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Opinion Expressed by Livestock Farmers on Para Veterinarians in Rendering Livestock Services in Bidar and Kalaburagi District of Kalyana Karnataka

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ABSTRACT: The study was conducted in Kalyana Karnataka during 2021 to 2022. The *exploratory* and *ex-post-facto* research designs were used to assess the opinion of the livestock farmers about the delivery of veterinary services, provided by the department of animal husbandry. The department of animal husbandry deals with the welfare of livestock and is responsible for matters related to livestock six dimensions general opinion of farmers on the para veterinarian, management of animals, breeding services, health services, feeding management and advisory services. Information was collected with the help of pretested and well-structured interview schedule from 60 farmers, who had at least one milch animal at the time of the investigation. The overall result depicts that 43.34 per cent of farmers had the medium opinion of rendering livestock services on para veterinarians followed by high (35.00 %) and low (21.66 %). Due to their average age and expertise, para veterinarians tend to actively participate in activities at the field level, which may explain the shift from medium to high level

Keywords: Animal health services, livestock farmer opinion, para veterinarians.

INTRODUCTION

Livestock is the lifeline for the farming community. It acts as a storehouse of capital insurance against crop failure and a coping mechanism against livelihood shocks. Therefore, it is considered a 'moving bank' for the farmers' income. Livestock acts as a vital source of dietary protein by providing foods like milk, meat and eggs for human consumption. Also, livestock as a sector contributes to the assembly of wool, hair, hides and pellets leather which is the most significant product with a large export potential and is employed for various purposes. Despite much progress in the use of mechanical power in Indian agricultural operations, Indian farmers, especially in rural areas, still depend upon bullock carts for various agricultural operations like bringing fodder and straw from the farm to the shed. Bullock carts are responsible for saving plenty of fuel which is considered a vital input for mechanical power like tractors, combine harvesters *etc*. Animal waste like dung and urine are excellent sources of major and minor nutrients for plant production and protection measures. Animal dung is an excellent source of raw material for biogas production, and also the preparation of cake, because of which it is called poor man cement as it is used for construction purposes. Animals like rams, bullocks, cock, chickens *etc.,* are used for recreation purposes and livestock acts as social security to their owners as per their status.

Livestock plays an important role in the Indian economy. About 20.5 million people depend upon livestock for their livelihood. Livestock contributes 16.00 per cent to the income of small farm households as against an average of 14.00 per cent for all rural households. It also employs about 8.8 per cent of the population in India. The livestock sector contributes employment to about 16.44 million workers as per usual status where they were engaged in activities of farming animals, mixed farming, fishing and aquaculture (Economic survey, 2020). The livestock sector contributes 4.11 per cent to GDP and accounts for 25.60 per cent of total Agriculture GDP along with the contribution of 17.4 per cent to value-added by the agriculture sector. Para veterinarians play a key role in the food supply chain, providing expertise in the treatment of sick animals and prevention of disease through health advisory services and the wellbeing of the livestock farming population has in recent times become an issue of increasing concern and interest. Opinion of livestock farmers explores the working nature of the para veterinarians. The current study used focuses on to explore livestock farmer's opinions on the role performance of their veterinarian in providing advice to improve the health and productivity of their flock

METHODOLOGY

The study was conducted in Kalyana Karnataka during 2021 to 2022. The *exploratory* and *ex-post-facto* research designs were used in the present study. This region had seven districts namely Bidar, Kalaburagi, Raichur, Koppal, Ballari, Vijayanagara and Yadgir. Among seven districts, Kalburgi and Bidar were selected for the study due to the highest number of para veterinarians working at the time of investigation in these districts. In Kalaburgi three talukas *i.e* Kalaburgi, Alanda and Chitapur and among eight talukas of Biadar three *i.e.* Bidar, Bhalki and Humanbad talukas were selected based on the highest number of para veterinarians working in the talukas at the time of the investigation. From each six selected talukas a list of livestock farmers who are rearing animals and they are availing veterinary services from the villages where veterinary centres and veterinary hospitals function were prepared. Thus 10 livestock farmers from each taluka were randomly selected constituting a total of 60 livestock farmers. They were interviewed on various identified parameters based on the objectives of the study and their opinions were collected to know the performances of the para veterinarian.

The opinion of livestock farmers was used to assess the role performance of para veterinarians**.** It was measured through a structured schedule which included general aspects, management of animals, breeding services, health services, feeding services and advisory services. The schedule was administered to livestock farmers and they were asked to respond on a three-point continuum *viz.,* Excellent, Average, and Poor against 24 selected statements the scoring orders for the response were 3, 2 and 1, respectively. Thus, the possible opinion score of the individual respondent about delivering livestock services could range from 24 to 72. The opinion scores of the respondents were calculated by adding up the score of all the statements. The respondents were classified into 'high', 'medium' and 'low' opinion groups based on mean and standard deviation as a measure of check on their scores for individuals and groups.

RESULT AND DISCUSSION

The opinion of livestock farmers mainly on six dimensions general opinion of farmers on the para veterinarian, management of animals, breeding services, health services, feeding management and advisory services. A cursory look at Table 1 represents the overall distribution of livestock farmers based on their opinion expressed on para veterinarians in rendering livestock services. The result depicts that 43.34 per cent of farmers had a medium opinion of rendering livestock services to para veterinarians followed by high (35.00 %) and low (21.66 %). Due to their average age and expertise, para veterinarians tend to actively participate in activities at the field level, which may explain the shift from medium to a high level. However, the wide jurisdiction, a larger number of animals, and the unavailability of infrastructure, particularly transportation, equipment, para veterinarians, and other staff members, may prevent them from reaching the remote location. The staff was doing well, and local para veterinarians may have won the farmers' trust by offering high-quality services as and when they were needed. The above results are in line with the findings of Kaler and Green (2013); Kareem *et al.* (2018); Lestari *et al.* (2022).

Table 2 represents the opinion of livestock farmers on a general aspect expressed that, 60.00 per cent of livestock farmers opinioned that there is an average response from the para veterinarians in receiving mobile/personnel calls in immediate situations followed by, para-veterinarians maintaining a good relationship with livestock farmers (48.33%), they are up to date with technical knowledge for livestock services (46.67%) and there are no extra fees for livestock services (40.00%). The likely cause is that every para veterinarian maintained a cell phone for making a quick response to farmers in an emergency case, such as a disease outbreak or when an animal faces difficulty in giving birth, and to treat the animal's illness responsibly. Consequently, by providing the necessary animal services and abiding by professional ethics, they were capable of maintaining good relationships with livestock farmers. The above results are similar to the findings of Hanley *et al.* (2020).

Table 1: Distribution of livestock farmers based on their overall opinion about para veterinarians in rendering livestock services.

Sr. No.	Category	Range	f	%
1.	Low	Less than (mean - 0.425 SD)	13	21.66
2.	Medium	In between (mean ± 0.425 SD)	26	43.34
3.	High	More than (mean + 0.425 SD)	21	35.00
Mean= 39.53 SD=13.03				

f - Frequency, %- Per cent

Table 2: Opinion of livestock farmers based on their general aspect of para veterinarians (n=60).

Sr. No.	Particulars	Responses patter					
		Excellent		Average		Poor	
		f	%	f	%	f	%
I	General aspect						
1.	Para veterinarian respond immediately to mobile/personnel calls	16	26.67	36	60.00	08	13.33
2.	Para-veterinarians maintaining good relationship with livestock farmers	20	33.33	29	48.33	11	18.33
3.	There are no extra fees for livestock services	15	25.00	24	40.00	21	35.00
4.	They are up to date with technical knowledge for livestock services	14	23.33	28	46.67	18	30.00

f - Frequency, %- Per cent

Table 3 represents the management of animals livestock farmers opinioned that excellent performance in everyone working together as a team in providing livestock services (41.66%) followed by, average performance in the guide in the construction of animal shed and ability to control over the emergency (46.66%). This may be due to a para veterinarian using their prior experience to respond quickly in an emergency such as sorghum poisoning, accidents, burns, electric shock, or stroke. They also have good experience identifying animal heat by observing animal behaviour such as reduced feed intake, red eyes, prevent urination, enlarged udders, and animals trying to climb other animals. Disposal of dead animals also helps in the prevention of the spread of the disease. The above results are similar to the findings of Kumar *et al.* (2009); Thombre *et al.* (2010); Akand *et al.* (2017).

Table 3: Opinion of livestock farmers based on their management of animals' services rendered by para veterinarians (n=60).

Sr. No.	Particulars	Responses patter					
		Excellent		Average		Poor	
		f	%	f	%	f	%
I	**Management of animal**						
1.	Guide in construction of animal shed	23	38.34	28	46.66	09	15.00
2.	Para-veterinarians have ability to control over emergency situation	21	35.00	28	46.67	11	18.33
3.	Everyone works together as a team in providing of livestock services	25	41.66	25	41.66	10	16.66
4.	Advice to safe disposal of dead animals	12	20.00	19	31.67	29	48.33

f - Frequency, %- Per cent

Table 4 concerning feeding management practices to the opinion of livestock farmers on para veterinarians in feeding management practices found that half (50.00 %) of para veterinarian average in advising growing of high-yielding fodder crops and feed and fodder management for ruminants, explains the importance of a balanced diet for the animal (43.33%) and guide in the preparation of silage making and hydroponics production (36.67%). The fact that para veterinarians are aware of the significance of diet in preserving an animal's health might be the cause for this. Additionally, a bad diet may result in several productive changes that lower milk production and inadequate silage and hydroponics production guidance from the veterinarian. This could lead to inaccurate exposure and a lack of current knowledge regarding issues of animal feeding. The above results are similar to the findings of Lestari *et al.* (2022).

The Table 5 concern health services livestock farmers said that para veterinarians performed on average the equipments used by the para-veterinarians effective (53.33%) followed by, follow-up of treatment for the diseased animal (46.67%), educating farmers on contagious diseases management of animals and providing quick and timely information on livestock services (Vaccination, Disease management *etc.*) (30.00%). The possible solution might be to follow up on proper task distribution and the job involvement of para veterinarian, and the available tools are efficient and operate successfully. The above results are similar to the findings of Morgan *et al.* (2006); Kumar *et al.* (2009).

Table 4: Opinion of livestock farmers based on feeding management services rendered by para veterinarians (n=60).

Sr. No.	Particulars	Responses patter					
		Excellent		Average		Poor	
		f	%	f	%	f	%
I	**Feeding management**						
1.	Advising growing of high yielding fodder crops	20	33.33	30	50.00	10	16.67
2.	Explains the importance of balanced diet for animal	21	35.00	26	43.33	13	21.67
3.	Assist in feed and fodder management to ruminants	22	36.66	30	50.00	8	13.34
4.	Guide in preparation of silage making and hydroponics production	11	18.33	22	36.67	27	45.00

f - Frequency, %- Per cent

Table 5: Opinion of livestock farmers based on health services rendered by para veterinarians n=60.

Sr. No.	Particulars	Responses patter					
		Excellent		Average		Poor	
		f	%	f	%	f	%
I	**Health services**						
1.	There is follow-up of treatment for diseased animal	18	30.00	28	46.67	14	23.33
2.	Educates farmers on contagious diseases management of animals	20	33.33	18	30.00	22	36.67
3.	The equipment's used by the para-veterinarians were effective	18	30.00	32	53.33	10	16.67
4.	Provide quick and timely information on livestock services (Vaccination, Disease management etc.)	20	33.33	18	30.00	22	36.67

f - Frequency, %- Per cent

Table 6 deals with breeding management the livestock farmers opined that excellent performance in assisting in timely heat detection of animals (51.66%) was followed by, average performance in pregnancy diagnosis and treatment of reproductive disorders (48.33%), advice in selection/purpose of breed (43.34%) and provide successful artificial insemination services as and when requested (41.67). The probable cause could be due to their expertise in livestock services, which makes them good at identifying disorders and diseases during pregnancy and at conducting artificial insemination. Furthermore, farmers have stated that they have trust in veterinarians' opinions when selecting superior breeds to purchase. The above results are similar to the findings of Hanley *et al*. (2020); Lestari *et al*. (2022).

Table 7 represents advisory services the livestock farmers opined that the average performance in providing information on animal insurance and subsidy Issue health certificates (45.00%), providing market information (43.33%), and Issuing health certificates (38.33%). However poor opinion in provides a general overview of the process of livestock enterprises (40.00 %). Since the majority of para veterinarians serve in rural areas, they can easily identify the aspects of animal suffering and loss incurred to their family when an animal may die suddenly for a variety of reasons. The above results are similar to the findings of Lestari *et al.* (2022).

The result lamented in Table 8 depicts the priority of livestock services. The preferences of livestock services are obtained using the mean score and they were ranked. Health services and artificial insemination were the most preferred services with a mean score of 2.0. The possible reason might be farmers frequently visit the hospital for treatment of accidents, dyspepsia, poising, infertility, and animal diseases like viral fever, anthrax, brucellosis, and foot and mouth diseases and on the other hand, the animals were taken to the hospital mostly for Artificial insemination. Followed by vaccination and deworming services with a mean score of 1.90. This could be because the government regularly raises awareness through the media and line departments. Some of the animals are susceptible to brucellosis and foot and mouth disease in the summer. Farmers get vaccinated as a preventative measure. Ecto and endo parasites infect small ruminates like sheep and goats as a result, they need to be treated every three months otherwise it leads to undergrowth and animal weight loss. The pregnancy services had a mean score of 1.70. This may be because certain cows and buffalo may not show some signs of heat.

Table 6: Opinion of livestock farmers based on breeding aspects services rendered by para veterinarians n=60.

Sr. No.	Particulars	Responses patter					
		Excellent		Average		Poor	
		f	%	f	%	f	%
I	**Breeding aspects of animals**						
1.	Advice in selection/purpose of breed	22	36.64	26	43.34	12	20.02
2.	Assist in timely heat detection of animals	31	51.66	19	31.66	10	16.02
3.	Helps in pregnancy diagnosis and treatment of reproductive disorders	22	36.67	29	48.33	09	15.00
4.	Provide successful artificial insemination services as and when requested	21	35.00	25	41.67	14	23.33

f - Frequency, %- Per cent

Table 7: Opinion of livestock farmers based on advisory services rendered of para veterinarians (n=60).

Sr. No.	Particulars	Responses patter					
		Excellent		Average		Poor	
		f	%	f	%	f	%
I	**Advisory services**						
1.	Issue health certificates	18	30.00	23	38.33	19	31.67
2.	Provide information on animal insurances and subsidy	17	28.33	27	45.00	16	26.67
3.	Provide market information	15	25.00	26	43.33	19	31.67
4.	Give a general overview of the process of livestock enterprises.	15	25.00	21	35.00	24	40.00

f - Frequency, %- Per cent

Table 8: Distribution of livestock farmers in accordance with their preferences to services rendered by animal husbandry department n=60.

Sr. No.	List of livestock services	Mean score	Rank
1.	Pregnancy diagnosis	1.70	IV
2.	Artificial Insemination services	2.00	I
3.	Vaccination and dew or min. g of animals	1.80	III
4.	Selection of animal breeds	1.90	II
5.	Record keeping and livestock insurance	1.20	VII
6.	Information regarding department services	1.50	V
7.	Input service and advisory services	1.60	VI
8.	Animal health care services and dairy management practices	2.00	I

Consequently, they may undergo a pregnancy test to avoid losing the kid by rearing unproductive animals. Input services had a mean score of 1.60. This might be due to only a few farmers getting the benefit of input services like mineral mixture, fodders seeds, poultry cages and subsidies for the construction of an animal shed.

CONCLUSIONS AND FUTURE SCOPE

It is evident from the findings that the majority of farmers were having a medium to the high level of opinion regarding veterinary services. It is time to ensure the in-time availability of veterinary services at farmers' doors. It is only possible by reducing the coverage area under each hospital and by establishing more mobile veterinary units so that veterinary service reaches every door free of cost. It is desired that veterinary officers not only concentrate on the treatment of animals but also on extension activities like consultancy services for scientific animal husbandry practices and awareness campaigns about loans, and insurance of animals, they should feel able to seek relevant support, through identifiable routes, where people are in difficulty and, as a result, are unable to care appropriately for livestock to make the dairy venture profitable for farmers.

Author contributions. Use this form to specify the contribution of each author of your manuscript.: Prepared questionaries and conducted survey in parts of Bidar and Kalaburagi districts to gather the information related specific objective of the study contributed data or analysis tools; Performed the analysis; Wrote the paper.

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Conflict of Interest. None.

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