

PREVALENCE OF CATTLE DISEASES AND THEIR PREVENTIVE MEASURES IN SELECTED VETERINARY RANGES OF AMPARA DISTRICT

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ABSTRACT

A survey was conducted to find out the prevalence of cattle diseases and their preventive measures. One hundred and fifty farmers were surveyed in three veterinary ranges of Ampara district namely, Sammanthurai, Ampara and Pottuvil. Relevant data were gathered through structured questionnaire from randomly selected livestock farmers in each veterinary range and the regional veterinary surgeons. Reports of the Department of Animal Production and Health (DAPH), private veterinary medicine dealers and Divisional secretariats assisted to get the secondary information for this study.

Foot rot, Foot and Mouth disease (FMD), Bloat, Mastitis and abortion were the diseases found to be the most prevalent in the study area. The results of the study revealed that about 90% farmers have encountered diseases in their cattle and the remaining 10% farmers were not aware of the diseases. However, none of them could define the stage of the disease at which the occurrence of a specific clinical sign was high. Most of the farmers lack in clear knowledge regarding the diagnosis of the diseases and suitable preventive measures. About 88% farmers did not practice any preventive measures as they were not aware of such aspects. The remaining 12% farmers adopted some preventive measures to some extent including hygienic practices and recommended management practices.

Regarding the veterinary services, majority of the farmers i.e. 70.5%, 68.5% and 65% from Pottuvil, Sammanthurai and Ampara veterinary ranges respectively, visited their veterinary surgeon after their own traditional treatment for their cattle. However, 24%, 23% and 19% of the cattle farmers from Sammanthurai, Pottuvil and Ampara respectively never visited the veterinary offices for treatment. Among the respondents about 22% farmers, who own large numbers of cattle, did not even care the death incidences of their cattle. The average mortality rate was estimated to be one per eight cattle annually.

Keywords: Veterinary range, Cattle diseases, Veterinary Surgeon, Preventive measures

INTRODUCTION

The economic efficiency of a farm depends greatly on the productivity of the animals. Poor health condition of animal adversely affects productivity and therefore profit in several ways including death of animals, retarded growth and reduced productive efficiency. Health of an animal is expressed by its appearance and physical activity. Shining skin coat, alertness (the quick response to stimuli), normal stance and gait and good appetite always signify good health. Any departure from these usually suggests an illness.

Preventive measures such as, routine vaccination and strategic de-worming programmes must be emphasized in farm management practice in order to control diseases effectively. Animals generally have an efficient

defense mechanism evolved primarily in the immune system of the body. The efficiency of this mechanism however, depends on number of factors. When these factors are not present at an optimum level, the animal could no longer defend against disease causing agents. As a result the animals will be susceptible to the disease. Diseases are caused by specific agents which may be infectious (micro organisms) or non-infectious such as, metabolic disorders, the deficiency or excess of essential nutrients *etc.*

In Ampara district, most of the farmers rear indigenous breeds of cattle in which the genetical potential is substandard. However, some farmers brought some improved breeds of cattle but they become lower productive as a result of poor management practices.

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There are plenty of disease conditions in Ampara district but, the problem is proper diagnosis due to the unavailability of veterinary investigation centers (VIC) in the district or even in the eastern province. There are nineteen veterinary ranges in Ampara district and only ten veterinary surgeons (VS) are being employed but, there is no any VIC. There are only eight VICs in whole Sri Lanka. Samples from suspected animals are sent to VIC for identification of diseases.

There are number of conditions such as, abortion, lameness, weight loss, lack of production, lack of appetite, diarrhoea *etc* which leads to higher mortality rate. However, all the cases are not taken into the account because most of the farmers are not consulting their VS. However, a number of reported confirmed cases have been considered in this study. Since, the most of the farmers were not capable to reply for the issues related with health care it was very difficult to gather data supports to the study.

The main objective of the study was to find out the important diseases in cattle reared in Ampara district and seeking preventive measures, to find out indigenous treatments under practice and to know about related services rendered by veterinary offices.

MATERIALS AND METHODS

This survey was conducted in Ampara district focusing on three Divisional Secretariat divisions in three different veterinary ranges namely Ampara, Sammanthurai and Pottuvil.

An exhaustive list of cattle farmers was prepared from each of the three veterinary ranges with assistance of livestock development officer and range veterinary surgeons. According to the list, five prominent cattle rearing villages were selected from each veterinary division. From each village, ten cattle farmers were randomly selected. Thus, the final sample comprised of 15 villages and 150 respondents.

Primary data were collected from sampled frames, through pretested structured questionnaires by interviewing the farmers and relevant officers at their door step. Secondary data were gathered from the

Department of Animal Production and Health (DAPH), Private veterinary medicine dealers and divisional secretariats.

Data analysis

Data were analyzed using MS-Excel spread sheet and SPSS (Statistical Package for Social Science) software (Version 11.0).

RESULTS AND DISCUSSION

Disease problems and vaccination practice

The survey results indicate that 90% of the farmers encountered cattle diseases and remaining 10% of the farmers still have not found any disease. The result was supported by the vaccination practice (Table 1). This vaccination programme was done according to the vaccination schedule instructed by the veterinary surgeons and livestock development officers (Table 2). Though 90% of them encountered ill conditions, none of them could define the stage at which, the occurrence of a specific clinical sign or disease is more. At present HS vaccine is practiced annually and vaccines for Black Quarter and FMD are not given frequently but only in case of emergence in the Ampara district.

Table 1: Adoption of vaccination in each veterinary range

Veterinary range	Vaccination (%)	
	Vaccinated	Not vaccinated
Ampara	92	8
Sammanthurai	88	12
Pottuvil	87	13
Average	89	11

Most of the farmers do not know what disease is, they only know some symptoms of various diseases and they are trying to treat for those symptoms on their own. Since there are similar clinical signs for different diseases farmers enlarge their problems.

Table 2: Vaccination schedule against common infectious disease of cattle

Disease	Primary Vaccine	Secondary vaccine	Booster vaccine
HS	4 months	7 months	12 months+annually thereafter
FMD	4 months	5,7 months	12 months and biannually thereafter
BQ	9 months	9 months	12 months and biannually thereafter

Source: Cattle and Buffalo farming, Hand book for veterinarians, 2002

Majority of the farmers (88%) did not practice any preventive measures to facilitate a healthful environment for their cattle. Some of them replied as it is unwanted, others replied as it is just waste of money and most of them were unaware of preventive activities. But, in accordance with more scientists conclusions most of the diseases are better to prevent than treat for economic purposes. Remaining 12% of the farmers adopted some preventive activities for a very limited extent such as sterilizing milking utensils, de-worming, cleaning (insufficient), etc. But the major aspect of prevention was proper cleaning of the farm and its surroundings which was very rare in the study area.

Services from the Veterinary office and medicine outlets

Percentages of farmers visit the veterinary office is given in Table 3. Visit of farmers to the veterinary offices were categorized into 3 groups such as soon after the disease symptom is found, after the first aid is done and farmers not visiting at all. Majority of the farmers visit veterinary offices after their own treatment to the diseased cattle. This may be due to the large herds and carelessness of death incidence of their animals. Because they think their farms are moving in a profitable and constructive way but, the fact is not accepted. Therefore, they were in need of training in this regard.

Table 3: Percentage of farmers visits the veterinary offices

Veterinary range	Percentage of farmers visiting veterinary office (%)		
	After disease symptom	After the first aid	Not visiting at all
Ampara	16.0	65.0	19.0
Sammanthurai	7.5	68.5	24.0
Pottuvil	6.5	70.5	23.0
Average	10.0	68.0	22.0

All the medicines or drugs for the animals have to be bought from private medical shops which are more than sufficiently available in every parts of Ampara district. Only the vaccines are provided by government veterinary offices which are issued free of charge. All the farmers included in the study area purchase the required medicines at private shops and all the available medicines could be bought in the district itself.

Indigenous treatments

Almost 90% of the farmers follow some indigenous treatments against some clinical signs indicated in the Table 4. But only 10% of the respondents who are inexperienced did not adopt any similar treatments.

Table 4: Indigenous treatments practiced by the farmers

Clinical sign	Treatment
Loss of appetite	Oma water
Worm attack	Caster oil
Raised body temperatures	Neemoil

Type of disease and cause of death

The type of diseases and the causes of death as responded by the cattle farmers are given in the Table 5 and Table 6 respectively. Every farmer loses their cattle in the rate of one calf per annum for every eight animals.

Table 5: Number of different diseases by veterinary range wise

Veterinary range	Number of Diseased cattle			
	Foot rot	FMD	Mastitis	Abortion
Ampara	27	78	5	>64
Sammanthurai	32	98	4	>80
Pottuvil	53	84	4	>56
Total	112	260	13	>200

Black Quarter (BQ): There were sporadic occurrences of this disease in Ampara district. The latest report of this disease was on October 2007 at a village called Maha Oya. Therefore, vaccination practices were carried out to control this disease in border villages (Only in case of emergence). There were no any other reports of this disease at the study area now.

Foot rot: Large number of foot rot cases were reported at Pottuvil that was 53 cases whereas, Ampara and Sammanthurai recorded 27 and 32 cases respectively during nine months of period between January 2008 and September 2008.

Foot and Mouth Disease (FMD): Ampara district is an endemic pocket for FMD. It is inevitable during the rainy seasons. It was a well distributed disease among the study area and 98 cases were reported in Sammanthurai while, 78 and 84 cases were reported in Ampara and Pottuvil respectively during the last rainy season between December 2007 and February 2008.

Bloat: This is one of the problems that cattle often undergo in the study area. There was no exact number of cases reported in the study area as it is curable and preventable by selected and restricted feeding practices. It is commonly found in cattle reared under semi-intensive system.

Hemorrhagic septicemia (HS): Through the annual mass vaccination programme the HS has been highly minimized (De Alwis, 1992). According to the current report HS has not been reported for last four years in the Ampara district. But there are possibilities of epidemic in future.

Mastitis: Since there are no improved breeds of cattle in Ampara district the milk production is low. However, few clinical cases of mastitis disease have been reported due to the poor milking practices. There were 13 cases of clinical mastitis reported in the study area during the period July 2007 to April 2008. Above mentioned clinical cases were found only in the large scale farms. Five cases were reported in Ampara while four cases in both Sammanthurai and Pottuvil.

Abortion: Since there were several cases of abortion (more than 200) reported in the Ampara district during the year 2008, the exact causes for abortion were not found out. Abortions in cattle may be due to the disease or improper use of medicines without consulting the veterinary surgeon. According to the analyzed data more than 64, 80 and 56 cases at Ampara, Sammanthurai and Pottuvil have been reported respectively.

Table 6: Causes of death of cattle in each veterinary range

Veterinary range	Causes and percentage death (%)				
	Diseased	Diseased and Natural disaster	Do not know	Natural disaster	No death
Ampara	38.5	9.5	47.0	-	5.0
Sammanthurai	41.0	12.0	41.0	1.0	6.0
Pottuvil	40.5	1.5	46.0	5.0	7.0
Average	40.0	8.0	44.0	2.0	6.0

Limitations of services provided by veterinary offices

There was only one veterinary surgeon at each veterinary range and the number of supportive staff were scattered around. There were three artificial insemination (AI) technicians at Sammanthurai while two at Ampara and none at Pottuvil. There were two livestock development

officers (LDO) at Sammanthurai whereas, Pottuvil and Ampara have one each.

Training programmes were conducted for farmers on basic farm management aspects. But, the participation of the farmers was very much lower than expected. Further, the farmers mentioned that as veterinary surgeons do not visit their farms even after they consult them.

Due to the inadequate veterinary services the disease diagnosis was very poor. There are only ten veterinary surgeons appointed at Ampara district even though there are nineteen veterinary divisions. Therefore three veterinary ranges are being covered by only one officer and it is obvious this will lead to inadequate service for the farmers.

CONCLUSION

The results of the study revealed that, mastitis, foot and mouth disease (FMD), foot rot, abortion and Bloat are the most prevailing and frequently affecting diseases in the Ampara district. According to the analyzed data 90% of the farmers follow some indigenous treatments against some visible clinical symptoms. But 10% of the farmers do not adopt any treatment for their cattle.

Due to insufficient number of veterinary surgeons and livestock development officers, the farmers training and instructions are not adequate to meet each and every farmer in the study area. Majority of the farmers do not seem to make use of the facilities provided by the department of animal production and health (DAPH) such as farmer training, animal health and extension services *etc.* and it is because of lack of effective extension services.

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