



## HEALTH CARE MANAGERMENTAL PRACTICES OF DAIRY ANIMALS IN SCARCE RAIN FALL ZONE OF ANDHRA PRADESH

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### ABSTRACT

Dairy farming provides sustainable income and reduces unemployment to a large number of rural poor. The present investigation on health care management practices adopted by dairy farming was conducted by collecting a data from 240 respondents of different villages in Kadapa district of Andhra Pradesh. The study revealed that small and medium farmers are spending most of their time on daily income generation for their livelihood instead of spending time for observing the dairy animals. The large farmers are indirectly involved in observation of disease symptoms of animals by employing dairy extension workers. Majority of the dairy farmers have not isolated the sick animals from healthy ones and availed health care services rendered by the veterinary staff. Only a few farmers (19.58%) have acquired the services of veterinarian for treatment of sick animals. Majority of the farmers have cleaned water trough and feed manger and washed their animals at weekly intervals but cleaned the animal sheds daily. The study indicated that most of the farmers (90.41%) had never used sanitizer for cleaning and disinfection of the shed. Even though higher percentage (68.33%) of farmers adopted vaccinating their animals against bacterial and viral diseases, still there is a gap for successful implementation of mass vaccination. Significant number of farmers had vaccinated their animals against FMD and HS (73.75%) followed by FMD, HS and BQ (26.25%). None of the farmers vaccinated their animals against Anthrax disease. Majority of the farmers expressed deworming as a major constraint and not followed ectoparasite control. Pregnant animal care was not taken by most of the farmers and hence not provided separate shed to them. About 1/3 rd of respondents have approached veterinarian for removal of placenta and only 20.83% of farmers buried it in the soil. None of the farmers have practised navel cutting and disinfection of calf. Farmers who are maintaining crossbred cattle are only adopting this dehorning technique. Regarding the insurance, the animals distributed under various government schemes are only insured. Hence suitable training programmes on improved health care practices will help the farmers to overcome the certain health care managerial problems and increase the production performance of the dairy animal as well as generate more additional income to the farming community.

**KEY WORDS:** Health care management, deworming, vaccination, placenta, cattle and buffaloes

### INTRODUCTION

India is endowed with the largest livestock population in the world and continues to be the largest producer of milk in the world. Livestock farming requires less capital and the management and production expenses are low compared to agriculture. Animal Husbandry plays an important role in the socio economic development of India. It is also helpful in generating gainful employment in the rural sector, particularly among the landless labourers, small and marginal farmers and women by supplementing their family incomes. Hence animal husbandry is carried out by all farmers regardless of their economic status and development of livestock sector would be more inclusive in providing employment and income generating opportunities. But the productive performance of dairy animals appears to be at low level and the factors responsible need greater attention. Productivity of an animal is primarily the product of

interaction of its genetic makeup and the environment in which it develops. Further, adoption of recommended health care management practices ensure better health of animals that leads to increases productivity of animals. Therefore, a study was undertaken to assess various health care management practices that can be followed by different dairy farmers in Kadapa district of Andhra Pradesh.

### MATERIALS & METHODS

A field study was conducted to outline the information on array of existing health care management practices followed by dairy farmers in Kadapa district of Andhra Pradesh. Proddatur, Mydukur, Pulivendula and Jammalamadugu mandals were selected for the purpose of this study. Six rural villages were selected randomly from each Mandal and from each selected village ten respondents having more than two dairy animals (cattle/buffalo/both) were chosen with the help

of village dairy cooperative, which constituted a total of 240 respondents from rural area. The data on various health care management practices was collected with the help of pre-designed and pre-tested questionnaire. All the responses recorded in the interview schedule were tabulated in the master sheet and comparison was made to find out level adoption of various aspects of health care management practices among the respondents of the study area on the basis of percentage. The data thus collected, was analyzed as per the procedures laid down by Snedecor and Cochran (1994).

## RESULTS & DISCUSSION

The health care managemental practices adopted by different categories of dairy farmers were presented in Table.1. The results indicated that majority of small (76.25%) and medium (53.12%) farmers are not watching their animals daily for disease symptoms. But 73.75% of large farmers are observing the animals for disease symptoms in the study area. This clearly shows that small and medium farmers are spending most of their time on daily income generation for their livelihood instead of spending time for observing the dairy animals.

**TABLE 1:** Health care managemental practices adopted by different categories of dairy farmers

S.no	Health care management	Farmers							
		Small (n=80)		Medium (n=80)		Large (n=80)		Overall (T=240)	
		F	%	F	%	F	%	F	%
<b>1</b>	<b>Watching daily for disease symptoms</b>								
	a) Yes	19	23.75	37	46.87	59	73.75	105	43.75
	b) No	61	76.25	43	53.12	21	26.25	135	56.25
<b>2</b>	<b>Isolation of sick animals</b>								
	a) Practised	07	8.75	12	15.00	14	17.50	33	13.75
	b) Not Practised	73	91.25	68	85.00	66	82.50	207	86.25
<b>3</b>	<b>Veterinary facility</b>								
	a) Available	54	67.50	60	75	68	85	182	75.83
	b) Not available	26	32.50	20	25	12	15	58	24.17
<b>4</b>	<b>Treatment of sick animals</b>								
	a) Veterinarian	18	22.50	20	25.00	09	11.25	47	19.58
	b) Para Veterinarian	50	62.50	51	63.75	71	88.75	172	71.66
	c) Quacks	08	10	06	7.50	00	00.00	14	5.83
	d) Self	04	5	03	3.75	00	00.00	07	2.91
<b>5</b>	<b>Cleaning water trough and feed manger</b>								
	a) Daily	03	3.75	07	8.75	11	13.75	21	11.25
	b) Alternatively	12	15.00	22	27.50	25	31.25	59	24.58
	c) Weekly	65	81.25	51	63.75	44	55.00	160	66.67
<b>6</b>	<b>Washing of animals</b>								
	a) Daily	03	3.75	11	13.75	23	28.75	47	19.58
	b) Alternatively	22	27.50	28	35	30	37.50	70	29.16
	c) Weekly	55	68.75	41	51.25	27	33.75	123	51.25
	<b>Cleaning interval of animal sheds</b>								
<b>7</b>	a) Daily	35	43.75	34	42.50	73	91.25	142	59.16
	b) Alternatively	30	37.50	25	31.25	07	8.75	62	25.83
	c) Weekly	15	18.75	21	26.25	00	00.00	36	15.00
<b>8</b>	<b>Use of sanitizers for disinfection of shed</b>								
	a) Occasionally	03	3.75	07	8.75	13	16.25	23	9.58
	b) Never use	77	96.25	73	91.25	67	83.75	217	90.41
<b>9</b>	<b>Vaccination</b>								
	a) Done	46	57.50	53	66.25	65	81.25	164	68.33
	b) Not done	34	42.50	27	33.75	15	18.75	76	31.67
<b>10</b>	<b>Vaccination against</b>								
	a) FMD+HS	49	61.25	57	71.25	71	88.75	177	73.75
	b) FMD+HS+BQ	31	38.75	23	28.75	09	11.25	63	26.25
	c) Anthrax	0	00.00	0	00.00	0	00.00	0	00.00
<b>11</b>	<b>Periodic deworming of calves</b>								
	a) Regular interval	29	36.25	22	27.50	07	8.75	58	24.16
	b) Seldom	44	55.00	52	65.00	63	78.75	159	66.26
	c) No	07	8.75	06	7.50	10	12.50	23	9.58
<b>12</b>	<b>Control of ectoparasites</b>								
	a) Followed	31	38.75	27	33.75	19	23.75	77	32.08
	b) Not followed	49	61.25	53	66.25	61	76.25	163	67.92

<b>13</b>	<b>Pregnant animal care</b>								
	a) Additional feed	0	00.00	06	7.50	12	15.00	18	7.50
	b) Providing pregnant animal shed	0	00.00	0	0	0	00.00	0	00.00
	c) No extra care	80	100.0	74	92.50	68	85.00	222	92.50
<b>14</b>	<b>Care during parturition</b>								
	a) Followed	02	2.50	07	8.75	11	13.75	20	25.00
	b) Not followed	78	97.50	73	91.25	71	88.75	220	75.00
<b>15</b>	<b>Removal of placenta</b>								
	a) Naturally	65	81.25	49	61.25	33	41.25	147	61.25
	b) Manually	15	18.75	31	38.75	47	58.75	93	38.75
<b>16</b>	<b>Disposal of placenta</b>								
	a) Buried in the soil	00	00.00	16	20.00	34	42.50	50	20.83
	b) Buried in the garbage	36	45.00	32	40.00	06	7.50	74	30.83
	c) Thrown away	44	55.00	32	40.00	40	50.00	116	48.34
<b>17</b>	<b>Disposal of dead bodies</b>								
	a) Deep buried	27	33.75	24	30.00	19	23.75	70	29.16
	b) Thrown away	53	66.25	56	70.00	61	76.25	170	70.84
<b>18</b>	<b>Insurance of animals</b>								
	a) Practiced	0	00.00	0	00.00	18	22.50	18	7.50
	b) Not practiced	80	100.0	80	100.0	62	77.50	222	92.50
<b>19</b>	<b>Naval disinfection of calf</b>								
	a) Practiced	0	00.00	0	00.00	0	00.00	0	00.00
	b) Not practiced	80	100.0	80	100.0	80	100.0	240	100.0
<b>20</b>	<b>Dehorning of calf</b>								
	a) Yes	0	00.00	0	00.00	14	17.50	14	5.84
	b) No	80	100.0	80	100.0	66	82.50	226	94.16
<b>21</b>	<b>Grooming practices</b>								
	a) Yes	0	00.00	0	00.00	12	15.00	12	5.00
	b) No	80	100.0	80	100.0	68	85.00	228	95.00

The large farmers are indirectly involved in observation of disease symptoms of animals by employing dairy extension workers. Majority of the farmers (86.25%) have not practised the isolation of sick animals from the other animals which might be due to low level of knowledge of the dairy farmers about the isolation and segregation process to be adopted in order to control the spread of disease in the herd or may be due to less availability of space so that even if they are knowing the practice but couldn't do it due to paucity of the space. Similar findings were reported by Meena *et al.* (2008) and Gill and Saini (2008). These findings were in agreement with those reported by Vranda *et al.* (2017), Yadav *et al.* (2009) and Vijay *et al.* (2008). On the contrary to this, Vivek (2013) reported that 39.37% of the dairy farmers have isolated the sick animals from healthy ones. It was found that 75.83% of dairy farmers have utilized the veterinary facility which indicated that well spread of the animal husbandry institutions in the study area and also the faith of the farmers on these institutions for veterinary health care services rendered by the veterinary staff. Similar findings were reported by Vranda *et al.* (2017). The present findings were contradictory to Rathore *et al.* (2010) who reported the poor availability of veterinary facilities. With regard to treatment of sick animals only 19.58% of the dairy farmers acquired the services of a qualified veterinarian for treatment. Similar findings were reported by Kokate and Tyagi (1991) and Malik *et al.* (2005). This may be due to non-availability of a qualified veterinarian in the veterinary dispensary, which is established at mandal level and the excessive workload to

person in-charge. These results were in consonance with those reported by Vivek (2013), Sabapara *et al.* (2010) and Meena *et al.* (2007). However, Vranda *et al.* (2017) and Prajapathi (2015) reported that 53.33 % and 33.6% of dairy farmers availed the services of qualified veterinarian for the treatment of their animals respectively. Majority of the dairy farmers (66.67%) cleaned water trough and feed manger at weekly intervals, where as 24.58% and 11.25% of farmers at alternate and daily intervals respectively. This indicates that farmers were not taking much care about cleaning of water trough and feed manger due to their busy farm activities. However, daily cleaning of water trough and feed manger is required for hygienic and sanitary conditions of the animal shed. The present findings were in close agreement with Vivek (2013) and Rathore *et al.* (2010) but contrary to the results of Manohar (2012).

The results indicated that 51.25% of the dairy farmers washed their animals at weekly intervals, while 29.16% and 19.58% at alternately and daily. It clearly shows that farmers thought that washing is laborious and time spending activity. Added to this there is scarcity of water in some villages of the study area. Similar findings were made by Vranda *et al.* (2017) and Yadav *et al.* (2009) but contrary to the reports of Rathore *et al.* (2010). Regarding the cleaning of animal sheds 59.16%, 25.83% and 15% of farmers are cleaning at daily, alternative and weekly intervals respectively. These findings were in consonance with those reported by Vivek (2013) but contrary to the findings of Meena *et al.* (2007) who reported that 91% of farmers cleaned the shed once in a week. It was found that only 9.58% of the farmers used

sanitizer to disinfect the shed, while 90.41% of the farmers had never used sanitizer as disinfectant for cleaning of the shed. The present findings were in conformity with those reported by Vranda *et al.* (2017) and Sabapara *et al.* (2010). This might be due to lack of awareness, cost of the disinfectant and an additional burden which did not give any immediate return to the farmer. Further the inadequate drainage facility and shed with earthen floors, which cannot be washed and thus ultimately leads to dampness and insanitary condition. The results are contradictory to the findings of Chowdhry *et al.* (2006) in dairy animals in North Gujarat.

Higher percentage of farmers (68.33%) followed vaccinating their animals against bacterial and viral diseases which are in conformity with the findings of Vranda *et al.* (2017), Prajapathi *et al.* (2015), Sabapara *et al.* (2010) and Kalyankar *et al.* (2008). This might be due to the awareness about the importance of vaccination and to protect their animals from contagious bacterial and viral diseases. But still there is a gap while implementing vaccination by some of the farmers because of non availability of farmers at the houses during the time of mass vaccination carried out by animal husbandry department. However, Vivek (2013), Mathur (2011) and Meena *et al.* (2007) reported that only few farmers had followed vaccination in their study areas. The study revealed that significant number of farmers had vaccinated their animals against FMD and HS (73.75%) followed by FMD, HS and BQ (26.25%). None of the farmers vaccinated their animals against Anthrax disease. The information of present study is indicative of high level of knowledge of the farmers regarding protection of their animals as the herd size increases. Similar findings were stated by Sabapara *et al.* (2010) and Vranda *et al.* (2017) where majority of the farmers vaccinated against FMD and HS and partially similar with Ahirwar *et al.* (2010), who reported that majority carried vaccination against FMD followed by HS and BQ. The present findings were on higher side to that reported by Kalyankar *et al.* (2008), Meena *et al.* (2007), Singh *et al.* (2007) and Malik *et al.* (2005).

Periodic deworming of calves was followed by only 24.16% of the farmers, whereas 66.26% respondents followed occasionally and remaining 9.58% did not give any medication to control the endoparasites. Similar findings were reported by Prajapathi *et al.* (2015), Gupta *et al.* (2008) and Kalyankar *et al.* (2008). The results of this practice are indicative of high level of awareness in respondents on implementation of mass deworming programme carried out by animal husbandry department as a measure of prevention of calf mortality. However the present findings were contrary to those reported by Meena *et al.* (2007) who stated that only 11.7% of farmers adopted deworming practice.

Regarding control of ectoparasites majority of the farmers (67.92%) did not follow any practice to control ectoparasites. However, some farmers adopted traditional practices like smoke of neem leaves to prevent mosquitoes, salt spray to control ticks and lice in animal houses etc. Similar findings were reported by Yadav *et al.* (2009) and

Sabapara *et al.* (2011). This practice needs attention to create awareness in respondents covered under present study. On the other hand, about 32.08% of respondents followed dusting, spraying, injectable drugs as a measure of ectoparasite control. On the contrary to this Vivek (2013), Malik and Nagpaul (1999), Pawar *et al.* (2006), Sinha *et al.* (2010) and Deshmukh (2009) reported that majority of the farmers practised various measure to control ectoparasites. None of the small farmers and majority of the medium (92.5%), large (85.0%) and overall farmers (92.5%) did not practise any special managerial care during advanced pregnancy of the animals. The probable reason for not taking care to the pregnant animals might be due to lack of awareness. The small and medium farmers have not provided separate shed to the pregnant animals due to non availability of space. Similar results were reported by Vranda *et al.* (2017). However Meena *et al.* (2007) reported that 45% of the farmers have provided extra ration for advanced pregnant animals.

The study revealed that only 35% of the farmers are approaching veterinarian for removal of placenta manually in retention of placenta cases. This clearly indicated that none of the farmers has taken risk regarding the removal of placenta. From the study it was observed that majority of the farmers (48.34%) had practised by throwing the placenta away from human vicinity, where as only 20.83% of the farmers buried placenta in the soil and the remaining 30.83% of farmers buried in garbage. The present findings were in agreement with those reported by Vranda *et al.* (2017), and contrary to those reported by Yadav *et al.* (2009). Majority of the small (66.25%) medium (70.0%) large (76.25%) and overall farmers (70.84%) have not practised proper disposal of dead carcass and simply thrown away from the human dwellings. This could be because of lack of awareness on importance of proper burial and the cost involvement could be the reason for not practising proper burial method. The findings were in agreement with those reported by Vranda *et al.* (2017) and contrary with the findings of Vijay *et al.* (2008), who observed in their study that, most of farmers buried the dead animals into the soil.

None of the farmers have practised navel cutting and disinfection of calf and it was left as it is to fall off itself naturally. The present findings were in conformity with the reports of Sabapara *et al.* (2010) and Kokate and Tyagi (1991). However, Pawar *et al.* (2006) and Rathore *et al.* (2009) reported cutting and disinfection of navel cord in 31 to 37% cases. More and concentrated efforts are required to motivate farmers to follow this practice. Regarding dehorning of calves, only 5.84% of the respondents have practised after 3-4 weeks of age by taking the calf to the nearest veterinary dispensary, whereas 94.16% of the farmers have not practised. Farmers who are maintaining crossbred cattle are only adopting this dehorning technique. Similar findings were reported by Sabapara *et al.* (2010) and Rathore *et al.* (2009). With regard to insurance of animals, only 7.5% of the respondents have insured their dairy animals, whereas 92.5% of the farmers in the study area have not adopted. The probable reason might be due to the

fact that the animals distributed to the farmers under various government schemes are only insured in the study area. This needs to encourage the farmers to insure their animals for at least during the productive period of the animal life.

## CONCLUSION

From the study it can be concluded that even though majority of the farmers have adopted the health care practices like veterinary facility, treatment of sick animals, cleaning of water trough and feed manger, washing of animals, cleaning of animal sheds and vaccination programmes, there is a gap in implementing the recommended practices such as daily watching for disease symptoms, isolation of sick animals, use of sanitizers for disinfection of sheds, control of ectoparasites, pregnant animal care, care during parturition, insurance of animals, naval disinfection of calf, dehorning of calf and grooming practices. To minimize gap between existing practices and recommended / improved scientific practices young farmers have to take interest in dairy farming activity. In this regard suitable extension strategies can be developed for creating awareness among the farmers by conducting training programmes demonstrations which will have catalytic influence on improvement of knowledge of the farmers.

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