

Chapter 1: Introduction

Bangladesh gained its independence 16 December, 1971. Our economy is agrarian based. Bangladesh is an agricultural country. Most of the people are related with agriculture directly and indirectly. Mixed farming system practices in Bangladesh continued for centuries (Alam et al;2015). About 80% of our population is employed in agriculture and livestock farming. Twenty percent people are involved in livestock sector as permanent occupation. (BBS, 2008). The contribution of magnitude of gross domestic product (GDP) is about (16.23%) in Bangladesh. But the livestock disease and disorder of animals are the most important hindrance towards livestock development in our country. There are about 22.87 million cattle, 20.75 million goat, 2.63 million sheep, 116.5 million chickens, 13.47 million duck in our country (DLS, 2014). Livestock is an integrated part of our farming system and plays an important role in the traditional economy of Bangladesh. There exists a variety of problems in livestock sector of Bangladesh such as insufficient pasture land, lack of technical expert, insufficient supply of vaccine, lack of epidemiologic study and shortage of government employee in field level and various diseases of different systems of animal. Infectious disease cause great harm in livestock. Among the various constrains in the development in livestock, disease are one of the most important limiting factor which not only degrade the productivity of cows but also causing mortality (Sarkar et al;1999). It has been estimated that about 10% animals die annually due to disease (Ali et al;2011).The dairy industry's major goal is to provide milk for consumer market. Most important constraint to achieve this goal is reduced fertility. Disease also cause nutritional deficiency and disturbance fertility. Most of the animals are weak, emaciated and non-satisfactory productive performance due to mainly malnutrition and disease.In present study I found different disease in Upazilla veterinary hospital Fatikchhari, Chattogram such as Lumpy Skin Disease,foot and mouth disease, pesti-des petites ruminant, digestive disorder, reproductive disorder, naval ill, tetanus, pneumonia, mastitis etc. The veterinary hospital is an ideal and reliable source of information about animal diseases and treatment. People of surrounding local areas bring theirs sick animals every day in the veterinary hospital to treat disease condition.(Rahman et al; 2012) who stated that

the PPR case was (5.2%) in goat. The incidence of various parasitic disease in cattle and goats as (12.4%) and (1.6%) (Karim et al; 2014). (Rahman et al; 2012) who stated that the pneumonia case was (5.11%) in cattle and 16.8% in goats. In case of FMD, Rahman et al., (2012) reported that (1.79%) cases of FMD in cattle and 0.08% in goats. Mastitis was found 1.1% in cattle (Karim et al., 2014).

Based on the above facts, present study aim to find out the disease pattern with associated risk factors in livestock in the mentioned area.

The specific objectives of the study is to investigate the prevalence of various diseases and disorders.

Chapter 2: Materials and Methods

2.1 Description of study area:

The study was conducted at Upazilla veterinary hospital, Fatikchhari, Chattogram. Fatikchhari is located in between in 22°35' and 22°58' north latitude and in between 91°38' and 91°57' east longitudes. Its population is 441863 and total area is 773.55km². Fatikchhari has some forest like areas where there are wild animals like foxes, mongooses, wild cats etc found.

2.2 Study period:

The study period was 15 October 2019 to 12 December 2019.

2.3 Study population:

The clinical study was undertaken at the Upazilla veterinary Hospital, Fatikchhari, Chattogram to determine the general clinical prevalence of diseases and disorders in livestock. The study population are cattle, sheep, goat, buffalo. The data were collected from Upazilla veterinary hospital register book and the information were taken on the specific time of study period.

2.4 Case definition:

Table 1: clinical signs of different diseases

Disease	Clinical sign	Reference
LSD	Lumps found throughout the body. swelling is seen in the brisket and limb region.	Chakrabarti,(2006); Blood and Radostits, (2000)
FMD	Profuse salivation, Stomatitis Blister on feet High temperature	Chakrabarti,(2006); Blood and Radostits, (2000)
Pneumonia	High fever,chillin. Coughing. Sneezing,nasal discharge. Shortness of breath.	Blood and Radostits, (2000)

Mastitis	Per-acute: severe inflammation of udder, serous milk Acute: moderate to severe inflammation of udder, decreased production, serous milk Subacute: mild inflammation, no visible changes in the udder	Blood and Radostits, (2000); Cockcroft, (2000)
Arthritis	Swelling of joint. stiffness of joint. Pain after palpation Fever, anorexia, Fluid is come out from the joint after aspiration	Chakrabarti, (2006)
PPR	High fever stomatitis, diarrhea nasal discharge shrunken eye pale mucous membrane, coughing.	Chakrabarti,(2006) Blood and Radostits, (2000)
Tetanus	Stiffness of muscle and hind limb, reduction of eye ball drolling of saliva, lock jaw. ophisthotonus.	Chakrabarti,(2006) Blood and Radostits, (2000)
Babesiosis	Coffee colour urine.	Blood and Radostits, (2000)
Parasitic infestation	Anorexia, diarrhea Bad odour in feces	Blood and Radostits, (2000)
Digestive disorder	Rumen is inflated with gas, anorexia Constipationa	Blood and Radostits, (2000)

2.5 Statistical analysis:

The data was collected from the record keeping sheet of UVH, Fatikchhari. Chattogram and entered into the excel-2007 sheet. The data was then transfer to the STAT/IC-13 for analysis. Descriptive analysis (basically, prevalence %) was done with diseases and disorder based on species, sex and breed. Association of the diseases also done where the results was indicated significant differences when the P value is less than 0.05.

Chapter 3: Results and Discussions

A total of 1723 different clinical cases were recorded at UVH during the study period. Based on the descriptive analysis, data revealed highest percentages patients were cattle (64.02%) followed by goat (35.28%) and other animals like buffalo and Sheep.

Table 2: Prevalence of diseases based on Species, sex, breed and infection status

Factors	Categories	Frequency(n)	Prevalence
Species N=1723	Cattle	1103	64.02
	Goat	608	35.28
	Buffalo	4	.23
	Sheep	8	.46
Total		1723	100%
Sex	Female	1127	65.41
	male	596	34.59
Total		1723	100%
Breed	Local	1105	64.13
	Cross	618	35.87

Among the affected animals Cattle (64.02%) was the maximum affected followed by goat (35.28%) and others. Again female (65.41%) are more susceptible than male (34.59%) to the diseases and disorders.

Table 3: Prevalence of different diseases in UVH

Disease /Disorder	Frequency of affected (n)	Prevalence (%)
LSD	1027	41.93
F.M.D	09	0.36
Arthritis	08	0.33
Mastitis	13	0.53
Digestive disorder	153	6.24
Pneumonia	14	0.57
PPR	123	5.02
Enteritis	7	0.28
Parasitic infestation	359	14.65
Babesiosis	3	0.12
Milk fever	7	0.28
Total	1723	70.36

Table 4: Prevalence of diseases and disorder based on different factors

Disease/ Disorder	Species				Sex		Breed	
	Buffal o	Cattle	Goat	Sheep	Male	Female	Cross	Local
LSD	0.00	41.93	0.00	0.00	15.53	26.40	11.67	30.26
F.M.D	0.05	0.31	0.00	0.00	0.10	0.26	0.30	0.06
Arthritis	0.00	0.15	0.14	0.04	0.13	0.20	0.15	0.18
Mastitis	0.00	0.20	0.29	0.04	0.00	0.53	0.50	0.03
Digestive disorder	0.04	4.01	2.17	0.02	2.02	4.22	3.03	3.21
PPR	0.00	0.00	5.01	0.01	2.05	2.97	0.00	5.02
Enteritis	0.00	0.19	0.05	0.04	0.08	0.20	0.15	0.13

Parasitic infestation	2.09	9.59	2.01	0.96	5.62	9.03	3.57	11.08
Milk fever	0.00	0.28	0.00	0.00	0.00	0.28	0.20	0.08
Babesiosis	0.00	0.12	0.00	0.00	0.00	0.12	0.12	0.00

Discussions

This study was conducted to understand the present condition of clinical diseases at the UVH, Fatikchhari, Chattogram. Domestic animals suffered from parasitic diseases more because the rural people are not willing to provide anthelmintic to them.

This year is very crucial to us because we are facing a devastating viral diseases LSD which makes our farmer loser due to lack of effective vaccine. By analysing data it reveals that among the clinical disease 41.93% is LSD. Another report revealed that the morbidity of LSD is 10-20% (Shahidul et al;2020)

Other diseases don't cause so much loss to the animal than LSD

Chapter 4: Conclusions

The knowledge attained from this study will help me in future to diagnose the disease more efficiently and to take necessary steps for preventing the diseases at national policy level. By analyzing data the most found disease is LSD (41.93%) out of eleven diseases followed by parasitic infestation (14.65%). Female animals are more affected than male animals.

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Acknowledgment

The author feel proud in expressing his deep sense of gratitude and indebtedness to internship supervisor Professor Dr. Bhajan Chandro Das, Department of Medicine and Surgery , Chattogram Veterinary and Animal Sciences University (CVASU) for his valuable advise technical support, leadership direction and dedication to provide me the study initiatives and valuable suggestions to write the report. His guidance helped me in all the time of research and writing of this reports. Thanks him to gave me the golden opportunity to do this wonderful work on the topic. I could not have imagined having a better advisor and mentor for my report. The author gratefully admits the help of DR. Omer Faroque and DR Sumen Chakma for their scholastic guidance and valuable suggestion during the work.

Biography

I am Saikat Barua, son of Mr. Nirjon Kanti Barua and Mrs. Sanchita Barua. I passed Secondary School Certificate in 2011 (GPA-5.00) followed by Higher Secondary Certificate in 2013 (GPA-4.80). Now I am an intern veterinarian under Faculty of Veterinary Medicine in Chattogram Veterinary and Animal Sciences University (CVSU). In future, I would like to work as a veterinary practitioner and research on animal diseases and production improvement in Bangladesh.