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A STUDY ON THE LIVESTOCK TECHNICAL SERVICES IN BANGLADESH

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ABSTRACT

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A study was conducted on the Livestock Technical Services in Bangladesh covering rural areas with the objectives of increasing livestock productivity increasing diagnostic and prescription system at veterinary hospitals and clinics. It was attempted to know the veterinary treatment status in rural areas of Bangladesh, and to identify the dominant problems of the livestock treatment components, through direct technical field investigations. According to the results the essential parameter inclusions were in the range of 1-25%. The results showed a perfection level being only 17.4% as regards diagnostic components. It was observed that no standard clinical format for prescription was used in the service and suggested immediate actions for controlling field problems in the livestock sector. The veterinary health treatment status showed a very poor. The findings mentioned here showed that there were no legal bindings for giving a prescription mentioning approved medicine preparing clinical back-sheets containing health status. The training programs for veterinarians/technicians did not contained compulsory health parameters and veterinary Council Guidelines which must be included in a modular form on the basis of one standard prescription guideline.

Key words: *prescription service, disease diagnosis, livestock productivity*

INTRODUCTION

Agriculture including livestock continues to be the largest of Bangladesh economy and is currently contributing 20.6% to the gross domestic product (GDP). Livestock is the most important sub sector of agriculture with national GDP contribution of almost 3% and 17% to the agricultural GDP (BBS-BEC 2011). Livestock also contributes significantly towards national export. The sector provides new raw material for industry, serves a social security for the rural poor, and provides security against crop failure or damage during draught or cyclone. At the national level, livestock sector employs about 20% of rural labor force.

The major constraints to dairy cattle production are the shortages of quality feeds and fodder, availability of better breeds of cattle, unscientific management practices and lack of institutional support, research and training, which would be beneficial to the farming and non-farming animals. Livestock is an important part of the integrated farming systems in Bangladesh, but it is characterized by very low productivity. The density of livestock is very high and availability of fodder is a constraint. According to the Bangladesh Agricultural Census (BAC 2008) the numbers were cattle 25.7, buffalo 0.5, goat 16.3, sheep 1.3, fowl 97.8, duck 39.4 and pigeon 7.5 million in our country.

It may be mention that the veterinary technical activities covering surgery and medicine is administered by the Director (Extension) Directorate of Livestock Services (DLS).

Sudden and insidious outbreak of many diseases is the major constraint to cattle production in Bangladesh. The extent of losses due to disease is very high. The major diseases are anthrax, hemorrhagic septicemia (HS), foot-and-mouth disease (FMD), black quarter (BQ), diseases caused by infestation with liver flukes and calf diarrhea (Ali 2000). Incidence of some cattle disease differs between the seasons and locations. There are eight Field Disease Investigation Laboratories (FDIL) located in different parts of the country are not closely concerned with diagnoses and treatment of livestock diseases especially, during the naturally hazardous periods. The importance of livestock has increased in Bangladesh in view of the growing income and urban demand for livestock products; however, the production system has not been able to respond to growing opportunities in view of continuing poor productivity and poor organization of smallholder farmers (GOBUN 2005). None the less, the potential remains high but capitalization of that potential requires policy, technology and institutional support from both government and non-government stakeholders. In the context the present piece of research was undertaken to know the veterinary treatment status and to identify the dominant animal diseases and its treatments. The importance of livestock has increased in Bangladesh in view of the growing income and urban demand for livestock products; however, the production system has not been able to respond to growing opportunities in view of continuing poor productivity and poor organization of smallholder farmers (MOA 2005). None the less, the potential remains high but capitalization of that potential requires policy, technology and institutional support from both government and non-government stakeholders.

In the context the present research program was formulated and implemented with the main objectives of increasing livestock productivity and sustainable food security and poverty reduction and alternate livelihood development for the poor. It was intended particularly for dealing with increasing diagnostic and modern prescribing format system at rural level veterinary hospital, production and productivity of livestock through improving management practices and support services. The specific objectives of the study were to i. to know the veterinary treatment status in rural areas of Bangladesh, ii. to identify the dominant types of need for

different animals diseases, iii. to know the prescription needs required for the veterinary technical service system, and to develop a IT and prescription need based extension training presentation guideline material.

MATERIALS AND METHODS

Methodology used in the study broadly included symptomatic diagnostic clinical treatment studies and on-clinic studies with a questionnaire.

Population sampling: Covered Livestock service departments and agencies of 7 Districts and 10 Upazila/centers/clinics

Questionnaire Guideline contained Characteristics of the site: District Upazila/site...Nomenclature of the Office...Head of Office...Status of the Clinic Lab Total no. of staff...

Characteristics of the patient animal: Species. Age Complain... Problem identified...AI service

Technical elements of prescription: Patient animal health status records:
Temp-⁰F, Pulse/min Respiration/min, Skin/fur, Hair

Characteristics of: Stool--Urine- Blood---Saliva---Diagnosing the problem

RESULTS AND DISCUSSION

The data collected through the survey were tabulated and analyzed for getting the outputs as per objectives of the studies. The results are given here in different forms and described as per major topics. The results of investigation were analyzed comparing these with standards as given in the Table 1 here.

Table 1. Standards rectal temp, pulse and respiration rates of different animals

Species	Temp. range ⁰ F	Pulse rate/min	Respiration rate/min
Cattle	99.5-103.1	60-80	15-30
Calf	101.3-104.9	100-120	20-25
Buffalo	99.5-102.2	60-80	15-30
Sheep	101.3-104.0	70-90	12-15
Goat	101.3-104.0	70-90	12-15
Dog	99.5-102.2	60-120	20-22
Cat	100.4-103.1	100-140	20-30
Fowl	104.9-109.4	180-440	15-30
Duck	105.3	180-230	30-50
Pigeon	105.8-111.4	140-400	20-40

Disease Diagnosis

It is primary think to make a patient and disease profile on the basis of which the treatment will be given. But it may be seen from the results (Table 2 and Figs. 1-2) that health records of the animals is very low. The mean performance level is 50.7% and there is scope to keep the animal in the clinic being only 4.2%.

Table 2. Animal health parameter documentation – Cow

	Chandpur	Comilla	Narayanganj	Gazipur	Munsiganj	Dhaka	Chittagong	Mean
Species	51	49	62	52	46	45	36	48.7
Age	42	35	45	51	42	45	32	41.7
Complain	46	31	51	32	37	49	38	40.5
Animal clinic	5	5	6	6	4	1	3	4.2
Problem identity	49	52	58	61	38	54	43	50.7
	38.6	34.4	44.4	40.4	33.4	38.8	30.4	37.2

The results show the patient animal profile of different district. It may be seen from the results that Upazila veterinary hospitals or office/clinic do not have any shelter for seriously weak or animal coming from far areas. It indicates that treatment status is sub-standard. According to the results patient profile made by Upazila livestock Officer is less than 40% than what is required by the system. So there remains great scope of improving the animal treatment situation at the local District and Upazila or lower levels.

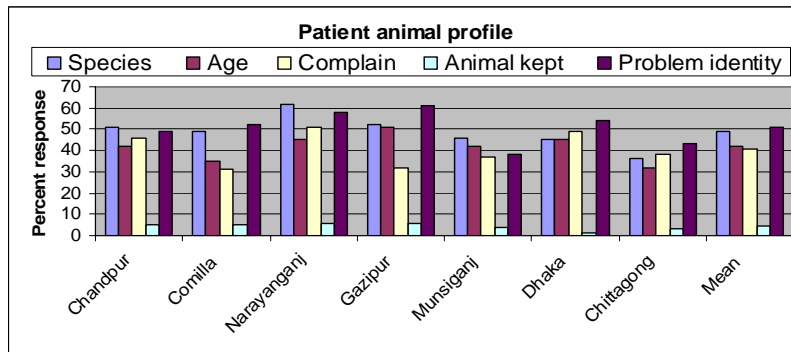


Fig. 1. Patient animal records

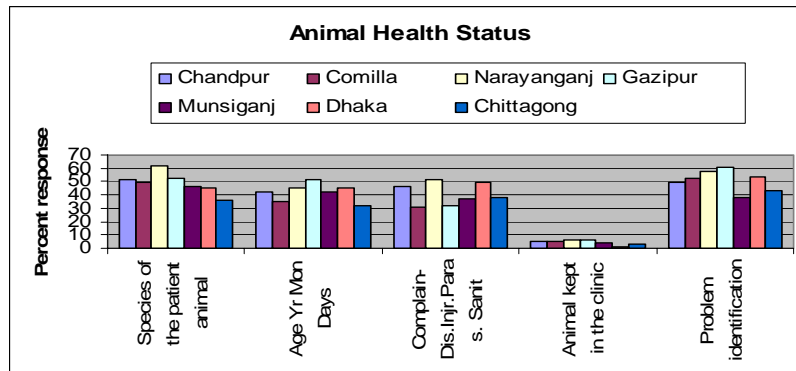


Fig. 2. Patient animal records

Comparative Veterinary Service as per Districts

The result shows the District wise animal health point documentation of animal are given here (Table 4). The results on the animal health status of different Districts is given in the Fig. 3. The data show that among the districts studied, the Narayanganj and Gazipur had slightly better animal health services followed by Dhaka which may be due to its nearer position to the capital city. The parameters recorded in all the Districts as mean found to be 37.2% (Tables 3-6) which may be stated as less than the required minimum status as to its quality of health service system.

Table 3. District wise performance status

Chandpur	Comilla	Narayanganj	Gazipur	Munsiganj	Dhaka	Chittagong	Mean
38.6	34.4	44.4	40.4	33.4	38.8	30.4	37.2

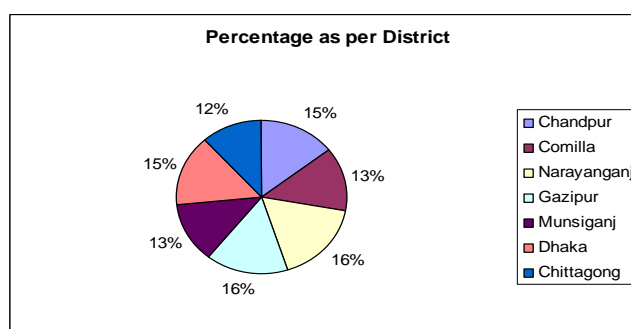


Fig. 3. District based performance

Table 4. Mean animal health parameter records–Cow hybrids

Parameter	Mean index (%)
Species/breed documentation	48.7
Age	41.7
Complain analysis	40.5
Animal keeping facilities in the clinic	4.2
Problem identification	50.7
Mean	37.2

Table 5. Technical elements of diagnosis- Cow hybrid

	Chandpur	Comilla	Narayanganj	Gazipur	Munsiganj	Dhaka	Chittagong	Mean
Temp °F	25	42	46	39	16	21	26	30.7
Pulse/minute	11	22	10	15	9	6	14	12.4
Respiration/ minute	9	8	7	15	12	11	13	10.7
Skin/fur	29	37	46	57	37	50	62	45.4
Test: Stool and urine	6	4	5	9	7	11	8	7.1
Test: Blood saliva etc	3	3	4	7	5	6	7	5.0
	13.8	19.3	19.7	23.7	14.3	17.5	21.66	18.6

The results given in the table on technical elements diagnosis show that the documentation level is only 18.57% due to lack of clinical test of the internal body parameters. It was indicated that treatment side was supposed to be sub-standard at the client level, which may be stated as great problem.

Diagnosis of the problem/ complain –Poultry hybrids and Pigeon

It was found positive that the rearing of hybrid poultry and various species of pigeon was increasing day by day. It is reflected in the fact that so many problems are reported to the Veterinary Office as regards their disease and other physical problems. The present study on its health treatment showed a very poor situation as because the perfection level of the treatments were found to be only 31.74%.

Table 6. Patient animal health parameter records for Poultry hybrid and pigeon

	Chandpur	Comilla	Narayanganj	Gazipur	Munsiganj	Dhaka	Chittagong	Mean
Species	28	19	34	31	23	26	25	26.5
Age	43	37	26	36	33	32	38	35.0
Complain	32	35	39	31	32	41	35	35.0
Animal clinics	9	3	7	54	32	27	29	23.0
Problem	37	24	38	41	33	58	43	39.1
	29.8	23.6	28.8	38.6	30.6	36.8	34	31.7

Perfection level of the treatment

The results given in the Table 7 below show a perfection level being only 17.4% which was mainly due to the absence of diagnostic tests of blood, saliva, stool, urine etc as its facilities were lacking. This type of situations that occur frequently in the rural areas was indicated by Hossian (1996).

Table 7. Technical elements of diagnosis – Poultry hybrids and Pigeon

	Chandpur	Comilla	Narayanganj	Gazipur	Munsiganj	Dhaka	Chittagong	Mean
Temp °F	29	26	16	26	17	15	14	20.4
Pulse/minute	19	23	11	31	12	15	13	17.7
Respiration/minute	19	13	12	19	27	17	22	18.4
Skin/fur	46	51	35	56	27	37	38	41.4
Tests: Blood saliva+	5	2	4	5	3	6	2	3.8
Stool and urine	2	3	3	2	6	1	1	2.5
Mean	20.0	19.6	13.5	23.1	15.3	15.1	15	17.4

The major findings of studies conducted are briefly mentioned here. The analyzed data on the technical elements of diagnosis in animals show that only the fur conditions were noticed and responded by highest clients. The other essential parameters were in the range of 1-25%. The results showed a perfection level being only 17.4% as regards technical elements of disease studies. It may be stated from the findings on diagnosis of the problem and the clinical elements that no standard format for prescription are not followed in the service which makes it very flexible and popular oriented. It requires immediate update for controlling field problems in the livestock sector. The present study on its health treatment showed a very poor situation as because the perfection level of the treatments were found to be only 31.74%. The findings mentioned here showed that there were no legal bindings for giving a prescription mentioning approved medicine preparing clinical back-sheets containing health status and systems. The training programs for veterinarians or veterinary technicians do not essentially include the compulsory health parameter points as done by medical council guidelines though it was mentioned in the registration process.

CONCLUSION

In the context of the present findings the following conclusions may be made which will improve the existing critical situation of Livestock Veterinary Service. To make a careful Diagnosis and evaluation of the conditions

for which the drug is to be used should be done very carefully and scientifically. Every veterinary Doctor must have laboratory attachments or a mobile treatment kit specially for the rural areas for problem analysis. There should be a standard prescription format to be legally followed by the vet graduates uniformly over the country. The training programs of Veterinarians and technical hands must include the legal aspects of Livestock related by-laws in a modular method. Mini laboratories should be developed for animal disease diagnosis.

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