

Original Research Article

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Survey on Managemental Practices of Kathiyawadi Horses in Four Districts of Gujarat State, India

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ABSTRACT

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This study was undertaken to investigate managemental practices of Kathiyawadi horses in their home tract and to find the type of feeding and watering management, vaccination and deworming other management practices followed by the horse owners of unorganized horse farms in Saurashtra region of Gujarat State. The present study was carried out in Junagadh, Botad, Surendranagar and Bhavnagar districts of Gujarat State. For the present study, eight talukas of each district was selected and from each selected taluka, ten villages were selected randomly. Five respondents were selected randomly from each village. Thus, random samples of 400 horse owners were selected for the study. The data was collected through personal interview schedule. Study show that maximum (74.5%) horse owners rear horses for pleasure while only 25.5 per cent horse owner rear for traveling, carting and racing. Majority (85 %) of horse's owners possessed small size followed by medium size (9.5 %) and large size (5.5 %) herds. Frequency of feeding as a twice in a day is being practiced by only 1.75 per cent and three times a day by 17.75 per cent of the owners. However, 74.5 per cent of the horse owners practiced four times a day. Generally, during winters horses offered drink water 3 times a day while in summer the frequency of drinking water increased 4 times a day. Majority of horse owners (65.75%) never vaccinate and deworm the horses while only 34.25 per cent horse owners regularly vaccinate and deworm the horses.

Introduction

India is very prosperous in the wealth of livestock. Some species are directly related with the production and some are indirectly, amongst which horse is important animal belonging to family equidae and its close relatives are ponies, donkeys, mules, zebra

etc. (Nehra, 2002). In spite of the road development and introduction of mechanical transport in most parts of the country, economical of haulage of goods and transportation of men as well as materials are still in favors of pack animals for short distance. Shortage of petroleum products in future would demand that sufficient attention

is bestowed upon the sound animal husbandry practices for the upkeep and further development of draft type animals for their efficient and economic utility (Fazili and Kirmani, 2011).

There are about 108.9 million equines in the world, comprising of 55.8, 12.8 and 40.3 million horses, mules and donkeys, respectively (Anon., 2014) In spite of mechanization of transport and less organized breeding farms, India still possesses a sizable number of valuable stock of indigenous breeds which can supply high class polo-ponies, saddle horse, Tonga pony and pack animals. The population of horse, mule and donkey, in India has increased by 625, 196 and 319 thousands respectively in 2012 (Livestock Census-2012). Gujarat state is very famous for some important horse breeds like Kathiyawadi and Marvadi. Hardly any literature is available on feeding practices of Kathiyawadi horse. Also housing practices and management practices adopted by the horse owners are not available at present. Hence, the study was planned to know the status of horse feeding and management adopted by horse owners in four districts of Gujarat state.

Materials and Methods

The present study was carried out in organized and unorganized horse farms of Junagadh, Botad, Surendranagar and Bhavnagar districts of Gujarat state. These districts are selected due to presence of large number of Kathiyawadi horses, horse rearing farmers, familiarity of researcher with the area and local language and his ability to cover larger area within stipulated time.

Gujarat division consists of 33 districts. Present study was conducted in four districts of the Gujarat having appreciable equine population viz Junagadh, Bhavnagar

Surendranagar and Botad district. Two talukas from each selected districts was selected randomly for the study purpose. Thus, a total 8 talukas were chosen randomly, from each selected taluka 10 villages were selected randomly. Thus the study was confined to total 80 chosen villages from Junagadh, Botad, Surendranagar and Bhavnagar districts. Thus Random samples of 400 Kathiyawadi horse owners were selected for the study. Personal interview technique was used as a tool through which first-hand information was collected. The data was collected by personal interview from Kathiyawadi horse owner of selected villages from 8 selected talukas of Botad, Junagadh, Surendranagar and Bhavnagar districts. Data were collected on proforma recording sheets, were processed and analyzed as per Snedecor and Cochran (1994). Basic statistical tools like frequency distribution, percentage, mean, range, standard error, z test, t test and ratio etc., were used to draw the inferences.

Results and Discussion

Data presented in Table-1 that a majority (85 %) of horse's owners possessed small size followed by medium size (9.5 %) and large size (5.5 %) herds. The findings of present study were related with the findings of Ganai *et al.*, (2004). Maximum (74.5%) horse owners rear horses for pleasure while only 25.5 per cent horse owner rear for traveling, carting and racing (Table-2). Data indicate (Table-3) that highest (72.25%) horse owners take moderate work from the horse and 14 per cent take light work from the horses while only 13.75 per cent horse owner take heavy work from the horses. It is observed from data (Table-4) that total 674 horses were possessed by the respondents amongst which 90 were Foals, 39 Stallions and 545 Mares. The findings of present study were comparable with the findings of Ganai *et al.*, (2004) and Hassan *et al.*, (2016b).

Feeding management

It is inferred from data presented in Table-5 that the chopping of green fodder as a daily routine was practiced by only 7.5 per cent of the farmers. However, 30 per cent farmers chopped the green fodder sometimes. As reported maximum 62.5 per cent of the horse owners never chop the green fodder before feeding to horses. Data presented in Table-6 indicate that chopping of dry fodder as a daily routine is being practiced by only 16.5 per cent of the owners. However, 36 per cent of the horse owners chopped dry fodder sometimes. As reported, maximum 47.5 per cent of the horse owners never chopped dry fodder before feeding.

Frequency of feeding to horses

Data presented in Table-7 indicate that frequency of feeding as a twice in a day is being practiced by only 1.75 per cent and three times a day by 17.75 per cent of the owners. However, 74.5 per cent of the horse owners practiced four times a day. As reported, 6 per cent of the horse owners fed more than four times a day to horses in a day. It is evident from data in Table-8 that 74.5 per cent of the horses were offered concentrate mixture only once a day. While 25.5 per cent were offered twice a day. Similar finding was reported by Yashpal *et al.*, (2011). Maximum 55.75 per cent horse owners used home prepared concentrate and 32.25 per cent use readymade concentrate. Only 9 per cent horse owners used mixture of both concentrate (Table-9). Ration fed to horses was supplemented with mineral mixture by only 11.5 per cent of the respondents and during pregnancy 24 per cent horse owners fed mineral mixture to mare. Maximum 64.5 per cent horse owner never fed mineral mixture to horses (Table 10). These findings have been supported by the findings of Yashpal *et al.*, (2012). Ration fed to horses was supplemented

with salt by only 29 per cent of the respondents and maximum 71 per cent horse owner never fed salt to horses (Table-11). The findings of present study are similar with the findings of Yashpal *et al.*, (2011).

Feeding method

In the study areas, the horses were fed in the stall as well they were sent for grazing to pastures and other places. Complete stall feeding was reported by only by 49.5 per cent horse owners in the study area. Likewise complete pasture grazing was not reported and 50.5 per cent horses adopted stall feeding plus grazing as the system of feeding (Table-12). Horses were sent for grazing to the hills surrounding the village, personal pasture and community pastures by almost all the horse owners. It is inferred from data presented in Table-13 that the majority of horse owners (49.5%) sent their animals for 7 to 9 hours daily for grazing while 9 per cent sent for 4 to 6 hrs. and 38 per cent did not sent their horse for grazing at all.

Watering management

As regards the frequency of watering, the horse owners replied that they did not followed a fixed routine of offering water to the horses (Table-14) But Generally, during winters horses offered drink water 3 times a day while in summer the frequency of drinking water increased 4 times a day. None of the respondents specified the quantity of water offered to different categories of horses. The finding of present study related to the findings of Hinton (1978), Keiper and Keenan (1980) and Jithendran *et al.*, (1998).

Vaccination, deworming and metabolic disorders

It is inferred from data presented in Table-15 that the majority of horse owners (65.75%)

never vaccinate and deworm the horses while only 34.25 per cent horse owners regularly vaccinate and deworm the horses. In the Table-16 shows that maximum 64.5 per cent

non-occurrence of metabolic disorders while 35.5 per cent occurrence of metabolic disorders in different districts.

Table.1 Distribution of respondents according to their animal holding

Sr. No.	Category	Frequency	Per cent
1	Small size (1 to 2 horses)	340	85
2	Middle size (3-4 horses)	38	9.5
3	Large size (more than 4 horses)	22	5.5
	Total	400	100

Table.2 Distribution of respondent according to their purposes for horse rearing

Sr. No.	Purposes	Frequency	Per cent
1	Pleasure	298	74.5
2	Traveling/Carting/Racing	102	25.5
	Total	400	100

Table.3 Distribution of respondent according to work take from horses

Sr. No.	Work	Frequency	Per cent
1	Light	56	14
2	Moderate	289	72.25
3	Heavy	55	13.75
	Total	400	100

Table.4 Distribution of Kathiyawadi horses under different categories

Sr. No.	Districts	Taluka	No of Foal	No. of	No. of	Total
				Stallion	Mare	
1	Junagadh	Visavadar	12	4	64	80
		Bhesan	11	3	55	69
2	Botad	Botad	13	5	76	94
		Gadhada	11	3	65	79
3	Surendranagar	Chotila	14	5	78	97
		Limadi	9	4	74	87
4	Bhavnagar	Palitana	11	5	59	75
		Ghogha	9	10	74	93
		Total	90	39	545	674

Table.5 Distribution of respondents practicing chopping of green fodder

Sr. No.	Chopping	Frequency	Per cent
1	Always	30	7.5
2	Sometimes	120	30
3	Never	250	62.5
	Total	400	100

Table.6 Distribution of respondents practicing chopping of dry fodder

Sr No.	Chopping	Frequency	Per cent
1	Always	66	16.5
2	Sometimes	144	36
3	Never	190	47.5
	Total	400	100

Table.7 Frequency of feeding in horses

Sr. No.	Feeding (in a day)	Frequency	Per cent
1	Twice	7	1.75
2	Three times	71	17.75
3	Four times	298	74.5
4	More than four times	24	6
	Total	400	100

Table.8 Frequency of giving concentrate mixture to horses

Sr. No.	Concentrate Mixture	Frequency	Per cent
1	Once in a day	298	74.5
2	Twice in a day	102	25.5
	Total	400	100

Table.9 Concentrate mixture used by the horse owners

Sr. No.	Concentrate	Frequency	Per cent
1	Home prepared	223	55.75
2	Readymade	141	32.25
3	Mixture of home prepared and readymade	36	9
	Total	400	100

Table.10 Distribution of respondents feeding mineral mixture

Sr. No.	Mineral mix Feeding	Frequency	Percent
1	Regular	46	11.5
2	During Pregnancy	96	24
3	Never	258	64.5
	Total	400	100

Table.11 Distribution of respondents supplementing salt with mineral mixture

Sr. No.	Salt Feeding (with min.mix)	Frequency	Per cent
1	Regular	116	29
2	Never	284	71
	Total	400	100

Table.12 Distribution of respondents according to different feeding systems

Sr. No.	Feeding system	Frequency	Per cent
1	Complete stall feeding	198	49.5
2	Complete pasture grazing	0	0
3	Stall feeding + pasture grazing	202	50.5
	Total	400	100

Table.13 Average duration (hrs./day) for which horses were sent for grazing

Sr. No.	Duration	Frequency	Per cent
1	1-3 hrs	14	3.5
2	4-6 hrs	36	9
3	7-9 hrs	198	49.5
4	No grazing	152	38
	Total	400	100

Table.14 Frequency of watering to horses

Sr. No.	Frequency of watering	Frequency	Per cent
1	Twice in a day	12	3
2	Three time in a day	130	32.5
3	Four time in a day	258	64.5
	Total	400	100

Table.15 Vaccination and deworming perform by the horse owners

Sr. No.	Vaccination & Deworming	Frequency	Per cent
1	Regular	137	34.25
2	Never	263	65.75
	Total	400	100

Table.16 Distribution of respondents according to occurrences of metabolic disorder to horses (laminitis, Monday mornig sickness, bran disease etc.)

Sr. No.	Occurrence	Frequency	Per cent
1	Occur	142	35.5
2	Not occur	258	64.5
	Total	400	100

In conclusion, almost all the horses' owner opined that the pleasure was the only purpose of keeping the horses. Majority of horse owner's practice four times feeding (74.5 %) and watering (64.5 %) per day. Stall feeding and pasture grazing for horses were carried out by 50.5 per cent of horse owners. Most of the horse owners (74.5 %) fed concentrate to horses once in a day. The majority of horse owners (65.75%) did not deworm or vaccinate the horses. Occurrence of metabolic diseases was found only to the tune of 35.5 per cent during the survey.

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