

**RESEARCH ARTICLE :**

# Feeding practices adopted for cattle in sugarcane pockets of Nanded district

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**SUMMARY :** The present investigation entitled “Feeding practices adopted for cattle in sugarcane pockets of Nanded district” was undertaken to study the different package of practices followed for indigenous and crossbred cattle. Twenty villages of sugarcane pockets of Nanded district were selected with the objective to study feeding practices of cattle. The data was collected from the 200 respondents in four sugarcane pockets. The study revealed that the indigenous cattle is mostly used for the draft purpose. The population of females are more than that of male one. Green fodder is mostly available in *Kharif* and *Rabi* season. It is also available in summer, where there is ample quality water is available, as most of the area in Jai shiv shankar co- operative sugarcane pockets was dry land. Grazing + stall feeding was adopted as method of feeding by majority of the respondents. There was very few farmers who adopted urea treatment and silage preparation. Inadequate availability of green fodder, high cost of fodder and inadequacy of own grazing land are some feeding constraints.

**KEY WORDS :**

Cattle, Feeding practices, Sugarcane pockets

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## BACKGROUND AND OBJECTIVES

The livestock farming is mainly owned by small marginal farmers including landless labours which constitutes more than 45 per cent of the population. These farmers follow traditional methods of cattle rearing system based on socio-economic condition and availability of home grown feed resources.

The dairy farming based on four pillars, viz., innovating breeding, appropriate feeding, excellent management and well supervised health care practices. These four factors greatly associated with milk marketing,

infrastructure and education aspect of the dairy farmer.

The farm by products like jowar, maize, bajra kadbi and cereals, pulses, straw are efficiently utilized and converted into useful material like milk, meat, and manure. Milk production can be improved by when adopting improved feeding and management practices and also cross breeding of Indian milch cows with exotic males. Animal nutrition experts have indicated that the milk production could be increased by 50 per cent through balanced feeding and scientific management. For improving such status government should

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<b>Table A : The selection of villages from sugarcane pocket area of Nanded district</b>			
Sugarcane industry	Block	Name of village	Number of cases investigated
Bhaurao Chavan Co- operative Unit –I Yelgaon Tq- Ardhapur, Dist.- Nanded	B <sub>1</sub> (Ardhapur)	Degaon ( B)	10
		Yelgaon	10
		Barasgaon	10
		Yemsetwadi	10
		Pardi	10
Bhaurao Chavan Co- operative Unit –II Harsani, Tq- Hadgaon, Dist.- Nanded	B <sub>2</sub> (Hadgaon)	Kankaewadi	10
		Sibdara	10
		Bamni	10
		Baradshevala	10
		Palsa	10
Bhaurao Chavan Co- operative Unit –III Wagalwada, Tq- Umri, Dist.- Nanded	B <sub>3</sub> (Umri)	Bijegaon	10
		Hassa	10
		Singanapur	10
		Karegaon	10
		Wagalwada	10
Jai Shiv Shankar Co-operatives, Barhalli, Tq- Mukhed, Dist.- Nanded	B <sub>4</sub> (Mukhed)	Hiperga ( B)	10
		Savargaon (P)	10
		Ladga	10
		Savargaon Wadi	10
		Shirur	10

implement different schemes and programmes like supply of crossbred cattle, A.I. technique and providing superior varieties of fodder crops. Farmers are also becomes aware about different practices *i.e.* supplying minerals, starter ration and concentrates.

In order to study the various aspects of problem of dairy cattle farming, feeding practices followed by dairy farmers, the present investigation entitled “Feeding Practices Adopted for Cattle in Sugarcane Pockets of Nanded District” is an effort in that direction.

## RESOURCES AND METHODS

The Methodology adopted in this project as the data on cattles generated on farmers field were collected from different dairy farmers, especially who are rearing the cattle in Nanded district of Maharashtra state.

### Collection of data :

The data obtained for the study was collected by multistage random sampling technique from the four sugarcane industrial pockets *viz.*, Ardhapur, Hadgaon, Umri and Mukhed from Nanded District. Random selection of twenty villages was made from four selected

sugarcane industrial pockets.

Ten numbers of cultivator farmers were randomly selected from each village. Thus, the total sample size comprised of 200 farmers. The system of grazing, availability of grazing land in village and also availability of farmers having own grazing land, type of fodder, quantity fed to animals, means of availability (*i.e.* whether, home grown or purchased), fed as such or chopped, whether fed alone or with concentrates, type and quality of concentrate, adopting feeding of mineral mixture and adopting new feeding practices or not has been studied

### Analysis of data :

The data collected were 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 percentages were estimated (Panse and Sukhatme, 1967).

## OBSERVATIONS AND ANALYSIS

The results obtained from the present study as well as discussions have been summarized under following heads:

**Feeding practices :**

It is important or urgent need to emphasis the importance of feed and fodder for milk production. Apart from the genetic capabilities of the animals, the milk production in cattle goes in response with nature and the quantities of the feeds and fodder allowed to them. So that it is essential to evaluate the present status of feeding practices adopted by the farmer on their own farm.

Information regarding the feeding practices adopted in different categories of farmer is presented in Table 1

It is observed from Table 1 that, the maximum number of farmers in all categories including landless used grazing + stall feeding (71.50%) and remaining categories of respondents used stall feeding (28.50%). Supply of fodder was adequate in large farmers (91.42 %), small farmers (86.66%), landless (87.50%) and marginal farmers (82.05 %). Green fodder produced on own farm was noticed more in case of large farmers (100%), marginal farmers (82.74%) and small farmers (84.00%) than the landless. It is also observed that 63.50 per cent of respondents were used as well for source of water, while 22.00 per cent were used river and 14.50 per cent used lake water as a source of water for livestock. Also urea treatment and silage preparation is more predominant in large farmers (*i.e.* 31.42% and 7.14%, respectively) than other categories of farmers. Overall, 23.50 per cent respondents were adopting urea

treatment and 6.50 per cent respondents makes silage. Fodder is principally grown in *Kharif* and *Rabi* season on rainwater, while it is grown in summer season, where ample quality of water is available. These present findings were supported by Rathore *et al.* (2010)

**Feeds and fodder :**

Fodder consists of stalk of Jowar, bajra, maize and sugarcane tops that are tied in bundles, husk of pulses, leaves and stalks of pulse crops, groundnut straw and wheat straw etc. At many places jowar is grown principally for fodder wherever irrigation facilities are available. In addition to all these above mentioned, cakes of groundnut and cotton seed are also utilized as a feed for livestock.

Information about different feeds and fodder used by dairy farmers to his animal are given in Table 2.

It is observed from Table 2 that the feeding of green fodder + dry fodder by marginal, small, large and landless to the extent of 15.38, 25.33, 22.85 and 25.00 per cent, respectively. Green + dry + concentrate + mineral mixture was not given to animal by all categories of respondents. Green + dry + concentrate was given as 84.61, 74.67, 77.15 and 75.00 per cent by marginal, small, large farmers and landless labourers, respectively. Storage of fodder was practiced by 84.00, 87.17, 87.50 and 100 per cent by small, marginal, landless and large farmers,

**Table 1 : Feeding practices adopted in different categories of farmers****(n = 200)**

Sr. No	Component	Marginal farmers	Small farmers	Large farmers	Landless labourers	Per cent
1.	Feeding systems					
	Grazing					
	Stall feeding	5 (12.82)	22 (29.33)	28 (40.00)	2 (12.50)	28.50
	Grazing + stall feeding	34 (87.17)	53 (70.66)	42 (60.00)	14 (87.50)	71.50
2.	Supply of fodder					
	Adequate	32 (82.05)	65 (86.66)	64 (91.42)	14 (87.50)	87.00
	Inadequate	7 (17.94)	10 (13.34)	6 (8.57)	2 (12.50)	13.00
3.	Source of green roughages					
	Produced on own farm	35 (89.74)	63 (84.00)	70 (100)	-	84.00
	Purchased	-	-	-	16 (100)	8.0
	Both	4 (10.25)	12 (16.00)	-	-	8.00
4.	Source of water					
	Well	29 (74.35)	52 (69.33)	46 (65.71)	-	63.50
	River	6 (15.38)	13 (17.33)	15 (21.42)	10 (62.50)	22.00
	Lake	4 (10.25)	10 (13.34)	9 (12.85)	6 (37.50)	14.50
5.	Urea treatment	7 (17.94)	18 (24.00)	22 (31.42)	-	23.50
6.	Silage preparation	1 (25.64)	7 (9.33)	5 (7.14)	-	6.50

Figures in parenthesis shows percentage of respective farmers

respectively. Regarding method of feeding concentrate to animal, it was noticed from Table 2 that, majority of the respondents fed raw concentrate to their animals without soaking in water. Preparation of feeds as soaked and dry (raw) was practiced by marginal, small, large farmers and landless labourers as 7.69, 18.66, 15.71, 18.75 and 92.31, 81.34, 84.29, 81.25 per cent, respectively to their animals at the time of milking. Also no one can give concentrate feed material to the bull. It is also noticed that 6.0 per cent respondents gave additional ration to their pregnant animals.

These findings are supported by the previous findings of Kumar (1994).

### Constraints faced by cattle owners :

From Table 3 it is observed that the majority of problem faced by farmers was inadequate availability of the green fodder (58.50%). This was more in case of landless followed by, small farmer, marginal farmers and large farmers. Another major problem encountered by respondents was lack of credit facilities for purchasing good quality cattles. The 64.00 per cent of respondents

faced the problem of effect of high prices of fodder on its supply. While 51.00 per cent respondents faced problem of inadequacy of grazing land. Whereas 59.00 per cent of respondents were not known the knowledge regarding the making of silage and urea treatment to dry fodder use of mineral mixture and antibiotics in feed *i.e.* 49.50 per cent.

### Conclusion :

It was concluded that farmers were feeding roughages and concentrates on an average 15-20 kg green roughages in the form of jowar, maize and sugarcane tops was given and 3-5 kg of dry roughages in the form of kadbi and pulse straw were made available to individual livestock. In addition to these feeding practices farmers were also allowing their livestock for grazing in the field and barren land throughout the day.

The concentrates were given in the form of cotton seed cake and no balanced diet was offered. The milk production was not taken into account, while offering roughages and concentrates. The majority of indigenous and crossbred cows were producing 2-3 and 5-6 liter of

Sr. No.	Component	Marginal farmers	Small farmers	Large farmers	Landless labourers	Per cent
1.	Green fodder + dry fodder	6 (15.38)	19 (25.33)	16 (22.85)	4 (25.00)	22.50
2.	Green + Dry + concentrate + Mineral mixture	-	-	-	-	-
3.	Green fodder + Dry + concentrate	33 (84.61)	56 (74.67)	54 (77.15)	12 (75.00)	77.50
4.	Storage of fodder	34 (87.17)	63 (84.00)	70 (100)	14 (87.50)	90.50
	No storage of fodder	5 (12.83)	12 (16.00)	--	2 (12.50)	9.50
5.	Method of providing concentrates					
	Wet	3 (7.69)	14 (18.66)	11 (15.71)	3 (18.75)	15.50
	Dry	36 (92.31)	61 (81.34)	59 (84.29)	13 (81.25)	84.50
6.	Provision of concentrate feed					
	With roughages	-	-	-	-	-
	Separately	39 (100)	75 (100)	70 (100)	16 (100)	100
7.	Additional ration for pregnant animal	4 (10.25)	6 (8.00)	2 (2.85)	-	6.00

Figures in parenthesis shows percentage of respective farmers

Sr. No.	Constraints	Marginal farmers	Small farmers	Large farmers	Landless labourers	Per cent
<b>Feeding constraints</b>						
1.	Inadequate availability of green fodder	28 (71.79)	49 (65.33)	24 (34.28)	16 (100)	58.50
2.	Effect of high cost of fodder on its supply	31 (79.48)	54 (72.00)	27 (38.57)	16 (100)	64.00
3.	Use of silage and urea treatment to dry fodder	29 (74.35)	49 (65.33)	24 (34.28)	16 (100)	59.00
4.	Inadequacy of own grazing land	31 (79.48)	48 (64.00)	7 (10.00)	16 (100)	51.00
5.	Use of antibiotics and mineral mixture in feed	23 (58.97)	37 (49.33)	27 (38.57)	12 (75.00)	49.50

Figures in parenthesis shows percentage of respective farmers

milk per day. As the fodder cultivation based on the availability of the water, most of farmers cultivate fodder in the season of *Kharif* and *Rabi*. If the irrigation facilities are available then fodder are also grown in summer season. Most of the area in Jai Shiv Shankar Co-operative sugar industry Barhali is under rainfed. So that farmers are allowing their animals for grazing in day time and allowed to stall feed at night time. In feeding practices, all farmers including landless labourers used grazing + stall feeding (71.50%). Cultivated green fodder was more in large farmers (100%) and marginal farmers (89.74%) than small farmers (84.00%). However, urea treatment and silage preparation were followed by very less number of the respondents. The constraints faced by farmers in milk production were inadequate availability of green fodder (58.50%), high cost of the fodder and concentrates. Grazing + stall feeding (71.50%) was adopted by majority of farmers whereas, stall feeding (28.50%) adopted by rest of the farmers to their cattle. The majority of farmers (87.00%) offered fodder adequate whereas, (13.00%) farmers offered inadequate fodder to their cattle. Green + dry fodder + concentrates (77.50%) was practiced by

most of the farmers. Hence it may be concluded that there is need to demonstrate scientific feeding practices replacing costly feed ingredients with locally available cheapest feed for feeding the indigenous and crossbred cattle for exploiting optimum milk production.

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