

Reducing Losses due to Livestock Disease *Towards Doubling Incomes of Livestock Owners*



Introduction

Livestock plays an important role in the economy of India, particularly those inhabiting rainfed regions, due to the inherent risks involved in crop farming (Misra, 2005). However, despite significant efforts towards disease outbreaks and control, majority of the livestock reared in India continues to be plagued by a large number of endemic diseases, causing considerable economic losses to rural communities (Ahuja et al., 2008). Effective control of animal diseases is a critical element of any strategy that aims at supporting and enhancing livestock-dependent livelihoods of the rural poor (Rajashekar, 2005). In India, despite having a large network of veterinary institutions run by various state governments, the quality of animal health services remains inadequate, and disease surveillance, control, diagnostics and reporting continue to be weak (Ahuja et al., 2008).

Background

While several useful studies on economic losses due to animal diseases exist, they are predominantly disease-specific studies. Studies on the farmer's perspective on economic losses associated with animal morbidity and mortality is a vital gap. This need led to conducting a study that computes the losses from diseases based on farmers' perspective bringing out a better understanding of:

- Impact of economic losses from animal morbidity and mortality at a household level
- Treatment costs incurred by farmers
- Health support accessed by farmers
- also, gaps in veterinary service delivery

The study was led by Watershed Organisation Trust (WOTR) in collaboration with Rainfed Livestock Network (RLN) and its partners in selected villages in five Indian states, namely Gujarat, Maharashtra, Rajasthan, Tamil Nadu and Telangana. The purpose was to identify necessary measures to bring in a shift to a preventive, diagnostic and farmer advisory mode of animal health service delivery; emphasizing the need for continuous disease surveillance and monitoring at the village level.

Recommendations

- Mobile health care systems and doorstep services would be beneficial for rainfed areas, as accessibility to proper animal health care is scarce due to dispersed villages and production systems being predominantly migratory.
- A robust system for disease tracking and reporting is proposed by involving and strengthening the livestock sub-committees in Gram Panchayats by appointing local youth as 'data collectors' to assist the animal husbandry departments in disease surveillance.
- The existing MIS systems at the animal husbandry departments can be used by the 'data collector' to systematize and strengthen the existing disease surveillance system as well as streamline the demand-supply chain of medicines and vaccinations.

Key findings

1. Ineffective Veterinary Service Delivery

In all study sites dependence on private services dominated the health delivery services.

Local chemists, former gopalmitras (paravets), private and retired veterinarians were the main service providers. Among all the study states, the state of Maharashtra was unique, where farmers equally used both government and private veterinary services. Interactions with farmers revealed that treatment was mostly symptomatic and hence drug dosage and types of drugs used were found not appropriate in most cases, particularly where access to veterinarians was absent or inaccessible. Interactions further revealed that proper diagnosis was lacking and the same drug was often used irrespective of disease. Interactions with local veterinary assistant surgeons in all study locations indicated that availability of staff and particularly veterinarians was a major constraint. The existing staff are either overloaded with other non-technical work or posts are left vacant.

2. Under Utilized Disease Surveillance Systems

The primary service of "disease recording and reporting" was almost absent in most study locations except for Maharashtra. Only cases

that were treated were being recorded. With majority of livestock keepers/farmers depending on private services for treatment of their animals, a critical loss of information was occurring. The department officials despite availability of infrastructure highly under utilized the existing system of disease recording and surveillance.

3. Large economic losses due to inadequate disease control

a. Large ruminants

The computation of total economic losses for animals (all categories) revealed that mortality losses were highest among indigenous animals, while morbidity losses were highest among crossbred cattle and graded / Murrah buffaloes. The morbidity loss per animal for was Rs.5,421/- for indigenous cattle, Rs.5,045/- for buffaloes, Rs.5,552/- crossbred cattle, and Rs.6,994/- for graded / Murrah buffaloes. Key factor found for higher mortality and morbidity rates in indigenous cattle and buffaloes was mainly due to neglect by farmers as their milk production capacity was lower than the crossbred /exotic cattle and buffaloes. In terms of average value of milk loss per annum per animal, as well as the Case Fatality Rate (ratio of number of deaths to the number of cases), loss was higher in crossbred cattle (Rs.4,102/-; 23.76 %) as compared to indigenous cattle (Rs. 2,198/-; 18.1 %). The case was similar in buffaloes.

b. Buffaloes vs cattle

Among the milch animals, the performance of buffaloes in comparison to crossbred cattle was better. The milk loss per annum per animal was Rs.4,102/- for crossbred cattle and Rs.3,919/- for graded / Murrah buffaloes in the aggregate sample. State-wise analysis also indicated similar trends. Given the scarce water resources available to produce high-quality fodder, buffaloes proved to be a more viable option for farmers to invest in.

c. Small ruminants

In small ruminants, the highest average loss per annum at household level due to mortality in goats was Rs.46,351/- and the lowest was Rs.9,345/-. In sheep the mortality loss was highest at Rs.51,135/- and lowest at Rs.15,959/-. These high mortality losses induced a trend of

selling sick animals at lower rates, to avoid the loss incurred in case of death of an animal. The market price of the sick animals would vary according to the level of morbidity.

Conclusion

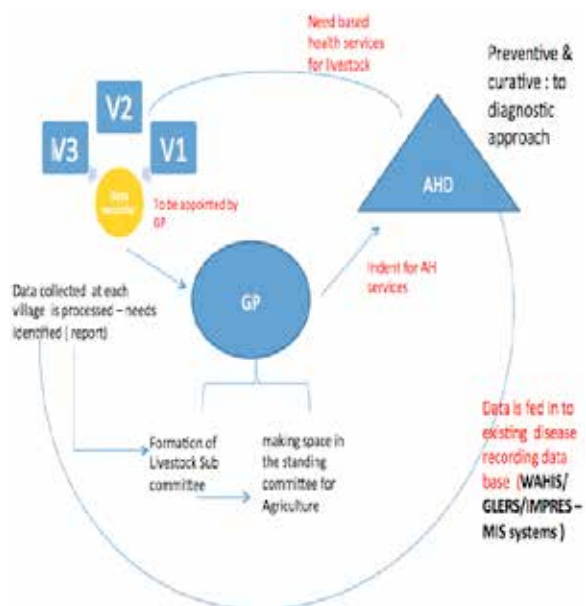
Although significant resources have been spent by the state governments on setting up veterinary service delivery systems, their outreach was limited. The inability to capture the real situation of livestock disease incidence on the ground as well as making provisions for disease prevention and control is leading to a huge national loss in terms of animal source food and rural incomes.

Additionally, while higher milk-producing cattle breeds have increased milk production at the village level contributing to higher household incomes there are tradeoffs – high input-output systems make both communities and the ecosystems vulnerable. This is more an issue in the context of climate change as heat stress and increased incidence of vector-borne diseases and water scarcity are expected to increase thereby impacting rural incomes significantly.

If the incomes of livestock farmers have to double, animal health issues faced by farmers will have to be adequately addressed. An effective animal healthcare system can help increase incomes by about 9 per cent by just reducing morbidity in milch animals, and if mortality is also managed, then incomes are much higher. In small ruminants, the income can be effectively increased by 28 per cent in goats and 20 per cent in sheep by just reducing mortality rates.

Way Forward

To build on the existing strengths of the animal husbandry departments a new mechanism to improve the animal health service delivery is proposed. What is required is to rework investments at the government level to support a robust system for disease tracking and reporting within the government framework. After consultation with many key stakeholders involved in this arena including community representatives the following bottom-up approach of disease tracking and reporting system is suggested (Fig: 1):



As illustrated, the approach focuses on ‘disease recording and reporting’ as a critical element, which will be the responsibility of the livestock sub-committees in Gram Panchayats. This would be done by appointing local youth as ‘data collectors’ to assist the local animal husbandry departments in disease surveillance. Systematic data recording can be done using the existing MIS systems at the animal husbandry departments, thereby strengthening the existing system as well as help in planning and streamlining the demand–supply chain of medicines and vaccinations.

This model will thus help in making a shift from a curative mode to a preventive, diagnostic and farmer-advisory mode of animal health service delivery – which is the need of the hour.

References

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Thematic Partner

This work on behalf of the Rainfed Livestock Network has been led by Network Partner Watershed Organisation Trust. For more information contact info@wotr.org

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“The Rainfed Livestock Network is a consortium of organisations anchored by the Foundation for Ecological Security. The Network’s objective is to strengthen the knowledge, information and analytical base on livestock rearing, with specific reference to arid and semi-arid regions, required to encourage and support favourable policies, planning and increase public investment for livestock development in these regions.

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