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Studies on Adoption of Feeding Management Practices in District Kanpur Dehat (U.P.)

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A B S T R A C T

The present study was carried out on feeding management practices on dairy animals, reared by 200 farmers' viz: villages of the Maitha, Akbarpur, Derapur and Rasulabad blocks of Kanpur Dehat district. This is presented in central plane zone of Uttar Pradesh state. The result of the study revealed that among the total 1175 dairy animals maintained by the 200 dairy farmer maximum 57.10 per cent were buffaloes and 42.90 per cent were cattle. Regarding feeding management practices in district there was 71.00 per cent of farmers grown the fodder crops. 77.50 per cent of farmer followed the stall feeding for animals and 85.00 per cent of farmers tried individual type of feeding for dairy animals. 55.50 per cent of farmers practicing of concentrate mixture feeding to their animals on before milking. More than half farmers were fed the pattern of feeding as (GF+DF+Concentrate) for the animals. While 33.00 per cent practiced as (DF+Conc+Salt). 83.50 per cent of farmers fed as chopped the green or dry fodder and, less than half 39.00 per cent of respondents did not adopted any measure for extra feeding their animals, and 35.00 per cent farmers fed the extra feed and fodder to their cattle and buffaloes when assured to as she pregnant, 15.00 per cent fed as when two month before of pregnant animals, and only 10.00 per cent of farmers fed as extra feed and fodder to their animals as one month before of pregnancy. 83.00 per cent of farmers were fed the concentrate mixture to their animals after the milking, 57.50 per cent of respondents provide drinking water as require well as ad.lib.

Introduction

Dairy management practices are an art of maintaining a balance between public demands for milk, and for family consumption and generating income. The constant increase in per capita income and increase in human population is increasing rapidly in the demand for animal food products. Demand for animal food products is income elastic and their income requirements in low income households increase as their household

increases. However, due to urbanization, demand for milk products will also remain. In addition, world trade in livestock products is also increasing rapidly, increasing the opportunities for export. Livestock production is faster than the crop production and is likely to continue its pace. Demand-based development in livestock production enables millions of poor to escape the trap of poverty, as the distribution of livestock is more equitable than land. The villagers have sufficient labor of low cost and are able to produce at low cost. The growing livestock sector also contributes significantly towards women empowerment. Market opportunities due to the anticipated increase in demand for livestock products provide an avenue for resource-poor farmers to increase production, improve their livelihoods, reduce malnutrition and, thus, contribute to the goal of overall poverty alleviation. However, cattle rearing have been provided with an enabling animal husbandry environment in which economic weaker people have also benefited from this opportunity. Animal feeding management helps animals prepare balanced diet. Proper feeding practices with the creation of ration, proper amount of nutritional content is taken care of in the diet for dairy animals, which can increase the productivity of dairy animals and it is dependent on the availability of feed and fodder. A balanced ration supplies vital nutrients to the animal during the critical time of their production cycle. In India, ruminant animals usually rely on straw and straw for their maintenance. The production requirement is often met with protein supplements such as peanut cake, mustard cake, or cottonseed cake, and a very small amount of mixtures that affect agricultural economics. Therefore rations should be cheap and nutritious (Mishra *et al.,* 2018). Generally the dairy farmers are grown fodder crops and cereals and pulses crops in their field to reducing of feed cost. The feeding system of dairy animals is important factor of dairy management because of it directly depend on health and productive and reproductive performance of dairy animals. In order to maintain fodder resources, apart from pasture, separate fodder crops have to be cultivated. There is a tremendous pressure of production, as the land available for fodder production is decreasing. In Wanapat (2009), the country currently has a net loss of 35.6 percent of green fodder with 10.95 percent of dry crop residues and 44 percent of concentrated content (IGFRI) Vision 2050.

Materials and Methods

The adoption of feeding management by the dairy farmers in district there was the feeding is the practice of providing diet to the dairy animals in the aspect of quantity and quality of feed and fodder as a balanced diet or need according to productive performance. Therefore to collecting information about the feeding practices viz: type of feeding (individual/group), type of feed and fodder (green, dry, chaffed and un-chaffed), time of concentrate feeding (during lactation and maintenance) and also grazing practices followed by dairy farmers etc.

Respondent's selection and Investigation

There were the 200 of dairy farmers selected for the investigation. After the selection of dairy farmers The operation of interview schedule conducting for the collection of information by dairy owner the questionnaire for research investigation covering the feeding management related parameters as scheduled in the questionnaire represent in their own speech ensuring that they have perceived the questions correctly so as to avoidance any explanation variation of questions marking in the questionnaire. All the answer regarding feeding management recorded in questionnaire and one interview of one farmer at a time. During interviewing of farmers there are

keeping alive interest of farmer. The time spend during interview twenty to thirty minutes each farmers, the administrator schedule for each depending on efficiency of respondents to reply the answer each question and posted them. On the occasion when farmers unable to responding difficult question, it was postponed till the ending of interview.

Provision of feeding

In the study area there was the dairy farmer adopted the provision of feeding of feed and fodder as depended on the body weight of the animals so therefore the farmers adopted the feeding as when he wants the production and performance which varies time to time and requirement of feed & fodder of the respondents. The cultivation of fodder crops by farmers is the arrangement of provision of feeding for the animals regarding the adoption of feeding management as like stall feeding and grazing for animals, as the concept of type of feeding for dairy animals like group and individual feeding. Farmers practicing of concentrate mixture feeding to their animals on before milking. The farmers were fed the pattern of feeding as (GF+DF+Concentrate) for the animals. Some of farmers practiced as feeding of (DF+Conc+Salt). The feeding of chopped un-chopped the green and dry fodder to the animals. And the Practice of feeding the self made and readymade concentrates mixture for dairy animals. The feeding of type concentrate mixture like soaked in water or dry form for the dairy animals.

The addition of common salt and mineral mixture in the feed to fed of animals. The need of the extra feed and fodder to fed their cattle and buffaloes when assured to as she pregnant. The farmers were fed concentrate mixture to their animals as concept of as per liter production of milk. The respondents provided ad.lib. as well as watering.

Results and Discussion

The proposal regarding feeding management in the sense of result and discussion it described as based on the feeding management in the study area. The feeding practices governs overall productive and reproductive performance of the animal. The low grade feeding practices causes the degradation of health and reproductive performance. The malnutrition activities inside body originated from the deficiency of nutritive elements in the feed and fodder so the proper feeding practices having very important contribution in animal husbandry.

Method of feeding

The feeding approach was a significant association between method of feeding practices and selected blocks. Overall highest 77.50 per cent of respondents followed the stall feeding method to their animals which was followed by 22.50 per cent practiced to grazing of their cattle. The maximum from 92.00 per cent from Maitha block and least from Akbarpur block 68.00 per cent adopted the stall feeding, maximum farmers from Akbarpur 32.00 per cent and least from Maitha block 8.00 per cent also followed the grazing of their animals. Findings were supported to the study Sabapara *et al.,* (2016), kumar *et al.,* (2017b), chaudhary *et al.,* (2018), Singh *et al.,* (2018), Gaikwad *et al.,* (2019), Kumar *et al.,* (2019a), Lakew *et al.,* (2019), Singh *et al.,* (2019), Kumar *et al.,* (2020).

Type of feeding

The type of feeding was a significant association between type of feeding and selected blocks ($\chi 2=12.078$). Overall highest 85.00 per cent of respondents followed the individual type of feeding to their animals which was followed by 15.00 per cent

practiced to group feeding of their cattle. The maximum from 100.00 per cent from Derapur block and least from Akbarpur block 78.00 per cent adopted the individual type of feeding, maximum farmers from Akbarpur 22.00 per cent and least from Maitha block 18.00 per cent also followed the group feeding of their animals. These study well contradicted by Manohar *et al.,* (2013), Yadav *et al.,* (2019), and this study was supported by Dar *et al.,* (2016), Dhailwal and dhillon (2017).

Formulation of feed and fodder

There was a non significant association between time of feed and fodder formulation in the selected blocks ($\chi 2$=4.248). Overall highest 55.00 per cent of respondents followed the in (GF+DF+Concentrate) fed their animals which was followed by 33.00 per cent practiced (DF+Conc+Salt) and minerals fed to their cattle and buffaloes, 12.00 per cent fed only GF+DF. The maximum from 60.00 per cent from Derapur block and least from Rasulabad block 48.00 per cent fed GF+DF+conc. To their animals, the maximum farmers from Rasulabad 42.00 per cent and least from Derapur block 24.00 per cent also fed of their animals DF+Conc+salt and minerals, and 16.00 per cent from derapur block and 10-10 per cent from Maitha and Rasulabad farmers fed only GF+DF to their animals. These findings were suggested by Dar *et al.,* (2016), Malssawmdawngliana and Rahman (2016), Sabapara *et al.,* (2016), Sekhar *et al.,* (2017), Yadav *et al.,* (2019), Roy *et al.,* (2020b).

Type of fodder

There was a non significant association between type of feed and fodder in the selected blocks ($\chi 2$=6.355). Overall highest 31.00 per cent of respondents followed the in (WS+Bajra,Karbi+Paddy) fed their animals which was followed by 30.00 per cent practiced (WS+PS+Maize) fed to their cattle and buffaloes, 25.00 per cent fed only WS+Maize and overall only 14.00 percent try to fed to their animals (WS+Maize+Grasses). The maximum from 36.00 per cent from Akbarpur block and least from Derapur block 22.00 per cent fed WS+Bajra/Karbi+Paddy to their animals, the maximum farmers from Akbarpur 32.00 per cent and least from Rasulabad block 22.00 per cent also fed of their animals WS+PS+Maize, and maximum from 28.00, 28.00 per cent from derapur block and Rasulabad block and least from Akbarpur 18.00 per cent farmers fed their animals only WS+Maize, and maximum from Rasulabad block 18.00 per cent and least from Maitha and Derapur block only 12.00 per cent of farmers fed only WS+Maize+Grasses to their animals. These findings were supported by Godhara *et al.,* (2018a), Singh *et al.,* (2018), Roy *et al.,* (2020b).

Extra feeding for pregnant cow/buffaloes

There was a significant association between type of feed and fodder in the selected blocks ($\chi 2$=10.295). Overall highest 39.00 per cent of respondents followed no measure for feeding their animals which was followed by 35.00 per cent fed to their cattle and buffaloes when assured to pregnant, 15.00 per cent fed two month before of pregnant fed of their animals and only 10.00 per cent of farmers fed their animals one month before of pregnancy.

The maximum from 50.00 per cent from Akbarpur block and least from Derapur block 34.00 per cent farmers adopted no measure of feeding to their animals, the maximum farmers from Akbarpur 38.00 per cent and least from Rasulabad block 32.00 per cent also fed of their animals as assured to pregnant, and maximum from 18.00 per cent from Rasulabad block and least from Akbarpur 12.00 per cent farmers fed their animals one month before of pregnancy.

Table.1 Adoption of feeding management practices in district

SI.No	Particular	Unit	Blocks N= 200					
			Maitha	Akbarpur	Derapur	Rasulabad	Total	χ2 Value
1. Method of eeding								
a.	Stall feeding	%	(92.00) 46	(68.00) 34	(78.00) 39	(72.00) 36	(77.50) 155	9.49*
b.	Grazing	%	(8.00) 4	(32.00) 16	(22.00) 11	(28) 14	(22.50) 45	
2. Type of feeding								
a.	Group	%	(18.00) 9	(22.00) 11	(0.00) 0	(20.00)10	(15.00)30	12.10**
b.	Individual	%	(82.00) 41	(78.00) 39	(100.0) 50	(80.00) 40	(85.00)170	
3. Formulation of feed and fodder (GF Green Fodder, DF Dry fodder, Concentrate,)								
a.	GF+DF+Conc.	%	(58.00)29	(54.00)27	(60.00)30	(48.00)24	(55.00) 110	4.25
b.	GF+DF	%	(10.00) 5	(12.00) 6	(16.00) 8	(10.00) 5	(12.00) 24	
c.	DF+Conc.+Salt minerals	%	(32.00) 16	(34.00) 17	(24.00) 12	(42.00) 21	(33.00) 66	
4. Type of fodder								
a.	WS+PS + maize	%	(28.00)14	(32.00)16	(38.00) 19	(22.00)11	(30.00) 60	6.35
b.	WS+Bajra karbi+paddy	%	(34.00) 17	(36.00) 18	(22.00) 11	(32.00) 16	(31.00) 62	
c.	WS + maize	%	(26.00) 13	(18.00) 9	(28.00) 14	(28.00) 14	(25.00) 50	
d.	WS+M+grasses	%	(12.00) 6	(14.00) 7	(12.00) 6	(18.00) 9	(14.00) 28	
5. Extra feeding for Pregnant cow/buffalo								
a.	Two month Before	%	(16.00) 8	(12.00) 6	(14.00) 7	(18.00) 9	(15.00) 30	10.29
b.	One month before	%	(14.00) 7	(0.00) 0	(16.00) 8	(12.00) 6	(10.50) 21	
c.	Assured pregnant	%	(34.00) 17	(38.00) 19	(36.00) 18	(32.00) 16	(35.00) 70	
d.	No measure	%	(36.00) 18	(50.00) 25	(34.00) 17	(38.00) 19	(39.50) 79	
6. Time of concentration feeding to lactating cow/buffalo								
a.	After milking	%	(84.00) 42	(74.00) 37	(88.00) 44	(86.00) 43	(83.00)166	4.11
b.	At milking time mixed in fodder	%	(16.00) 8	(26.00) 13	(12.00) 6	(14.00) 7	(17.00) 34	
7. Drinking water frequency								
a.	Three time	%	(22.00) 11	(26.00)13	(18.00) 9	(32.00)16	(24.50) 49	8.43
b.	Two time	%	(12.00) 6	(18.00) 9	(16.00) 8	(26.00) 13	(18.00) 36	
c.	Ad.lib.	%	(66.00) 33	(56.00) 28	(66.00) 33	(42.00) 21	(57.50) 115	

Figure in parenthesis indicate frequency and *significant (P<0.05), **significant (P<0.01)

These findings were supported by Atkare *et al.,* (2016), Sabapara *et al.,* (2016), Khadda *et al.,* (2017), Reddy *et al.,* (2017), Gaikwad *et al.,* (2019a).

Time of concentrate fed to lactating cow and buffalo

There was a non significant association between mode of concentrate feeding and selected blocks ($\chi 2$=4.111). Overall highest 83.00 per cent of respondents fed concentrate to their animals after milking, which was followed by 17.00 per cent farmers were fed the concentrate their animals at milking time. The maximum from 88.00 per cent from Derapur block and least from Akbarpur block 74.00 per cent farmers fed their animals after milking, maximum farmers from Akbarpur 26.00 per cent and least from Rasulabad block 14.00 per cent farmers fed their animals at milking time. These study was supported by Jadav et. al. (2014), Malsawmdawngliana and Rahman (2016), Benidir *et al.,* (2016), Godhara *et al.,* (2018a) Muruz and Seluck (2019).

Frequency of watering

There was a non significant association between drinking water frequency and selected blocks ($\chi 2$=8.432). Overall highest 57.50 per cent of respondents provide drinking water ad.lib to their animals, which were followed by 24.50 per cent provided drinking water three times to their cattle and buffaloes, 18.00 per cent farmers provided two times drinking water to their animals. The maximum from 66.00 per cent from Derapur and Maitha block and least from Rasulabad block 42.00 per cent provided drinking water as ad.lib. to their animals, the maximum farmers from Rasulabad 32.00 per cent and least from Derapur block 18.00 per cent farmers provided the three times of drinking water their animals, and 26.00 per cent from Rasulabad block and 12.00 per cent from Maitha block farmers provided drinking water two times of their animals. These findings were supported by Roy *et al.,* (2020b).

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