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Nutritional Status of Buffaloes in Banaskantha District of North Gujarat

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Abstract

A survey was undertaken to study the feeding practices and nutritional status of buffaloes in five talukas of Banaskantha district of North Gujarat. It was observed that most of dairy animals were stall-fed and provided dry and green fodder with various combinations of concentrate mixtures. The daily milk production and 6% FCM of buffaloes were 8.42 kg and 15.09 kg, respectively. The average DM, DCP and TDN Intake (kg/day) of the buffaloes in Banaskantha district were 12.74, 0.93 and 6.78, respectively.

Keywords: Buffaloes; DCP; TDN; FCM.

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Introduction

Adequate supply of feeds and fodders is a critical factor affecting performance of animals. Availability of green fodder, dry fodder and homemade concentrate/compound feed in an area largely determine the conventional feeding practices followed by the farmers. Buffaloes with high milk yielding potential produce milk up to their inherited capacity It is necessary to provide adequate and balanced nutrition in order that they can express their full potential.[1]

Materials and Methods

A survey of Banaskantha district of North Gujarat was conducted in five talukas viz. Dantiwada, Palanpur, Amirgadh, Deesa and Dhanera. Multistage random sampling technique was used to select the respondents. Two villages were selected in each taluka, which were geographically located apart in the direction and truly represented the animal husbandry practices of the taluka. In each village, 10 farmers who own animal/s producing at least 10 kg or more milk per day were selected. The selected farmers were interviewed on the basis of questionnaire developed. Information regarding type of feed offered, daily intake of individual animal, milk yield and its fat % were collected from all the respondents.

The record of intake of feeds and fodder were taken and on the basis of nutritive value given by Sen *et al.* , Ranjhan and ICAR the DM, DCP and TDN intake of buffaloes were calculated.[2-4] The samples of feeds and fodder were analyzed for proximate constituents by the methods of AOAC.[5] The data were subjected to statistical analysis using methods of Snedecor and Cochran .[6]

Results and Discussion

Most of the owners selected keep their animals stall-fed either at home or at farm within a limited area. They store dry fodder like straws of Bajri, Wheat, Jowar and Groundnut haulms. Most of them grow green fodders like Jowar, 'Rajaka-Bajari (multicut), Chicory leaves, Hybrid Napier, Lucerne and local mixed grasses. It was found that the dairy animals were fed roughages three times and concentrates offered twice a day at the time of milking. Among concentrate they fed Banasdan (compound cattle concentrate), maize grain, bajri grain, cottonseed cake etc. Similar

Table 1: Average Estimated Levels of Nutrients Supplied to Buffaloes in Comparison to their Calculated Requirements

Taluka	Village	MY (kg)	6% FCM	DM Intake	C:R Ratio		Available Nutrients (kg)		Require Nutrients (kg)		Nutrient Intake (%of Requirement)	
							DCP	TDN	DCP	TDN	DCP	TDN
Dantiwada	Odhva	6.75	14.10	10.46	35.73	64.27	0.906	7.52	1.000	8.15	90.60	92.26
	Nilpur	9.90	15.35	12.43	34.20	65.80	1.104	9.12	1.071	8.66	103.08	105.31
	Average	8.32	14.72	11.44	34.96	65.04	1.005	7.32	1.035	8.40	96.84	98.78
Palanpur	Jagana	5.79	13.67	11.82	34.54	65.46	1.176	8.18	0.976	7.97	120.49	102.63
	Kushkal	3.80	7.53	9.49	34.32	65.68	1.106	8.76	0.626	5.45	176.67	160.73
	Average	4.79	10.60	10.65	34.43	65.57	1.141	8.47	0.801	6.71	148.58	131.68
Amirgadh	Ikbalgadh	11.02	17.41	12.36	35.51	64.49	0.715	4.61	1.189	9.51	60.13	48.47
	Dabhela	9.00	16.50	14.23	33.60	66.40	1.039	8.28	1.137	9.14	91.38	90.59
	Average	10.01	16.95	13.29	34.56	65.45	0.877	6.44	1.163	9.32	75.75	69.53
Deesa	Zerada	10.77	17.11	14.99	35.05	64.95	0.728	5.11	1.172	9.39	62.11	54.41
	Vasada	10.73	16.03	12.65	36.32	63.68	0.768	5.20	1.110	8.94	69.18	58.16
	Average	10.75	16.57	13.82	35.69	63.32	0.748	5.15	1.141	9.16	65.64	52.28
Dhanera	Bhatib	8.29	16.52	15.14	34.21	65.79	0.861	5.86	1.138	9.06	75.65	64.67
	Saral	8.21	16.77	13.93	36.46	63.54	0.991	7.27	1.152	9.25	86.02	78.59
	Average	8.25	16.64	14.53	35.34	64.67	0.926	6.56	1.145	9.15	80.83	71.63
Average		**8.42**	**15.09**	**12.74**	**35.19**	**64.81**	**0.939**	**6.78**	**1.057**	**8.54**	**93.52**	**82.47**

Table 2: Percentage of Buffaloes Underfed, Moderately Underfed, Adequately Fed, Moderately Overfed and Overfed Out of those Surveyed

Taluka	DCP					TDN				
	U	MU	A	MO	O	U	MU	A	MO	O
Dantiwada	69.16	13.07	13.42	4.35	0	82.21	0	17.79	0	0
Palanpur	12.50	12.50	27.50	35.00	12.50	40.00	7.50	27.50	2.50	22.50
Amirgadh	78.78	5.61	4.39	11.22	0	77.56	0	5.61	16.83	0
Deesa	83.02	6.51	6.98	3.49	0	86.51	3.49	0	10.00	0
Dhanera	80.01	0	4.26	11.47	4.26	87.21	4.26	0	8.53	0

U -underfed (< 90 % of requirement), MU- Moderately Underfed (> 90 < 100 % of requirement), A- Adequately fed (> 100 <11 % of requirement), MO- Moderately Overfed (> 110 <125 % of requirement), O- Overfed (> 125 % of requiremen

kind of feeding practices observed by Gami et al. (2012).

The quantity of concentrate fed (kg/day) to buffaloes in different talukas ranged between 5.05 to 7.09. The district average was 6.16 kg/day. The feeding of green fodders to buffaloes in different talukas ranged between 19.36 to 28.02 kg/day. The district average worked out as 24.67 kg/day. The dry roughage feeding ranged between 4.97 and 6.41 kg/day in buffaloes. The district average for dry roughages worked out as 5.56 kg/day. The average concentrate to roughage ratio in buffaloes of different talukas ranged between 34.43: 65.57 to 35.69: 63.32 with an average of 35.19: 64.81 (Table 1).

The average DM, DCP and TDN Intake (kg/day) of the buffaloes in Banaskantha district was 12.74, 0.93 and 6.78, respectively. The DM, DCP and TDN Intake of buffaloes in different talukas did not differ significantly. However, the same differed significantly (P<0.05) between villages. Present findings are in accordance with Lal *et al.*[7] On the basis of nutrients available to buffaloes were grouped in to various classes like underfed, moderately underfed, adequately fed, moderately overfed and overfed are summarized in table 2.

The daily milk production and 6% FCM of buffaloes were 8.42 kg and 15.09 kg, respectively. Daily milk production and 6% FCM of buffaloes in different talukas did not differ significantly. However, the same differed significantly (P<0.05) between villages.

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