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Feeding status of dairy animals in Sailu Tahsil of Parbhani district in Maharashtra

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Abstract

The present investigation was taken to study the status of feeding the dairy animals in respect to concentrates, green and dry roughages, to suggest recommended feeding practices for higher milk production. The idea is to obtain the real status of feeding the dairy animals by owners, In management practices, vaccination and health checking of animal were followed 60-75 percent, while cleaning and sanitation of camp and animal practiced by 80 percent. Artificial insemination technique was followed by 78.25 percent farmers, whereas 38.25 percent of respondent followed mating of animals.

Keywords: Feeding practices, management practices

Introduction

Indian cattle population is an integral part of the agriculture. As per 19th livestock census 2012, total livestock population in Maharashtra, cattle 15.4 million, buffalo 5.5 million, goat 8.4 million, sheep 2.5 million. As per survey of Department of Animal Husbandry, Govt. of Maharashtra (2015) the total milk production ('000 MT) is 9089 in the year 2013-2014. The per capita availability of milk in Maharashtra in 215g per day (2013-14), 239 g per day (2015-16). In India, farmers don't have adequate knowledge about nutritional requirement of an animal and cannot supplement or enrich a feed, if found deficient in particular nutrient. The analysis of feed stuff gives the important information about the quality of feed in respect of nutritional value of different purpose. Whatever be the inherent qualities all the animals are not to express these qualities in actual production unless they are properly fed their ration furnishes all the required nutrients in such proportion and amount as well as provide balance nourishment to the animal. Therefore understanding of certain fundamental principles involved in feeding by a livestock owner will prove very helpful in computing ration which should supply both qualitatively and quantitatively all the nutrient required for proper nourishing of animals. For improving such status, government should implement different schemes and programmes like supply of crossbred cattle, A.I. technique and providing superior varieties of fodder crops. Therefore, the present study has been conducted with the following objectives:

1. To study the status of feeding the dairy animals in respect to concentrate, green and dry roughages
2. To adopt practices of feeding for higher milk production

Materials and Methods

Selection of villages

The data obtained for the study was collected by multistage random sampling technique. At first stage Sailu taluka was selected. At second stage, random selection of 10 villages were made with 20 dairy farmer in Sailu Tahsil of Parbhani district in Maharashtra.

Table 1: List of villages randomly selected for collection of data

Sr. No.	Name of Village	No. of Farmer
1.	Pimpalgaon-dhengli	20
2.	Zodgaon	20
3.	Nipani-Takli	20
4.	Rajewadi	20
5.	Kajali-Rohina	20
6.	Sonna	20
7.	Shelwadi	20
8.	Walangwadi	20
9.	Dugra	20
10.	Karadgaon	20

Tools and Techniques of data collection

The collection of above information of each dairy farmers, a method of 'Personal Interview' through questionnaire was followed. For these questionnaire, a standard Performa of questionnaire as adopted by 'NBAGR' was prepared and taken for survey.

The data collected will be classified and tabulated as per the objective concerned and simple tabular analysis was followed for analyzing data, where the comparison was redundant only frequency and percentage was estimated (Panse and Sukhatme, 1967) [7].

Results and Discussion

Feeding dry roughages

The data on the quantity of dry roughage fed to milch cow and buffalo by landless, marginal / small, medium and large farmers were compiled analysed for the interpretation of result. The results on these aspects are present.

Table 2: Mean dry roughages offered to various dairy animals by group of dairy farmers

Types of Farmers	Mean daily dry roughages offered (kg/animal)		
	Buffalo	crossbred	Indigenous/local
Landless	6.83	10	4.91
Marginal/small	8.64	9.81	5.02
Medium	9.00	10.2	5.78
Large	9.44	10.12	8.11

Table 2 shows that, one milch buffalo was offered 6.83, 8.64, 9.00, 9.44 kg dry roughages by landless, marginal / small, medium and large farmer respectively. From the above figures, it could be seen that buffalo of landless farmer got least amount of dry roughages in comparison to others. However Lall *et al.* (1998) [6] recorded higher values of fodder than the present investigation.

The quantity of dry roughages offered to crossbred cows by landless, marginal / small, medium and large farmers was 8.50, 9.81, 10.2 and 10.12 respectively. There was significant difference between the quantity of dry roughages offered daily to crossbred cows by large and medium farmers. Jadhav (1973) [4] also recorded similar findings.

The quantity of dry roughages offered to indigenous cows by landless, marginal / small, medium, and large farmers was 4.91, 5.02, 5.78 and 8.11 kg respectively. The mean dry roughage offered to indigenous milch cows was comparatively less than that offered for buffalo and crossbred cow by each type of farmers. The statistical analysis of data for this parameter revealed that large farmers fed significantly higher amount of dry roughages than others.

From table 2 reveal that among the three types of dairy animals, the indigenous cows were most neglected by all the

dairy farmers having offered the roughage in the range of 4.92 to merely 9.50 kg daily. Further landless farmers could offer nearly half of the roughage offered by the large farmer. One buffalo could get dry roughage in the range of 8.71 to 11.87 kg / day in comparison with crossbred cow receiving minimum 10.20 to maximum 13.66 kg/ day.

Feeding green roughages

The present data on the quantity of green roughage fed to milch cow and buffalo by landless, marginal / small, medium and large farmers were compiled analysed for the interpretation of result. The results on these aspects are present in table 3.

Table 3: Mean green roughages offered to various dairy animals by group of dairy farmers

Types of Farmers	Mean daily green roughages offered (kg/animal)		
	Buffalo	crossbred	Indigenous/local
Landless	9.66	11.00	7.08
Marginal/small	11.12	12.00	7.28
Medium	12.10	12.60	8.32
Large	12.66	13.37	10.33

Above data in Table 3 shows that one milch buffalo were offered 9.66, 11.12, 12.10, 12.66 kg green roughages by landless, Marginal / small, medium and large farmer respectively. From the figures, it could be seen that buffalo of landless farmer got least amount of green roughages in comparison to others. And buffalo of large farmer got highest amount of green roughages in comparison to others.

The quantity of green roughages offered to crossbred cows by landless, marginal / small, medium, and large farmers was 11.00, 12.00, 12.60, and 13.37 kg respectively. From the figures, it could be seen that crossbred cow of landless farmer got least amount of green roughages in comparison to others. The mean of green roughage offered to indigenous milch cows was comparatively less than that offered for buffalo and crossbred cow by each type of farmers. The quantity of green roughages offered to indigenous cows by landless, marginal / small, medium, and large farmers was 7.08, 7.28, 8.32 and 10.33 kg respectively. The statistical analysis of data for this parameter revealed that large farmers fed significantly higher amount of green roughages than others.

The overall picture of Table 3 reveal that among the three types of milch animals, the indigenous cows were most neglected by all the dairy farmers having offered the green roughage in the range 7.80 to merely 10.33 kg daily. One buffalo could get roughage in the range of 9.66 to 12.66 kg / day in comparison with crossbred cow receiving minimum 11.00 to maximum 13.37 kg/ day.

Feeding concentrate

Dairy farmers use roughages to feeding their milch animals with concentrates. The data collected for this parameter and presented in table 4.

A landless farmer could offer 1.500 kg of concentrate to his buffalo, while marginal / small 1.334, medium 2.35 and large 2.38 kg. The statistical analysis revealed that large farmers offered significantly higher concentrate than rest of the farmers. Unexpectedly marginal farmers fed least concentrate to their buffaloes than landless farmer. During the survey farmer has been informed that no quantity of concentrate fed was in proportion to the quantity of milk obtained daily. Singh *et al.* (1998) [8] reported that landless, marginal/ small

medium and large farmers daily feed 2.86, 4.71, 5.06 and 5.66 kg concentrate respectively, the present observation are very low as compared with these findings.

Table 4: Mean concentrate offered to various dairy animals by group of dairy farmers

Types of Farmers	Mean daily concentrate offered kg/animal		
	Buffalo	crossbred	Indigenous/local
Landless	1.500	2.000	0.846
Marginal/small	1.340	2.220	1.018
Medium	2.350	3.700	1.410
Large	2.380	3.120	1.660

Concentrates for crossbred animals could get from 2.00 to 3.12 kg daily irrespective of their production performance. The crossbreds also were preferred and fed more concentrate than buffaloes by every farmer. This may conclude that farmers give little more importance in managing cross bred cows. Kumar *et al.* (2005) [5] reported that the intake of concentrate mixture ranged from 1.80 to 2.40 kg in crossbred which was low than present result nevertheless indigenous cows due to their low milk yield performances have been neglected. Concentrate offered to indigenous cow varied from 0.846 to 1.660 kg/ day. Table 4 reveals that large farmers did offer highest amount of concentrates to all categories of animals.

Feeding preserved roughages

About feeding preserved roughages it was observed that by personal observation the 200 dairy farmers, not a single dairy farmer was aware about the method of preservation of roughages either into silage or hay. In the survey it was seen that the major problem in preservation of such roughages were lack of sufficient surplus green fodder and method of demonstration of preparation of either silage or hay.

Adoption of management practices

About management practices it was seen that various management practices were adopted for increasing the milk production by the dairy farmers such as adopting recommended feeding practices, enrich low quality fodder, supplements, use of stimulants for increasing milk production and veterinary aids etc. The present study was conducted to know the extent of adoption of these management practices by dairy farmers.

The dairy farmers in the survey area are not adopting any recommended feeding practices by taking into consideration the milk yield of animals, its body weight and proper use of available feeds for economic returns.

In survey area not a single dairy farmers fed mineral and vitamin in proper proportion to their animals. Mineral imbalance is of common occurrence in livestock throughout the continent affecting in a number of way (Garget *et al.* 1999) [3]. However common salt is the only mineral used largely in the survey area. It is dissolved in water and sprayed on dry fodder and fed to dairy animals. This method of feeding mineral is also not done regularly and as per requirements. From the data, it was shows that 60 percent of farmers fed common salt to their animals. Dhimani *et al.* (1990) [2] also find similar result.

About the use of a stimulant for increasing the milk production, it was informed that no dairy farmer use any such stimulant as hormonal preparation to increase the milk production of their animals.

Urea feeding is also unknown to animal owners however 128

out of 200 dairy farmers use of jaggary to their animals but just after the calving and not fed continuously during the lactation period.

Quantity of stored fodder largely depends on their land holding. Dairy farmers store the dry fodder either in open air or under shed. From the data, it was seen that on an average, a holding. Farmers' stores 600-750 bundles (about 1800-2250kg) dry fodder. The period of storage depends on the number of animals owned by each farmer. The farmer stores such fodder till next season. Maximum farmers (80percent) store the dry fodder in open air in their fields while few owners store it under the shed near the cattle shed.

Provision of health care to the dairy animals in the survey area was very less and in only 2 out of 10 villages the veterinary dispensary units are available. Irrespective of the distance the farmer in difficult has to take his animal to the nearest veterinary units for treatment. The A.I. facilities are not with either of units.

Conclusion

1. In the study it is found that the quantity of feed fed is based on land holding. Landless farmers offered less feed as compared to large farmers. It is also revealed that farmers offered feed to animals without any scientific standard of feeding.
2. Due to lack of knowledge about new livestock management practices, breeding practices, housing pattern farmers do not get profit in gross income of family.
3. Availability of grazing land helps to landless, marginal/small, medium and large farmer to decrease expensive stall feeding.
4. Growing of green forage in own land also helpful for maintaining feeding the roughages and dry fodder for increase milk production.
5. Lack of commercial approach towards livestock rearing avoids harvesting maximum milk potential.
6. Non-adoption of recommended feeding and management practices shows greater impact on milk production.
7. Urea treatment and silage preparation is done by very less number of farmer populations.

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