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MANGEMENTAL PRACTICES ADOPTED BY BUFFALO MILK PRODUCERS IN KRISHNA DISTRICT OF ANDHRA PRADESH

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ABSTRACT

A field survey was conducted to know the existing feeding and housing management practices by buffalo farmers in rural, semi-urban and urban areas of Krishna district. It was found that only 1.6 % farmers practiced chaffing of fodder. Paddy straw was sole roughage to buffaloes. No farmer practiced silage making and urea treatment of paddy straw. 26, 42 and 68% farmers offered purchased concentrate feed, 80, 94 and 88 % offered concentrate in soaked form in rural, semi-urban and urban areas, respectively. Regarding housing practices 83, 67 and 56% farmers' maintained buffaloes in loose house: 38, 51 and 68% had pucca floor: 23, 36 and 60% had pucca drainage facilities in rural, semi-urban and urban areas. 20% farmers provided cooling devices like fan in urban areas of the district. High cost of pure bred buffaloes, hired labour, feed ingredients, lack of financial assistance for purchase of high milk producing buffaloes and equipment like chaffer cutter and lack of extension activities was the major problems.

Key worlds: Buffaloes, Feeding, Housing, Management Practices, Constraints.

Buffaloes form the backbone of Indian dairy industry and are rightly considered as the "bearer cheque" of rural folk. Being less than one third of total bovine population, contributes more than 50% of the total bovine milk production in the country . Feeding and housing are the two most important aspects of buffalo management and are directly responsible for the production performance of the buffaloes. To effectively popularize the concept of complete feeds or total mixed rations among farmers, it is necessary to know the existing feeding practices adopted by farmers. The identification of constraint can help to a larger extent in finding the solutions to their problem on priority basis. Hence, the present study was taken to assess the feeding and housing management practices and constraints perceived by buffalo farmers in the district.

MATERIALS AND METHODS

A multi stage stratified random sampling procedure was used for the selection of villages and wards in the district. Krishna district had four revenue divisions viz Machilipatnam, Gudiwada, Nuzvid and Vijayawada, and covers 937 villages (rural), 5 municipalities (semi-urban) and one municipal corporation (urban). For rural area study 20 villages were selected (from each revenue division 5 mandals and from each mandal one village were selected) and whereas from each municipality 5 wards were selected for semi-urban study. 10 wards were selected from Vijayawada Municipal Corporation for the study of urban area. From each village and ward 5 buffalo milk producers were selected randomly. A total of 250 buffalo milk producers were selected from rural

(100), semi-urban (100) and urban (50) area. The data were collected by using a pretested questionnaire through personal interview and the data analyzed by using statistical methods according to[19].

RESULTS AND DISCUSSION:

From the findings of Table 1, the green fodder production trend was almost similar in the rural (84%), semi-urban (79%) and urban (84%) area. However, more extent of area was allocated in the rural (1.98 acre) area than that in semi-urban and urban areas. It was nearer to the findings of [7, 14, 10]. Chaffing of green fodder was adopted by overall 1.60% of respondents in the study area. It was almost similar to the findings of [2, 7, 17]. However [23] reported that most of the farmers chaffed the fodder and fed the animals in groups in Punjab. It was found that paddy straw (100%) was the major source of dry fodder for feeding of buffaloes in the rural, semi-urban and urban areas of the study area.

Hay making was practiced by overall 10.8 % of the respondents particularly in the rural (23%) area of the study area. Silage making and urea treatment of paddy straw were not practiced by the respondents in rural, semi-urban and urban areas in the study area. It was in agreement with the observations [13, 18]. The lower rate of adoption of these practices in the study area might be due to lack of awareness about these practices among the farmers.

Grazing of buffaloes was practiced by overall 72.4% of the respondents in the study area. The higher rate of adoption of this practice in rural area was due to the availability of more grazing area than that in semi-urban and urban areas. It was in agreement with the observation[2]. It was found to be higher in the rural area (74%) than that in semi-urban (58%) and urban (32%) areas, whereas urban milk producers (68%) preferred to purchase the readymade concentrate mixture in the local market. It was mostly nearer to the observations of[2]. Supplementation of mineral mixture and common salt in the feed was practiced by overall 30.4 and 29.2 %, respectively. It was nearer to the observations[6]. According[2] majority of farmers provided mineral mixture in urban area as compared to rural area.

It was observed that majority of the semi-urban (63%), urban (60%) and rural (55%) respondents fed their buffaloes with concentrate feed at the time of milking. It was nearer to the observation[12]. According[14] concentrate fed to the animals after milking was practiced by 91% of farmers. Majority of the farmers (73%) fed concentrate mixture to buffaloes daily before milking was observed[17]. Extra concentrate feeding during advanced pregnancy and early lactation was adopted by overall 12 and 12.4 % of the respondents, respectively. Reported that 45 % of farmers provided extra ration to advanced pregnant animals. It was observed that majority of rural (61%) and semi-urban (51%) milk producers provided drinking water to buffaloes from tank, whereas urban milk producers (56%) supplied drinking water from tube well. Majority of farmers provided drinking water from a tube well was observed [6, 1].

Housing management practices

From Table 2, it was observed that majority of respondents in rural (63%), semi-urban (62%) and urban (60%) areas located the buffalo shed nearer to their dwelling. It is in agreement with the observation[8]. This was in contrary to findings[10,18]. Loose housing system was practiced by majority of rural (83%), semi-urban (67%) and urban (56%) milk producers in the study area. It is similar to the finding[8].

Thatched roofing was adopted by majority of rural (59%) and urban (56%) milk producers, whereas asbestos roofing was provided by majority of semi-urban (54%) milk producers in the study area. It was similar to the finding[3] provided thatched roof, whereas[6] observed that 34 % of farmers preferred iron sheets for roof of animal housing in rural milk shed of Gujarat.

Kutcha type of flooring was provided in the sheds by majority of rural (62%) milk producers, whereas pucca type of floor was provided by majority of urban (68%) and semi-urban (51%) milk producers in the study area. These findings were nearer to the observation[1.] Kutcha type of manger was provided in the buffalo shed by majority of rural (71%) and semi-urban (51%) milk producers, whereas pucca type of manger was provided by majority of urban (58%) milk producers in the study area. It was nearer to the observation[8] reported that 64 % of farmers provided pucca manger. Pucca type of drainage was provided by majority of urban (60%) milk producers, whereas kutch type of drainage was arranged by majority of rural (77%) and semi-urban (64%) milk producers in the study area. These findings were nearer to the observation[2] reported that majority of animal sheds in rural areas had improper drainage (98%) due to mud floor.

Majority of urban (80%) milk producers located manure pit beside the animal shed. Nearly 50 % of milk producers in rural and semi-urban areas provided manure pit far away from the animal shed, whereas[18] observed that manure pit was distantly located by the rural (86.7%), semi-urban (73.3%) and urban (57.8%) farmers. Wallowing of buffaloes was practiced by majority of rural (98%) milk producers followed by semi-urban (83%) and urban (46%) milk producers in the study area. It was similar with the finding[13]. The higher rate of adoption of wallowing in the study area might be due to availability of large number of village water tanks and irrigation canals of Krishna river.

Constraints perceived by buffalo milk producers

From Table 3 observed that high cost of pure bred buffaloes in the local market was the main constraint in the rural (99%) area than that in semi-urban (92%) and urban (90%) area. This result was in agreement with the finding[16]. It might be due to low purchasing capacity of milk producers in the rural area. This problem might be solved by producing good quality farm born replacement stock instead of purchasing the animals from buffalo traders.

High cost of hired labour for maintaining dairy unit was perceived as serious constraint by overall 94 % of milk producers in the study area. It was similar to the finding[25]. This problem was higher in urban area (96%) than that in semi-urban (94%) and rural (93%) areas. High cost of feed ingredients like oil cakes, brans and cereal grains was also viewed as a major problem in the rural area (95%) than that in semi-urban (90%) and urban (92%) areas. It was similar to the observations1[5, 20, 25] . Lack of financial assistance for purchase of high milk producing buffaloes and equipment was perceived as a problem by overall 91.6 % of milk producers in the study area. This was in agreement with the findings [16, 21, 25]. It was higher in the urban area (94%) than that in rural and semi-urban areas.

Lack of extension activities was also viewed as a constraint for the adoption of buffalo milk production technologies by overall 88 % of the milk producers in the study area. This was similar to the observation[24]. This was slightly higher in the rural and semi-urban areas than that in urban area. It indicated that inadequate extension services to transfer technologies affected the adoption of certain scientific management practices in buffalo farming.

Non remunerative price for milk was perceived as a major problem in the rural areas (86%) than that in semi-urban and urban areas. It was in agreement with the findings[4, 21, 25]. It indicated that remunerative price for milk motivated the milk producers for increasing the milk production by adopting the scientific milk production technologies.

Non availability of fodder seeds/ slips was also expressed as a problem by overall 68.8 % of the milk producers in the study area. It was in agreement with the findings[3, 15]. It was higher in semi-urban area (82%) than that in urban (62%)

and rural (59%) area. Problem of favouritism in providing inputs and loans to the milk producers was also viewed as a constraint by overall 68 % of the milk producers in the study area. This problem was higher in the rural area (72%) than that in semi-urban and urban areas. It might be due to the local politics in the study area.

Inadequate supply of concentrate mixture/ mineral mixture on subsidised cost was perceived as a problem by overall 64 % of the milk producers in the study area. It was higher in the rural area (85%) than that in semi-urban and urban areas. It indicated that the government and co-operative agencies were not able to supply the required quantity of balanced concentrate mixture to the milk producers.

High incidence of repeat breeding was higher in the rural area (65%) than that in semi-urban (62%) and urban (48%) area. This was similar to the observations[9, 15, 16]. This problem might be solved by conducting fertility camps frequently in the buffalo rearing areas. Low conception rates with A.I in buffaloes were also viewed as a constraint by overall 58 % of the milk producers in the study area. It was in agreement with the findings of [3, 9, 16]. Problem of feed and fodder shortage was more in the urban area followed by semi-urban area than that in the rural area. It was similar to the findings [4, 11, 20]. It might be due to non availability of crop by-products for feeding of buffaloes in the urban and semi-urban areas.

High incidence of anestrous in buffaloes was perceived as a problem by overall 54.4 % of milk producers in the study area. It was found more in the rural area (63%) than that in semi-urban and urban areas. It might be due to lack of adequate knowledge about the detection of estrous in buffaloes in the rural milk producers than that in urban and semi-urban areas. Inadequate supply of veterinary medicines in the veterinary hospitals was expressed as a problem by overall 52.4 % of milk producers in the study area. It was in agreement with the observations [15, 22, 24]. It was higher in the urban area (70%) than that in rural and semi-urban areas. Distant location of veterinary hospital was also viewed as a problem by overall 46.40 % of the milk producers in the study area. It was similar to the observations [3, 22, 25]. This problem was observed to be higher in the rural area (68%) than that in semi-urban and urban areas. Lack of adequate knowledge about scientific management of buffaloes was also felt as a constraint by 62% in rural, 25% in semi-urban and 8% in urban area. It was in agreement with the findings[11, 15, 22]. It might be due to less exposure of the rural milk producers to the mass media and print media and their low literature level.

Table 1: Feeding management practices adopted by respondents in buffaloes

Sl. No	Feeding practices		Rural		Semi-urban		Urban		Overall	
			No	%	No	%	No	%	No	%
1.	Green fodder production	Practiced	84	84	79	79	42	84	205	82.00
		Not practiced	16	16	21	21	8	16	45	18.00
		Extent of area (acre)	1.98	1.98	1.20	1.20	1.16	1.16	1.44	1.44
2.	Chaffing of fodder	Practiced	2	2	2	2	0	0	4	1.60
		Not practiced	98	98	98	98	50	100	246	98.40

3.	Feeding dry fodder	Paddy straw	100	100	100	100	50	100	250	100
		Others	0	0	0	0	0	0	0	0
4.	Method of feeding green/dry fodder	Group	50	50	55	55	27	54	132	52.80
		Individual	50	50	45	45	23	46	118	47.20
5.	Hay making	Practiced	20	20	0	0	2	4	22	8.80
		Not practiced	80	80	100	100	48	96	228	91.20
6.	Silage making	Practiced	1	1	0	0	0	0	1	0.40
		Not practiced	99	99	100	100	50	100	249	99.60
7.	Urea treatment of paddy straw	Practiced	1	1	0	0	0	0	1	0.40
		Not practiced	99	99	100	100	50	100	249	99.60
8.	Grazing of buffaloes	Practiced	90	90	68	68	23	46	181	72.40
		Not practiced	10	10	32	32	27	54	69	27.60
9.	Concentrate mixture	Home made	74	74	58	58	16	32	148	59.20
		Purchased	26	26	42	42	34	68	102	40.80
10.	Type of feeding concentrate mixture	Mash	9	9	6	6	6	12	21	8.40
		Soaked	80	80	94	94	44	88	218	87.20
		Boiled	11	11	1	1	0	0	12	4.80
11.	Supplementation of mineral mixture to the feed	Practiced	21	21	28	28	27	54	76	30.40
		Not practiced	79	79	72	72	23	46	174	69.6
12.	Supplementation of common salt in the feed	Practiced	30	30	22	22	21	42	73	29.20
		Not practiced	70	70	78	78	29	58	177	70.80
13.	Time of concentrate feeding	Before milking	45	45	37	37	20	40	102	40.80
		At milking time	55	55	63	63	30	60	148	59.20
14.	Extra concentrate feeding during advanced pregnancy	Practiced	8	8	11	11	11	22	30	12.00
		Not practiced	92	92	89	89	39	78	220	88.00
15.	Extra concentrate during early lactation	Practiced	9	9	12	12	10	20	31	12.40
		Not practiced	91	91	88	88	40	80	219	87.60
16.	Source of drinking water	Tube well	14	14	37	37	28	56	79	31.60
		Canal	25	25	12	12	2	4	39	15.60
		Tank	61	61	51	51	20	40	132	52.80

Table 2: Housing management practices adopted by respondents in buffaloes

Sl. No	Housing practices		Rural		Semi-urban		Urban		Overall	
			No.	%	No.	%	No.	%	No.	%
1.	Location of buffalo shed	Nearer to farmer dwelling	63	63	62	62	30	60	155	62.00
		Far away from farmer dwelling	37	37	38	38	20	40	95	38.00
2.	Housing system	Loose	83	83	67	67	28	56	178	71.20
		Conventional	17	17	33	33	22	44	72	28.80
3.	Floor	Kutcha	62	62	49	49	16	32	127	50.80
		Pucca	38	38	51	51	34	68	123	49.20
4.	Roof	Thatched	59	59	47	47	28	56	134	53.60
		Asbestos	41	41	53	53	22	44	116	46.40
5.	Manger	Kutcha	71	71	51	51	21	42	143	57.20
		Pucca	29	29	49	49	29	58	107	42.80
6.	Water trough	Kutcha	13	13	14	14	5	10	32	12.8
		Pucca	87	87	86	86	45	90	218	87.2
7.	Drainage	Kutcha	77	77	64	64	20	40	161	64.40
		Pucca	23	23	36	36	30	60	89	35.60
8.	Location of Manure pit	Beside the shed	52	52	47	47	40	80	139	55.60
		Far away from animal shed	48	48	53	53	10	20	111	44.40
9.	Calf Shed	Nearer by mother	93	93	98	98	47	94	238	95.20
		Separate calf shed	7	7	2	2	3	6	12	4.80
10.	Cooling devices like fan	Practiced	0	0	2	2	10	20	12	4.80
		Not practiced	100	100	98	98	40	80	238	95.20
11.	Wallowing of buffaloes	Practiced	98	98	83	83	23	46	204	81.60
		Not practiced	2	2	17	17	27	54	46	18.40

Table1 3: Constraints perceived by buffalo milk producers in Krishna district

Sl. No.	Constraint	Rural (N=100)		Semi-urban (N=100)		Urban (N=50)		Overall (N=250)	
		%	Rank	%	Rank	%	Rank	%	Rank
1.	High cost of pure bred buffaloes	99	I	92	II	90	IV	94.40	I
2.	High cost of hired labour	93	III	94	I	96	I	94.00	II
3.	High cost of feed ingredients	95	II	90	IV	92	III	92.40	III
4.	Lack of financial assistance for purchase of high milk producing buffaloes and equipment like chaffer cutter	91	IV	91	III	94	II	91.60	IV
5.	Lack of extension activities	88	V	89	V	86	V	88.00	V
6.	Non remunerative price for milk	86	VI	81	VII	68	VIII	80.40	VI
7.	Non availability of fodder seeds/ slips	59	XIV	82	VI	62	X	68.80	VII
8.	Problem of favouritism in providing inputs and loans to the milk producers	72	VIII	65	VIII	66	IX	68.00	VIII

9.	Inadequate supply of concentrate mixture/mineral mixture on subsidized cost	85	VII	49	XIII	52	XII	64.00	IX
10.	High incidence of repeat breeding	65	X	62	X	48	XII	60.40	X
11.	Low conception rate with A.I	64	XI	53	XII	56	XI	58.00	XI
12.	Feed and fodder shortage	42	XVI	63	IX	78	VI	57.60	XII
13.	High incidence of anestrous	63	XII	56	XI	34	XV	54.40	XIII
14.	Inadequate supply of medicines	50	XV	46	XIV	70	VII	52.40	XIV
15.	Distant location of veterinary hospital	68	IX	32	XV	32	XVI	46.40	XV
16.	Lack of adequate knowledge about scientific management of buffaloes	62	XIII	25	XVI	8	XVII	36.4	XVI
17.	High incidence of prolapse of uterus	18	XVII	21	XVII	36	XIV	22.80	XVII

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