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DOMESTIC ANIMAL HEALTH AND TRAINING SERVICE IN THE SOUTHERN BANGLADESH COASTAL DISTRICTS

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ABSTRACT

Hossain SA, Rahman MGUI, Ali MA, Hossain SA (2014) Domestic animal health and training service in the southern Bangladesh coastal districts. *J. Innov. Dev. Strategy*. 8(2), 28-32.

Studies were conducted on the domestic animal health and training service in the southern Bangladesh coastal districts with the objectives of identifying the dominant types of diagnostic parameters and problems and to know the technical element needs required for prescription and follow up skill training requirements. The major results obtained from the studies showed that the diagnosis of the problem/complain show that the perfection of the problem identification is 39% due to poor detailing of the complaints and analysis of other parameters. The analyzed data on the technical elements of diagnosis showed that only the skin/ fur conditions were noticed and responded by only a quarter as highest. Other parameters were within the range of 7-26% indicating a serious stress in the service leaving a great scope of its improvement. The results on the Technical elements documented as per District base showed that the higher percentage is in Noakhali being lower in Barguna district being extreme rural. The results on diagnosis of the coastal region poultry complains showed that analysis of clinical items at the on-farm level was only 30%. On the basis of the findings a prescription model and one skill training schedule has been recommended. However, further studies are required in these aspects specially for skill training methods.

Key words: *animal health, prescription training service, disease diagnosis, coastal zone*

INTRODUCTION

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. The costal low land of Bangladesh has a large milk deficit area yet has considerable potential to meet the unsatisfied demand through peri-urban milk production. If we resolve biological, social and economic constraints to the development, adoption and productivity of sustainable household dairy system, it will be helpful to minimize the deficit of milk and meat for our consumption. Wide-ranging expansion of livestock farming is needed to remove the existing protein deficiency along with cutting the poverty rate in the costal belt of Bangladesh (BBS 2008; and BBS-BEC 2011).

The unemployment problem in the rural areas could be reduced to a greater extends through making the dairy farming popular in the costal belt of Bangladesh. Animal rearing and its productivity have a direct impact on livelihood income and Uptake of animal source protein. The respective contributions of domestic livestock are still dominated by dairy industries in Asia and also in Bangladesh (GOBUN 2005). The per capital daily supplement of milk and meat is around 30 ml and 10 grams against the mean requirement of 250 ml and 120 grams respectively facing an acute shortage of milk and meat by 80-90%. The coast consists dynamic line between land and sea, covering the savanna area where interactions among land, soil and sea takes place integrating in many in the Khulna, Barisal and Chittagong regions. Livestock activate an pivotal sub-sector of agriculture with national GDP about 3% of national and about 20% to the agricultural GDP (MoA 2005; BBS 2008; and BBS-BEC 2011).

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 environment. Although the nineteen districts in the coastal zone occupied 32% of the country's surface and have 28% of the population. The majority of dairy farms in Bangladesh are privately owned and entrepreneurs are also getting involved in small-scale and commercial dairy farming in urban and peripheral urban areas through micro-credit programs (Ali 2000). The costal low land of Bangladesh has a large milk deficit area yet has considerable potential to meet the unsatisfied demand through peripheral urban milk production. If we resolve biological, social and economic feed constraints to the development (Saadullah 1989), adoption and productivity of sustainable household dairy system, it will be helpful to minimize the deficit of milk and meat for our consumption. Wide-ranging expansion of livestock farming is needed to remove the existing protein deficiency along with cutting the poverty rate in the costal belt of Bangladesh. The majority of dairy farms in Bangladesh are privately owned. Entrepreneurs are also getting involved in small-scale and commercial dairy farming in urban and peripheral urban areas through micro-credit programs.

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 but none of them are situated in the costal belt of Bangladesh and are not closely concerned with diagnoses and treatment of livestock diseases especially, during the naturally hazardous periods, when the extent of losses are at the highest level. In view of the above background and importance the present piece of research was formulated with the objectives such as to identify and prioritize the treatment and training need for different domestic animals.

MATERIALS AND METHODS

The materials and methods followed in the present studies include on and off -station clinical investigation, on-farm management studies with a questionnaire; institutional training evaluation and developing a model and technical prescription and training service guideline for future strategic planning. The materials used in the studies were previously recommended by several workers (Hossain *et al.* 2013; Rahman *et al.* 2013a and Rahman *et al.* 2013b). Population sampling coverage: Livestock service departments and her GO/NGO Agencies of different Agro-Ecological Zone (AEZ) based10 areas.

Questionnaire guideline

A. Characteristics of the study site

1. District…2. Upazila……3. Union… 4. Village……5. Site/Centre name 6. Name / Designation ……..
7. Status of the clinic…8. Laboratory status 9. No. of Doctors /technicians 10. Other information.

B. Characteristics of the patient animal

1. Species of the patient animal: 2. Breed name……3. Health status……4. Age--
5. Complain….6. Problem identified……7. Status of the patient animal:

C. Technical elements of prescription

1. Patient animal health parameter records: 2. Temperature----^{0}F, 3. Pulse rate /per min
4. Respiration rate/ min. 5. Skin/hair condition 6. Characteristics of stool, urine, blood, saliva, 7. Diagnosis of the problem/ complain ……

The Acts identified related to the Veterinary Services consulted in the studies were: i) Pesticide Act 2002 ii) Animal Medicinal Drug Use Classification Act (AMDUCA) 1994; iii) Animal Disease Act 2005; iv) Animal Disease Rules 2008; and v) Veterinary Practitioner Act 1982.

RESULTS AND DISCUSSION

The results obtained from the studies are sequentially presented here with necessary interpretations. The results given in the Table on diagnosis of the problem/complain show that the perfection level of the problem identification varied from 32-46% at different Districts. The perfection level was measures as mean value of several parameters detailing the complains and analysis of other parameters.

Patient animal health parameter records:

The results obtained on the patient animal health records are given in the Table 1 and Fig. 1. The results apparently indicated less scientific veterinary service at the client level was very weak and incomplete.

Table 1. Percent positive response for disease diagnostic parameter

Parameters	Patuakhali	Barguna	Pirojpur	Chittagong	Noakhali	Mean
External symptoms	32	49	26	15	36	31.6
Health indicators	42	48	32	26	39	37.4
Verbal complains	41	29	42	47	42	40.2
Test results	53	27	27	29	38	34.8
Disease history	61	63	48	44	43	51.8
Mean	45.8	43.2	35	32.2	39.6	39.16

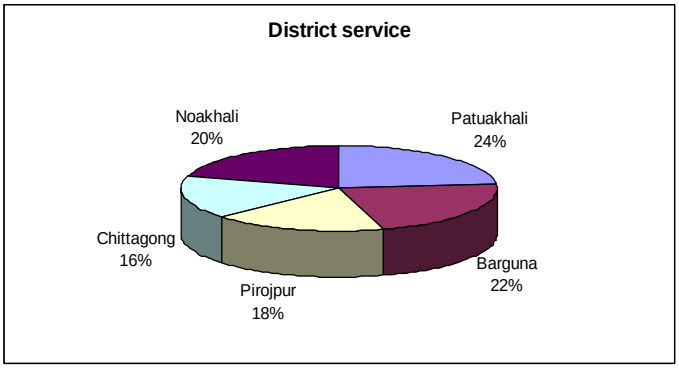

Fig. 1. Mean positive response for disease diagnostic parameter as per districts

The results also comparatively show that the higher percentage is in the Patuakhali district and the lower being the Barguna district. The pie chart (Fig. 1) show the perfection level of the complain identification as per Districts. Similar findings were also apprehended and recognized by many workers including (Hossain 1996) and gave recommendations for improvement of the situation. Similar related results were also reported which strongly supported by these findings (Hossain *et al.* 2013; Rahman *et al.* 2013a; and Rahman *et al.* 2013b).

Diagnosis of the problem for Poultry

The results presented here (Table 2) on the patient animal health parameter records of poultry Birds of coastal region show that analysis of clinical items at the on-farm level was only 30%. The problem identification standard was only 28% which indicate a quack type of treatment or giving treatments only in case of very known popular diseases and surgeries/dressings. The results also comparatively show that the higher percentage is in Patuakhali district and the lower being in Noakhali district.

Table 2. Percent positive response for poultry health parameter records

Items	Patuakhali	Barguna	Pirojpur	Chittagong	Noakhali	Mean
Breed name	31	19	26	25	13	22.8
Health status	36	17	32	38	33	31.2
Age	31	35	41	35	32	34.8
Complain detailing	54	31	27	29	32	34.6
Problem identification	41	14	28	33	23	27.8
Mean	38.6	23.2	30.8	32	26.6	30.24

Technical elements of diagnosis for poultry

The results obtained on the technical elements of diagnosis in case of poultry birds including local chicken and ducks show (Table 3) that the essential elements of clinics namely temperature, pulse, respiration etc are recorded but it was only within the range of 14-16%. Test of stool, urine blood, saliva were 16% but it was for visual features like colour, consistency, fiber, looseness etc. The mean performance level was answered by only 19% respondents.

Table 3. Technical elements of diagnosis in case of poultry birds

	Patuakhali	Barguna	Pirojpur	Chittagong	Noakhali	Mean
Temperature-^{0}F	16	15	14	9	17	14.2
Pulse rate -per min	11	15	13	19	12	14
Respiration rate….per min	12	17	22	19	7	15.4
Skin/fur condition	35	37	38	46	27	36.6
Test of stool, urine, blood, saliva	10	19	16	15	19	15.8
Mean	16.8	20.6	20.6	21.6	16.4	19.2

The results showed comparatively higher percentage is in Patuakhali district and the lower being in Noakhali district. The major findings of studies conducted are briefly mentioned here. The results given in the table on diagnosis of the problem/complain show that the perfection of the problem identification is 48% due to lack of detailing of the complains and analysis of other parameters. It clearly indicates less scientific veterinary service at the client level. The analyzed data on the technical elements of diagnosis in animals show that only the fur conditions were noticed and responded by 27% as highest. The other essential parameters were in the range of 7-26% indicating a serious stress in the service leaving a great scope of its improvement.

Prescription Model:

In the light of these findings and interpretations, a model format for prescription service specially for the unprivileged remote areas, is given here (Table 4) which may a more perfect status after further technical studies.

Table 4. Model of a prescription format

No	Prescription format back sheet medicine	Specification of the items	Dose	Total course Medicine and days	Frequency of use	Side effects and precautions
1	MEDICINE					
2	VITAMINS					
3	FEED					
4	PRECAUTION					
5	OTHERS					

Technical elements of Training

The analyzed data on the technical skill elements show that breed physiology and productivity scored about 49% as highest through practical lab skills-instrument and IBCT method of training using clinic + multimedia BCT methods. Only the fur conditions were noticed and responded by highest clients. 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 improvement 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 at the unsatisfactory level.

Table 4. Training skill elements for poultry and suitability of training methods

Topics	Classroom	Distant/ open	Clinic based	Multimedia mm IBCT	Clinic + mm IBCT
Breed Physiology and Productivity	29	36	46	56	77
Livestock, Fish and Environ Legislations	19	23	31	40	42
Farm Clinic establishment	10	18	68	43	62
Practical lab skills-Instrument and IBCT	7	8	62	69	82
Genetic modification of animal and AI	12	13	42	49	57
Animal Health Administration	20	27	34	29	36

Training module content: Day/week Topics

Comparative etiology and symptomology

1. Breed Physiology and Productivity
2. Livestock, Fish and Environmental Legislations
3. Farm Clinic establishment
4. Practical laboratory skills-Instrumentation and ICT
5. Genetic modification of animal and AI
6. Animal Health Administration

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 as previously initially worked by several scientists as for the methods and situation describing the disease diagnosis and local treatments (Hossain 1996; and Hossain 1998). 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. In the context of the present findings the following recommendations may be made which will improve the existing critical situation of Livestock Veterinary Service. For making a careful diagnosis and evaluation of the conditions for which the drug is to be used should be worked out and should be incorporated in the IBCT training manuals and thus in the prescription format. Every veterinary doctor should have laboratory attachment or a mobile reliable rapid test kit specially in the rural areas for problem analysis. There should be a standard prescription format to be legally followed by the veterinary graduates uniformly over the country. The training programs of Veterinarians and technical hands preferably should include the legal aspects of livestock services related Acts and by-laws. Mini laboratories should be developed for disease diagnosis providing a post of pathologists in veterinary hospitals.

CONCLUSION

It may be concluded 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 development for controlling field problems in the livestock sector. Test of stool, urine blood, saliva were 16% but it was for visual features like color, consistency, fiber, looseness etc. The mean performance level was answered by only 19% respondents. Training Module content as identified are AEZ-Agro-Ecological Biophysical Animal Factors of coastal Bangladesh (AEZ-12, 13, 14, 18, 19, 23 and 24) UNDP BARC, Breeds-Breeds and Productivity, Administration-Livestock Legislations, Management-Farm Panning and Management. Treatment-Treatment practical skills-Instrumentation and ICT, Community Medicine-Sanitation prevention and social administration, Business Administration-Eximport requirement of inputs and outputs of different countries. IBCT Training- Information Based Communication Technology (IBCT), Clinic service and specific training. 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. The findings show that the overall performance was comparatively higher in Patuakhali district and being lower in the Barguna district. In the context of the present findings the following recommendations may

be made which will improve the existing critical situation of Livestock Veterinary Service. The training programs of Veterinarians and technical hands must include the legal aspects of Livestock related by-laws.

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