSTRACT

A study was conducted to find out various feeding management practices of Vechur cattle farmers of Kerala. Three districts of the state namely Kottayam, Thrissur and Palakkad were selected for the study. By employing chain referral sampling, a total of 60 farmers were selected as respondents and data were collected through personal interview method using a structured pretested interview schedule. It was found that majority (75%) of the farmers followed tethering and only 5 percent practiced grazing. All the farmers fed their animals green grass and majority (75%) prepared concentrate feed mixtures on their own. Only 15 per cent of farmers gave commercially available concentrate feed to their animals. Only 20 per cent of the farmers provided supplements like mineral mixture or calcium. About 36.67 per cent of the farmers had fodder cultivation.

Keywords: Feeding practice, Indigenous breed, Vechur cattle

INTRODUCTION

Livestock farming is an important economic activity, potential source of employment and additional income for rural families particularly to the landless, small and marginal farmers. In addition to this, it also helps in meeting nutritional requirements of farm families. Among various species of livestock, indigenous cattle play a vital role by providing milk for nutrition and manure as fertilizer for agriculture (National commission on cattle, 2002). This fact remains the same even today.

Vechur cattle are the only recognised native cattle breed of Kerala. The small size and adaptability of this animal to the hot humid climate with higher milk yield compared to other local dwarf varieties, led Vechur cattle to occupy a better position

among the domestic animals in the state. The height of this breed is around 90 cm which makes the animal one among the shortest cattle breeds in the world. It is valued for the larger amount of milk it produces relative to the amount of feed it requires. The milk of Vechur cattle is believed to have medicinal qualities and easy digestible due to its smaller fat globule size (Thirupathy and Iype, 1997). The protein component of Vechur cattle milk has an improved antimicrobial property (Shashidharan *et al.*, 2011). In spite of this, due to the low yield of milk, the people were reluctant to do Vechur cattle farming earlier. However, the trend is changing nowadays. Even though a significant number of people are engaged in indigenous cattle rearing these days, there is a dearth of proper data regarding the farming practices of these indigenous cattle. Any intervention which is aimed at improving the productivity of the Vechur cattle will have a great impact on the sustainability of rearing these cattle. Such interventions cannot be drawn until we do not have information about their pattern of rearing in the field condition (Singh *et al.*, 2019).

It is generally agreed that an animal fails to express its genetic potential for high milk production when underfed. Underfeeding of young stock will lead to retarded growth, delay in maturity

and lower productivity after attaining the breedable age. Selection of proper feeding standards and using the right combination of feeds in adequate quantity along with other related practices are some of the ways which will enable the farmers to increase the milk production and make dairying more profitable (Jadav, 2018). Thus, keeping in view of the above facts, the feeding practices of Vechur cattle was studied.

MATERIALS AND METHODS

An *ex post facto* research design was conceived to conduct a study among the Vechur cattle farmers in Kerala state to understand their feeding practices. By employing chain referral sampling technique, a total of 60 Vechur cattle farmers from three districts of the state namely Kottayam, Palakkad and Thrissur were selected. The data were collected using a pre-tested structured interview schedule. Personal meeting with the Vechur cattle farmers and direct observation in the study area were used to analyse the feeding practices. The data collected from all the districts were classified and tabulated as per the objective concerned and simple tabular analysis was followed for analysing data, where the comparison was redundant only frequency and percentages were estimated (Panse and Sukhatme, 1967).

RESULTS AND DISCUSSION

1. Feeding System

It could be inferred from Table 1. that majority of farmers (75%) studied followed tethering, 20 per cent used stall feeding alone and only 5 per cent let their animals to graze. Farmers opted restricted grazing owing to the nature of Vechur cattle that made it difficult to manage them while grazing. This was in contrary to the finding of Tudu and Roy (2015) who reported that majority of farmers allowed their animals to graze and farmers adopted tethering where facilities for grazing were limited, in a study conducted at Nadia district of West Bengal.

2. Types of feed

All the sixty farmers fed green grass to their animals. Only 46.67 per cent provided straw and none knew about methods for preservation of fodder such as making of hay and silage. This observation was in contrary to the findings of Jain *et al.* (2018) and Kumar *et al.* (2017) who reported that the animals were fed with dry fodder by the farmers. Only 15 per cent of respondents gave commercial concentrate feed to their animals. Farmers believed that urea based commercial concentrate would affect the quality of milk of their animals. This however, did not deter them from preparing concentrate mixtures on their own for which they mainly used locally

Table 1. Distribution of Vechur cattle farmers based on feeding system

Sl. No	Feeding System	Frequency (f)	Percentage (%)
1	Grazing	3	5.00
2	Tethering	45	75.00
3	Stall feeding only	12	20.00
Total		60	100

Table 2. Distribution of Vechur cattle farmers based on type of feed

Sl. No.	Type of feed	Frequency (f)	Percentage (%)
1	Green grass	60	100.00
2	Balanced commercial concentrate	9	15.00
3	Straw	28	46.67
4	Hay	0	0
5	Silage	0	0
6	Self-prepared concentrate mixture	45	75.00
7	Others (Unconventional feed – Subabul, Agathi, Glyricidia, Banana leaves)	35	58.33

Table 3. Distribution of Vechur cattle farmers based on ingredients used in self-prepared concentrate mix

Sl. No.	Concentrate ingredient	Frequency(f)	Percentage (%)
1	Ricebran	15	25.00
2	Wheatbran	32	53.33
3	Coconut oil cake	18	30.00
4	Soyabean husk	1	1.67
5	Maize	10	16.67
6	Any other	11	18.33

available ingredients like rice bran, wheat bran, groundnut oilcake, coconut oilcake, maize etc. This is similar to the findings of Tudu and Roy (2015), and Singh *et al.* (2019). About 58.33 per cent of the respondents provided unconventional feed and fodder trees available in the farmstead (Table 2).

3. Type of concentrate ingredients

The ingredients used for self-prepared concentrate were wheat bran, coconut oil cake, rice bran, maize and soyabean husk (Table 3). Similar findings were reported in a study conducted by Singh *et al.* (2019), wherein they found that the respondents were using grains (Maize, barley), oil cakes, mill by-products (brans) etc. as ingredients of concentrate mixture.

4. Method of feeding concentrate

The results of the present study showed that 48.14 per cent (n=26) of the respondents provided concentrate mixed

with water, 31.48 per cent (n=17), in mash form and 20.37 per cent (n=11), as such. The findings are in consonance with that of Tudu and Roy (2015) who reported that 78.50 per cent of farmers provided concentrate mixture in soaked form.

5. Supplementary feeding

Supplements being offered to Vechur cattle observed in the study are presented in Table 4. Majority (80 %) of the respondents did not feed any supplement and 20 per cent of the farmers fed mineral and calcium supplements to their cattle. The study concluded that the respondents were not aware of the benefits of feeding mineral mixture. Similar findings were also reported by Sheikh *et al.* (2011) in their studies on Kankrej cattle of North Gujarat.

6. Fodder cultivation

Observations with respect to fodder cultivation are presented in Table 5. Majority (63.33 %) of farmers did not

cultivate any fodder on their farmstead. Further, it was understood that none of the respondents cultivated fodder exclusively for Vechur animals since they believed that native animals required less feed when compared to cross bred cows and that the fodder available around the area near their farmstead was sufficient for meeting the requirement of their animals. These findings are however contrary to that of Tudu and Roy (2015). Half of the farmers studied had 1-5 years of experience in fodder cultivation whereas, 18.18 per cent each had 5-10 and more than 10 years of experience. Analysis of the farmers who were cultivating fodder revealed that 50 per cent of them cultivated it in more than 15 cents of land. It was found that Hybrid Napier was cultivated by 81.81 per cent of the farmers. The cultivation of Congo Signal or fodder trees such as Glyricidia and Agathi were also practiced in a few farms. Majority of the farmers were doing six (36.36 %) to eight (27.27 %) cuttings per year.

In the present study, all the farmers reported that Vechur cattle required less feed compared to other cross bred cattle. The main feed resources fed to Vechur cattle were green grass and self-prepared concentrate mixture and majority of the farmers were not giving commercial concentrate to their animals. They also reported that as fodder available near the farmstead was sufficient to feed their animals, there was no need for fodder cultivation. From the findings of the study, it can be concluded that Vechur cattle is suitable for low input management system to meet family requirement of milk.

REFERENCES

- Jadav, S.J. 2018. Prevailing Feeding Practices of Dairy Animals Followed by Dairy Farmers in the Operational Area of Dairy Vigyan Kendra, Vejalpur. *TIBS*. **11**(14): 2467-2472.
- Jain, A., Barwa, D., Jain, T., Singh, M., Mukherjee, K., Gendley, M., and

Table 4. Distribution of Vechur cattle farmers based on type of feed supplements used

Sl. No.	Supplements	Frequency(f)	Percentage (%)
1	Mineral supplement	7	11.67
2	Calcium supplement	5	8.33
3	No supplement	48	80.00
Total		60	100

Table 5. Distribution of Vechur cattle farmers based on fodder cultivation

Sl. No.		Frequency (f)	Percentage (%)	
1	Fodder cultivation (Respondents n = 60)			
	1	Practiced	22	36.67
	2	Not Practiced	38	63.33
2	Years of cultivating fodder (Respondents n = 22)			
	1	<1 year	3	13.64
	2	1-5 years	11	50.00
	3	5-10 years	4	18.18
	4	>10 years	4	18.18
3	Area of Cultivation (Respondents n = 22)			
	1	<5 cent	6	27.27
	2	5-15 cent	5	22.73
	3	>15 cent	11	50.00
4	Variety of fodder (Respondents n = 22)			
	1	Hybrid Napier	18	81.81
	2	Congo signal	2	9.09
	3	Glyricidia	1	4.55
	4	Agathi	1	4.55
5	Cuttings per year (Respondents n = 22)			
	1	6 or less	8	36.36
	2	7 cuttings	7	31.82
	3	8 cuttings	6	27.27
	4	9 or above	1	4.54

Mishra, R. 2018. Socio-Economic Status and Perceptions of Kosali Cattle Keepers and Constraints to Cattle Production in Central Plain Region of Chhattisgarh state. *Int. J. Livest. Res.* **8**(6): 279-285.

Kumar, S., Subash, S. and Jangir, R. 2017. Feeding and milking management practices adopted by indigenous cattle farmers in Thar desert of Rajasthan. *J. Anim. Health Prod.* **5**(1): 14-18.

- Panse, V.G. and Sukhatme, P.V. 1967. Statistical Method for Agricultural Workers. Indian Council of Agriculture Research, New Delhi. 381 p.
- Report of the National Commission on Cattle (Rashtriya Govansh Ayog). 2002. Department of Animal Husbandry and Dairying, Ministry of Agriculture, Government of India, New Delhi. Available : <http://dadf.gov.in/related-links/report-national-commission-cattle>.
- Shashidharan, A., Singh, R., Bhasker, S. and Mohankumar, C. 2011. Physicochemical characterization and functional site analysis of lactoferrin gene of Vechur cow. *Bioinformation*, **6**(7): 275.
- Sheikh A.S., Bhati D.S. and Sheikh W. 2011. Feeding practices followed by professional Kankrej cow owners of Banaskantha district of North Gujarat. *J. Progressive Agric.* **2**(1): 67-69.
- Singh, P.K., Sankhala, G., Singh, P.K. and Jadoun, Y.S. 2019. Management Practices for Rearing of Gangatiri Cattle in Native Tract. *Indian J. Anim. Res.* **86**: 1-7.
- Thirupathy Venkatachalapathy, R. and Iype, S., 1997. Fat globule size and distribution in milk and iodine value of milk fat of Vechur cattle of Kerala. *Indian J. Anim. Sci.* **67**(10): 910-912.
- Tudu, N.K. and Roy, C. 2015. Demographic profile and management practices of dairy farmers in Nadia district of West Bengal. *Int. J. Inf. Res.* **2**(3): 521-524.
-