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Livestock Disease and Health Care Facility in Sundarbans Delta of India

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ABSTRACT

There are a number of livestock diseases which are seasonal in nature. Understanding the disease pattern and health care facility has an implication in formulating an efficient and effective disease management strategy. With this implication, a study was conducted in four villages of Sundarban delta of India to understand the prevalence of livestock disease, their seasonality, and health care facility available. A participatory case study method was used for the study. Data were collected using semi-structured interview, listing, narrative and observation method. Study reveals that foot and mouth disease, ranikhet disease, chicken pox, hump sore, etc. were highly seasonal, whereas amphistomiasis, delayed expulsion of placenta, dystokia, etc. were not seasonal. Quacks, veterinary officers, medicine pedlars, medicine shop keepers, mid-wives, and ethno-veterinarians were the veterinary service providers in the study area. It is concluded that a holistic research is needed on documentation and validation of major livestock diseases in order to suggest effective disease management practices in the context of prevailing health care practices and available veterinary facilities.

Key words: Livestock disease, seasonality, sundarban delta, health care facility.

INTRODUCTION

Health care of livestock constitutes a major part in the whole gamut of animal husbandry. There are a large number of diseases commonly attack livestock in our countryside. Rearing practices, quality and availability of feeds, agricultural practices and seasonality, have a profound influence on livestock diseases in rural India. vary with the region/area .

Moreover, many livestock diseases are locally referred differently in different regions of India, even in different districts or so within a state. For example, Foot and Mouth Disease (FMD) is colloquially referred as *enso*, *khurai*, *etc*. in different parts of West Bengal. There are also some diseases, ailments or health problems which have no local name, but people recognize them by their manifestations through signs or symptoms. Therefore, understanding the diseases and major health problems of a locality, and their relations with the seasons may help to control them efficiently and effectively within the local socio-economic, agro-ecological and seasonal conditions.

Keeping the above implication in view, a study was undertaken in Sundarban delta of India to document various livestock diseases, disease signs, ailments and health problems prevalent in the study area with their seasonality; and veterinary services and facilities available in and accessible to the locality.

METHODOLOGY

Famous for the abode of notorious man eating Royal Bengal Tiger, Sundarban consists of a number of islands (102 islands of which 54 have human habitation) formed by the continuous deposition of silts where the river Ganga meets the Bay of Bengal. The region is dominated by a special forest eco-system known as mangrove forest. Spreading over India (one-third) and Bangladesh (two-third), Sundarban is the largest delta, largest mangrove forest area, and one of the few existing mangrove eco-systems in the world. Indian part of Sundarban spreads over the districts of South (13 blocks) and North 24 Parganas (6 blocks) in West Bengal state. In this region, people are poor, their livestock are hardy but yields are poor. The region is not industrially advanced. Agriculture is the mainstay of people's livelihood as about 90 per cent of the population depends on agriculture (Chattopadhyaya, 1999).

Four villages were selected from four different locations of the region for the purpose of capturing the diversity . Villages were selected purposively based on their location, livelihood and backwardness where animals are reared almost traditionally. Selected villages were Bagulakhali (Basanti block), Moukhali (Canning-II block) and Jemspur (Gosaba block) in South 24 Parganas district, and Samsernagar (Hingalganj block) in North 24 Parganas district. Among the villages, Samsernagar and Jemspur were mangrove forest-fringe village. Residents of these two villages were heavily dependent on forest and river for their livelihoods, whereas, Bagulakhali and

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Moukhali were non-forest fringe village. Their livelihoods were not dependent on forest and river. Moreover, Samsernagar was situated at Indo-Bangladesh border beside Kalindi River.

Rural Sundarban was a treasure trove of livestock species variety. Among livestock, *desi* cattle; swamp buffalo; *Garole* sheep; Black Bengal goat; *desi* pigs; *pati/peti/desi* and Muscuovy duck; *baral*, *Ranchi*, *desi* chicken; and goose with whitish and grayish featherings were reared in the study villages. The primary purpose of cattle and buffalo rearing was to perform various agricultural operations. Other animals and birds served the purpose of savings, meeting small cash needs and family nutritional requirements. A combination of cattle, goat, duck and chicken was a common herd composition in the study area across the class, caste and religion (Das, 2005). A participatory case study method (Mukherjee, 1993) was used for the study. Semi-structured interview, listing, narrative and observation were used as participatory appraisal tools/methods for data collection. Data were collected from the villagers, mid-wives, ethno-veterinarians, medicine pedlars, quack veterinary practitioners and government veterinary officers (multiple sources of evidence) for cross-checking in order to get reliable and valid data. Besides, data were collected staying at a villager's home in each of the study villages to have first-hand knowledge of the social reality.

RESULTS AND DISCUSSION

Livestock diseases

Table 1 showed different types of diseases, disease symptoms ailments and health problems commonly occurred in livestock across the study villages. Ailment like injury intentionally caused by inter-household conflict was found very common in rural Sundarban. Insufficient milk production, loose feces, weakness, delayed expulsion of placenta were very common ailments/health problems in the study area. However, these did not cause death of the animal. Chronic emaciation and weakness caused mainly by malnutrition burdened with workload was observed very common across the villages leading to a situation wherein cattle occasionally showed inability to walk and stand up properly.

Seasonality of livestock diseases

Among the various diseases some were highly seasonal like foot and mouth disease (FMD), Ranikhet disease, pox, etc. while some were regular like delayed expulsion of placenta, dystokia, amphistomiasis, etc. Seasonal analysis on prevalence and occurrence of livestock diseases revealed the following (Table 1). List of ailments presented here is not an exhaustive one.

Table 1 Major livestock diseases and their seasonality

Diseases/disease signs/ailments	Livestock mostly Affected	Seasons/months of occurrence
FMD*(Enso)*	Cattle, buffalo	*Jaistha-Asarh*
Ranikhet *(Chunpaikhana)*	Chicken	*Poush* to *Jaistha*
Duck cholera/duck plague	Duck	*Aghrayan-Poush*
Hump sore (*Kaua gha)*	Bullock	*Jaistha-Asarh*
Pox (*Basanta)*	Goat and sheep	*Falgun-Chaitra*
Pox (*Pachchab)*	Chicken	*Poush* to *Chaitra*
Amphistomiasis (*Paschimi/tuntiphola)*	Cattle, buffalo, sheep, goat	-
Ephemeral fever	Cattle	Summer
Delayed expulsion of placenta	Cattle	-
Dystokia	Cattle	-
Gid	Sheep	-
Foot-rot	Cattle, buffalo, sheep, goat	Rainy
Worm infestation	Cattle, buffalo, sheep, goat, duck, chicken	Rainy
Hog cholera	Pig	Rainy
Diarrhea, dysentery, fever	Cattle, buffalo, sheep, goat	*Baisakh* to *Asarh* and *Magh* to *Chaitra*
Malnutrition, weakness, emaciation, anemia	Cattle, buffalo, sheep, goat	*Magh* to *Baisakh*

Note: '-' indicates 'no seasonality'.
Figures in the parentheses indicate local names.

Seasonality of the diseases was studied according to the local months. They are: *Baisakh* (mid-April to mid-May), *Jaistha* (mid-May to mid-June), *Asarh* (mid-June to mid-July), *Sravan* (mid-July to mid-August), *Bhadra* (mid-August to mid-September), *Aswin* (mid-September to mid-October), *Kartik* (mid-October to mid-November), *Aghrayan* (mid-November to mid-December), *Poush* (mid-December to mid-January), *Magh* (mid January to mid-February), *Falgun* (mid-February to mid-March), and *Chaitra* (mid-March to mid-April).

FMD occurs at the onset of monsoon (*Jaistha-Asarh*) though sometimes found to occur during *Kartik-Aghrayan* which is the time of *Bakrid* (a Muslim festival) when cattle from outside areas are transported through the locality. Probably some of them may be affected by FMD. When unaffected ones come in contact with them the disease spreads in the local herd. FMD does not occur during winter/dry season, generally.

An infestation occurs in bullock mainly during cultivation of *aman*/monsoon/wet paddy on the onset of monsoon (*Jaistha-Asarh*). Since bullocks are continuously and excessively used for various

agricultural operations like ploughing, tilling, levelling, *etc*., continuous pressure of yoke of plow produces sore in neck region. Condition of sore is aggravated by the infestation of a house fly which is further complicated by continuous biting of crow. Infestation is transmitted to normal animal through the contact of yoke used by an affected bullock. The wound persists up to *Magh-Falgun,* and locally called as *kait gha/kaua gha/kaur gha* (hump sore).

Sheep and goat are attacked by pox mainly during spring season (*Falgun-Chaitra*) but pox may appear in any time of the year. According to the local veterinary officers, some cases of goat pox were confirmed as PPR (peste des petits ruminants).

Chunpaikhana/chunahaga, expressed by the villagers as lime like loose feces coupled with drowsiness, attacks the flock of chicken to death. The disease occurs during *Poush to Jaistha*, but takes an epidemic form mostly during spring (*Falgun-Chaitra)* and summer *(Baisakh-Jaistha)* seasons. According to the local veterinary officers, it was probably Ranikhet disease.

Another disease, probably duck plague/duck cholera, manifested by greenish diarrhea and drooping head was occurred during *Aghrayan-Poush* with a heavy mortality rate.

Diarrhea, dysentery and fever though occurred at any time of the year, invariably occurred during *Baisakh* to *Asarh* and *Magh* to *Chaitra*. During *Magh-Chaitra,* livestock graze freely in the harvested field and drink muddy and dirty water from water bodies, which almost are dried out, results into fever and diarrhea. Whereas diarrhea occurred during *Baisakh-Asarh* was probably due to overfeeding when the agricultural fields became covered with lush green grasses on the onset of monsoon. Because, after long period grazing in the harvested fields with virtually no greens at all, animals suddenly get chance to feed relatively more lush greens on the onset of monsoon.

Though weakness, emaciation, anemia, *etc*. were the common health problems across the villages round the year, they were profound during *Magh* to *Baisakh* when harvested fields used for grazing.

Ecto-parasites of livestock

A hard tick locally called in different villages as *entuli* or *and ali* was found common in small and large ruminants across the villages. Mosquitoes were found everywhere. Therefore, in all the village, cattle shed was mostly found protected with nets. Mosquito net in the shed was invariably found in Samsernagar, may be due to its closer proximity to the forest where mosquitoes, flies and ticks like *tangi*, *kantasi*, and *dans* (*Tabanus* sp.) were more compared to other three villages.

Kantasi and *dans* were flies, whereas *tangi* was a hard tick. Like *andali*, *tangi* sucks blood by attaching itself with the skin of livestock. *Dans* were larger in size than *kantasi*. House fly like they, another type of fly was found in the study villages which infests *kait gha/kaua gha*.

Buffalo also harbors a mite on its coat. Chickens harbor a louse smaller than a pin head in size locally called as *chulchile-poka/ukun* which was found especially during summer as well as incubating time. This louse also transfers to humans and its movement on the body is quite disgusting. In this way, human beings were also affected. Pigs harbor a flea at the base of their bristles, which was found in dogs also.

Health care facilities

The study revealed that quack veterinary practitioners, government veterinary officers, medicine pedlars, medicine shop keepers, mid-wives and ethno-veterinarians were the veterinary service providers in the study area. However, villagers invariably resorted to ethno-veterinary practices to get rid of the common ailments in the first place by themselves followed by fellow villagers having better knowledge in those practices (ethno-veterinarians).

Ethno-veterinary practices were followed in *paschimi/tuntiphola (amphistomiasis)*; foot and mouth disease or other type of sore; delayed expulsion of placenta, abortion and dystokia; pox; loose feces, diarrhea and dysentery; sprain or strain; cataract in the eye of cattle; *etc.* (Das, 2005).

Bagulakhali was the only village having government animal health care facility. Because there was an additional Block Animal Health Center located at the *Gram Panchayat* office adjacent to the village. In other villages, government animal health centers were located far away mainly at the block headquarters. However, villagers of Bagulakhali depended mainly on mid-wives to get rid of dystokia or other parturition problems in their animals. The mid-wives were helpful, effective and easily available whose assistance was always sought at the time of parturition, normal or abnormal.

In Moukhali village, villagers depended almost solely on medicine shop keepers in nearby canning town. Canning town is the gateway of Sundarban on which villagers had heavy dependence for everyday survival.

Here quacks were rarely called for to treat their animals.

For the villagers of Jemspur, quacks were the main help for their stock. Four to five experienced and skilled quacks were working in the area. They rarely consulted medicine pedlars in *haat*, or purchased medicines from them.

Also villagers of Samsernagar depended on quacks. Only two quacks were working in the area. They also purchased medicines from pedlars in *haat* especially for *chunpaikhana*.

CONCLUSION

In this way with sound understanding of various livestock diseases, their occurrence and prevalence, seasonal variations, and knowledge of existing health care facilities and practices, measures to control livestock diseases of a locality can be undertaken effectively and efficiently. Thus, the study provides an insight for conducting a holistic research on documentation and confirmation of major livestock diseases and ethno-veterinary practices followed in managing and treating them to suggest locally compatible effective disease management practices.

REFERENCES

Chattopadhyaya, H. 1999. The mystery of the Sundarbans, A. Mukherjee and Co. Pvt. Ltd., Kolkata.

Das, S. K. 2005. Livestock and livelihood of rural inhabitants in Sundarbans region of West Bengal, Ph. D. Thesis, Division of Extension Education, Indian Veterinary Research Institute, Izatnagar.

Mukherjee, N. 1993. Participatory rural appraisal: Methodology and applications, Concept Publishing Co., New Delhi.