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Position Paper
from the Rain-fed
Livestock Network
on critical issues
affecting India's
traditional livestock
rearing systems

Strengthening Livestock Healthcare Services

Rejuvenating and Developing Livestock Healthcare Systems

Summary

Indian farmers and livestock herders face great economic losses due to mortality or sickness caused by infectious diseases — many of which are entirely preventable. An outbreak of disease means loss of capital assets and of a regular source of income— a situation further aggravated by recurring droughts and other natural calamities.

The work done by government departments and institutes is crucial to the availability of a robust healthcare service for India's livestock. Yet, with liberalisation the activities of these departments have declined or they have slowly abdicated their responsibility. Current public veterinary health care is solely focused on two broad areas— Prevention and Treatment.

The Rain-fed Livestock Network believes it is time to create an enabling environment through the right policy frameworks that would strengthen existing healthcare systems and take into account the needs and priorities of poor livestock keepers. Strengthening Disease Management Systems with an integrated perspective that takes into account the role of diverse factors is crucial for any progress in this area. There is a critical need to strengthen the current delivery system, which is rooted in a field-level cadre of dedicated and well trained, para-vets and animal health workers at the village level, with suitable support from the central government and the states. There is an urgent need to increase public investment and strengthen decentralised planning for effective and appropriate primary health delivery through programmes that are in sync with location-specific, agro-ecological conditions. When framing policies one should consider and support the impact of social, environmental and economic issues even in matters related to animal health.



Ailing Livestock Healthcare Systems

Enfeebled Systems in a Changing Healthcare Environment

Livestock rearing is important to the livelihoods of farmers from India's rain-fed regions. The Indian livestock production system operates on low input-low output basis. It is critical to the sustainability of agriculture (income) and makes significant contribution to the food and nutritional security, particularly among women. Estimates suggest that 40 per cent of agricultural GDP in semi-arid areas and 70 per cent of the GDP in arid areas come from rearing of livestock.

Farmers and livestock herders face immense economic losses due to mortality or sickness caused by infectious diseases —many of which are entirely preventable. An outbreak of disease means loss of capital assets and of a regular source of income. It causes a setback to the household's economic growth. High rates of animal morbidity and mortality cause serious distress, economic loss and lower productivity of natural resources. This is further aggravated during periods of drought. The fact that as of now, no worthwhile data are available in India on the economic losses caused by morbidity and mortality, complicates efforts to arrive at the right solution.

Decrease in morbidity and mortality rates will mean that individual producers would have to own less stock to maintain their present standards of living. This would result in less stocking pressure

on common-property resources, better nutrient availability, reduced chance of disease epidemics and availability of greater market surplus (Singh and Swankar, 2009¹).

A Battle on Many Fronts

In the near future, the effect of climate change on livestock health could worsen the condition of poor livestock keepers. Because of climatic changes, rainfall patterns have become highly variable leading to long, dry spells interspersed by periods of heavy, intense rains. Even a small rise in temperature is likely to cause an increase in incidences of animal diseases spread by insects and other vectors. Protozoan and viral diseases spread rapidly in susceptible livestock populations. Incidence of mastitis and foot and mouth disease may increase due to the rise in temperature and humidity. Global warming may facilitate the spread of diseases in other seasons as well.²

Work done by ANTHRA (a non-governmental organisation) on promoting ethno-veterinary practices shows that morbidity and mortality can only be controlled to a limited extent. The current practices are not effective for contagious diseases, which are likely to increase manifold in the context of climate change (Presentation by ANTHRA at RLN workshop 2009). In view of this, it is vital to sustain efforts that strengthen the health service delivery system based on disease surveillance and monitoring. It is the surest way of maintaining at least the present level of production of livestock products and the best way to take the rural poor out of poverty.

¹ Status, Issues and Strategies in Livestock Health And Productivity, D. Singh and C.P. Swankar, Division of Animal Health, CSWRI, Avikanagar – 304501 (Rajasthan)- Paper presented at National Workshop of Livestock Health Services at Bhuj, 2009, Organised by RLN and Sahajeevan.

² V Padmakumar, Paper on Livestock and climate change adaptation, 2007

A study done by the Central Sheep and Wool Research Institute indicates that indiscriminate and continued use of chemical controls can lead to rapid emergence of resistance to current lines of treatment. Hence, there is a need for dedicated and rigorous government programmes that ensure correct and efficient use of chemotherapeutics and biologicals through an integrated approach.

Liberalisation and Declining Role of Public Livestock Healthcare Systems

Even during colonial times, animal healthcare was considered a 'public good,' which was available through Civil Veterinary Departments. They were subsequently renamed as Animal Husbandry Departments. Most states later set up a number of veterinary biological and diagnostic institutes for the prevention of infectious diseases in livestock and poultry.

The involvement of these departments and institutes is crucial to the availability of a robust healthcare service for India's livestock. The eradication of *Rinderpest* from India is a case in point. The state Animal Husbandry Departments in coordination with the Department of Animal Husbandry, Dairying and Fisheries and the Government of India created an effective healthcare service that eradicated this disease.

In spite of the good work done by these departments earlier, after economic liberalisation, the animal health activities of the Animal Husbandry Departments of many states have declined. The reasons are aplenty: reduction in allotment of funds for animal health, no recruitments to fill vacancies

of veterinary and para-veterinary staff and no new investments made to modernise vaccine production units and disease diagnostic laboratories. As a result, disease surveillance and monitoring slackened and vaccination and de-worming are only carried out during outbreaks of diseases. The public livestock healthcare system now works on a reactive mode and is ill-equipped to face bigger challenges, which call for a sustained response. To camouflage the real issue, many states arrange monthly health camps for massive vaccination, de-worming and treating infertility. These programmes run only during specific periods, are not well-conceived and do not address the real needs of the livestock keepers (Sastry, N.S.R and Nanda Gopal, V.2003³).

The following factors constrain delivery of preventive healthcare services:

- a) There is no effective outreach mechanism or extension cell within the department to increase awareness about preventive healthcare among livestock holders.
- b) The dearth of skilled human resources affects vaccination and de-worming services. A large number of vacancies, insufficient deployment of human resources in the Department of Animal Husbandry (DoAH) and reduced budgetary allocations are adversely affecting the delivery of services in rural areas.
- c) Though the Government has established an elaborate infrastructure to promote preventive health services, there are still some supply constraints.

³ Sastry, N.S.R. and Nanda Gopal, V (2003). Landscaping of Initiatives in the Area of Animal Health, Breeding Services and Indigenous Breed Development for Cattle, Buffalo, Goats, Sheep and Poultry in Andhra Pradesh. A Project of CALPI, New Delhi.



- d) While the modern crossbred dairy cattle are well covered under the vaccination programmes, the coverage is poor for non-descript indigenous cattle, small ruminants and backyard poultry. The situation is much worse in the interior areas that are plagued by poor means of access and inadequate staffing. Poor livestock holders from these areas need better access to these services.
- e) The outreach mechanism (vaccination or deworming) for service delivery mainly depends on ‘special drives’ such as the livestock health camps.
- f) Though a disease surveillance system is in place, the disease reporting system is sadly a snail-paced, low-profile administrative ritual⁴, which abides by the routine.
- g) A specific disease control strategy for handling diverse livestock systems, locality-specific issues and needs⁵ is missing.

Changing Scope of Healthcare Services – Assumptions and Misgivings

An idea started gaining currency that farmers and herders *can* and are *willing to pay* for healthcare services offered by private individuals trained to

⁴ M Rajasekhar – Control Strategy and Action Plan; www.intercooperation.org.in/km/livestock

⁵ M Rajasekhar – Control Strategy and Action Plan

deliver animal health services (Ahuja *et al.*, 2000⁶; Suleiman and Sadavate, 2000⁷). Hence, in recent years, the emphasis has shifted to decentralisation and cost recovery, leading to withdrawal by the government from selected services (Sen and Chander, 2003⁸).

However, even in these changed circumstances the departments of Animal Husbandry carried out disease diagnosis and vaccine production. The para-veterinarian of earlier years was given an assortment of names under different programmes, such as ‘animal health worker (AHW),’ ‘Gopalmitra,’ ‘Sangmitra’ and so on. Studies carried out by external donor agencies proved unequivocally that para-workers trained and deployed for vaccination and de-worming have a short professional life unless the government provides some additional support. Vaccination activities are seasonal in nature and para-veterinary professionals cannot depend on the income derived from these activities alone to support themselves and their families. This system is not a stand-alone alternative and relies on the state Animal Husbandry Department for inputs and technical advice. There were several instances of para-workers exceeding their brief (Sastry, N.S.R and Nanda Gopal, V.2003⁹).

The emergence and use of para-workers gave the state Animal Husbandry Departments an opportunity to slowly abdicate their responsibility on preventive healthcare and concentrate on curative approaches, particularly in case of dairy cattle, while ignoring small ruminants and backyard poultry. As indicated earlier, healthcare services are almost non-existent in tribal and remote arid areas. Therefore it becomes imperative to search for alternate models of animal healthcare service delivery that will encourage active participation of livestock keepers and help build capacity at the local level.

The Eleventh Schedule of the Constitution, created by the 73rd Amendment, contains 29 subjects under *Panchayati Raj* system and among them animal husbandry, dairying and poultry occupy a prominent place. Depending upon the state concerned, animal husbandry activity is vested with either the *gram panchayat* or *panchayat samiti*. Already every state has a well-defined role for their Animal Husbandry Department though they have reduced budget allocations citing various reasons. The advantage with the state Animal Husbandry Department is that it can act as sound base for technical support, supplies, supervision and quality control of services (CALPI, 2008¹⁰).

⁶ Ahuja, V., George, P.S., Ray, S., McConnell, K.E., Kurup, M.P.G., Gandhi, V. Umali-Deinger, D. and de Haan, C. (2000). Agricultural Services and the Poor-Case of Livestock Health and Breeding Services In India, (Indian Institute of Management, Ahmedabad, The World Bank, Washington DC and Swiss Agency for Development and Cooperation, Bern.

⁷ Sulaiman, V.R. and Sadamate, V.V. (2000) Privatising Agricultural Extension In India. Policy Paper 10; National Centre for Agricultural Economics and Policy Research (NCAP), New Delhi.

⁸ Sen, A. and Chander, M. (2003) Privatisation of veterinary services in developing countries: A review. *Tropical Animal Health and Production*, 35: 223-236.

⁹ Sastry, N.S.R. and Nanda Gopal, V. (2003). Landscaping of Initiatives in the Area of Animal Health, Breeding Services and Indigenous Breed Development for Cattle, Buffalo, Goats, Sheep and Poultry in Andhra Pradesh. A Project of CALPI, New Delhi.

¹⁰ CALPI (2008). Para-veterinarians and Animal Health Workers in Andhra Pradesh. CALPI Programme Series 6 Intercooperation Delegation Hyderabad, India

Good practices documented by South Asia Pro Poor Policy Programme¹¹ (SA PPLPP) have also clearly brought out the fact that health service delivery systems can work very well provided the role played by an external facilitating agency and a strong institutional structure at the village level keeps the system working.

Rejuvenating and Developing Livestock Healthcare Systems

The Rainfed Livestock Network believes that the present livestock healthcare system needs to be rejuvenated and strengthened in a number of areas, in order to ensure it provides holistic care, while taking into account the issues faced by poor livestock herders.

i.] Strengthening Disease Management Systems

There is a need to holistically view the disease management taking into account the overall animal production systems rather than compartmentalising health care into treatment and prevention of diseases.

- The current public veterinary health care is inefficient and ineffective, as it does not holistically address the concept of health. It is narrowly defined in two blocks: (a) Prevention (de-worming and vaccination) and (b) Treatment. The current treatment system is symptomatic and uses a target-based approach under which all aspects of production and health are compartmentalised.

There is a need to move away from the 'curative services' or 'preventive services' mode to a 'diagnostic' mode, which would enable precise intervention. Investment to support diagnostic-based treatment or services is also required.

- An integrated perspective that emphasises the role of the diverse vegetation on common property resources, harvested diverse crop residues and lopped fodder is required. This must also support rearing appropriate breeds adapted to the eco-regions and use of sound, seasonal management practices. A comprehensive knowledge base to recognise diseases and indigenous systems of prevention and treatment is important to strengthen disease management systems.
- Government programmes need to ensure correct and efficient use of chemotherapeutics and biologicals through an integrated approach and regulate overuse of drugs, to minimise the chances of drug resistance among disease causing organisms.
- The increased frequency of old and new animal diseases emerging in animal populations shows that disease surveillance and disease forecasting is crucial for defining suitable control measures. Hence, it is vital to develop a strong Disease Information System using Information Technology and takes advantage of the spread of mobile networks and SMS.

¹¹ www.sapplpp.org/thematicfocus



- Integration of ethno-veterinary practices in formal disease management systems have shown good results in cost effective delivery and in restricting excessive drug usage for disease treatment. Local livestock keepers have also keenly adopted these practices. Departmental validation of these practices and their integration with the mainstream programmes are now required and this will help strengthen the current system.
- Other key interventions that must be taken up by the government to improve the health of livestock include:
 - Region-specific, problem-based research
 - Efficient extension of knowledge of the technical aspects of animal health
 - Farmer advisory services
 - Removal of distortions in the market for animal health inputs
 - Education and training
 - Regulation
 - Output incentives
 - Disease loss insurance

ii.] Strengthening Service Delivery

In response to the ineffective and inefficient public veterinary healthcare system, today more attention has been given to privatised health delivery systems. This 'reformed' approach to health care is flawed in its very creation and execution, for it is narrowly defined as a system that recovers costs when it delivers vaccines, carries out de-worming and provides treatment. This model is being pushed in spite of the fact that there aren't enough cases whereby it can be shown that the idea that the 'poor are *willing* to pay or *can pay*' for services is self-sustaining and based on factual grounds. Considering the profit-linked goals of most private systems, it is extremely doubtful if such privatised



models would be willingly operated in remote and economically non-rewarding areas. If the remote areas are not served, then the very purpose of seeking alternate delivery systems is negated. Therefore it is imperative that livestock healthcare should be provided free of cost for all infectious diseases by the Department of Animal Husbandry.

In view of the above, there is a critical need to strengthen the current delivery system, which is rooted in a field-level cadre of dedicated and well-trained animal health workers at the *Gram Panchayat* or village level. The vital inputs required in this system, such as, extension work, giving counsel and information, vaccination and deworming can be provided by trained community para-workers. However, for the system to succeed, it is vital that the government support this primary service. In order to make the strengthened delivery system a reality, the para-workers created by the government must be supported to

render additional services in terms of: extension, preventive care, first aid (which can include validated herbal remedies and homeopathy) and reporting incidences of diseases.

iii.] Government and State Level Actions

Some immediate remedial measures at the central and state government levels would help in improving the system:

- The number of vets available in many regions is less than the number required and hence the ratio of vets to animals is lower than the 'desired' figure. Currently no fresh recruitments are being made and many posts lie vacant. Postings, for even highly technical positions (disease investigation, polyclinic experience, vaccination, production experience etc) are done by considering seniority rather than specialisation, which leads to serious problems in the field.

- Regular Capacity Building: State veterinary doctors have no regular source of information for an updated information system is missing and needs to be developed.

iv.] Strengthening Primary Service Delivery through Para-vets and AHWs

India already has a basic set up to deliver primary healthcare service to livestock. It is important that this set-up be strengthened further, rather than uproot what is available and foist a new, un-tested system.

- The experiences of others in improving health service delivery have shown that para-vets and Animal Health Workers (AHWs) are effective and their activities more beneficial in the presence of a strong facilitating agency. As these individuals are the only means of expanding the outreach of the DoAH, the DoAH must financially support these para-vets and AHWs. Expecting the poor will pay for the services rendered is unviable as the poor cannot pay for health services.
- Vaccination must be provided through a single-window system and a procedure for supply of vaccines to CBOs (Community based organisations) or para-vets and AHWs must be clearly laid out. However, this calls for investment on maintaining cold chains, development of thermo-stable vaccines, and production of adequate number of vaccine doses and so on.
- Role of para-vets and AHW: Appropriate systems and legal provisions as per the suggestion VCI Act must be developed so that para-vets and AHW can support Animal Husbandry Department and render services effectively (as observed in the states of AP, UP and Karnataka). To strengthen primary service delivery, standardised training curriculum and methods must be developed for para-workers and AHWs.

v.] Enabling Policies

A sound, government-supported, veterinary public health referral advisory and delivery system is critical to actualise a system of pro-poor livestock development. There is an urgent need to increase public investment and strengthen decentralised planning for effective and appropriate primary health delivery. Simultaneously, there is a need to ensure integral, inter-departmental coordination between departments of Rural Development, Animal Husbandry and Agriculture. This will go a long way in promoting an appropriate livestock development programme, which is in sync with location-specific, agro-ecological conditions. The pre-requisites for health promotion —ensuring enhanced facilities for grazing, provision of fodder, access to water resources and use of appropriate breeds —which are usually neglected in policies oriented towards strengthening disease management systems, need to be given adequate attention. The policies should consider and support the impact of social, environmental and economic issues even in matters related to animal health.

- Government policies that inflate price of animal health inputs discourage their use by most livestock herders and farmers, leading to greater incidences and levels of animal diseases.
- Distortions in the market price of animal products influence decisions of livestock keepers to invest in health inputs.

- In spite of its previous experiences the government has not come forward with a policy of utilising the vital services of para-vets, LWCs or AHWs as an additional support for strengthening livestock services of the State. There is a need to sensitise veterinarians about amending the Veterinary Council Act.

RLN- Piloting Action Research

At present, Indian farmers face tremendous economic loss through livestock morbidity and mortality due to preventable infectious diseases. An outbreak of disease can mean loss of capital assets and of a regular source of income. It also means a setback in the household's economic growth process.

- High rates of morbidity and mortality of animals cause serious distress, economic loss and lowers the productivity of the natural resources.
- This is further aggravated during periods of drought.
- In India, as of now, no worthwhile data is available on the economic loss due morbidity and mortality.
- Climate change could affect livestock health, worsening the conditions of poor livestock keepers. Climatic change could lead to highly variable rainfall patterns with intermittent spells of long, dry periods alternated by heavy, intense rains.
- Even small increase in temperatures is likely to cause a rise in animal diseases spread by insects and other vectors. Both protozoan and viral diseases could spread in susceptible livestock populations. Incidence of mastitis and foot and mouth disease may increase due to the rise in temperature and humidity. Global warming may also lead to the spread of diseases in other seasons as well.

In view of the above, RLN is initiating a pilot with a two-pronged approach – an action component supported by survey and analysis based studies. The action component envisages field testing and standardising an effective animal disease surveillance, monitoring, forecasting and preventive healthcare delivery system - rooted in the Gram Panchayat and delivered by the Animal Husbandry Department. This action component can be showcased for policy advocacy. The action component will be tested at three locations facilitated by NGOs or CBOs without directly participating in the animal health delivery system. The survey and analysis component will investigate the status of animal health delivery system, especially preventive healthcare and the extent of economic loss due to morbidity and mortality of livestock and poultry in rain-fed areas.

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