Livestock Extension Service Delivery System in India: A Review

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Abstract

Livestock is an integral part of Indian agriculture and contribute 26 percent of agricultural GDP. About 75 percent of the Indian rural households are keeping the livestock out of which the resource poor farmers own nearly 80 percent of the livestock so extension of livestock information has become an important component for rural development but livestock extension has not much developed in our country. The NSSO survey revealed that only 5.1 % of the farmer households in India were able to access any information on animal husbandry against 40.4 % of the Indian households accessing information on modern technology for crop farming. The Government of India (GoI) spends below 10 % on livestock extension activities. Public livestock extension delivery institutes include directorate of extension, I.C.A.R, N.D.D.B, K.V.Ks, S.D.A.H and private extension service delivery institutes include N.G.Os, Agriclinics and Agribusiness Centers, Pashu Sakhi etc. The public extension has faced many limitations in transfer of services so private extension organizations came into existence to overcome the short comings. But private extension service should are also reluctant to deliver their services to resource poor farmers so income guarantee should be provided to them. Extension plus, partnership, experimentation, reflection and learning are the lesson which public sector can learn from private sector for efficient service delivery.

Keywords: Livestock, Extension service, Public Delivery, Private Delivery.

1. Introduction

Extension is defined by World Bank as a “Process that helps farmers become aware of improved technologies and adopt them in order to improve their efficiency, income and welfare” (Purcell and Anderson, 1997). Similarly livestock extension involves systematic and organized communication with livestock owners with a view to helping them in such a way that the livestock owners to help them form sound opinions and make good decisions. Livestock extension is poorly developed in developing countries like India and its strengthening is a major issue so various public and private organization involved in livestock extension should be studied and their short coming should be improved.

Extension of knowledge, technology and service through extension education to the grass root level is of paramount importance for the growth of the livestock sector. However, compared to crop sector, extension education for livestock production has so far been a non-starter severely hampering its growth. The sector is still considered as subsidiary to crop sector and the extension format and methodology developed for crop production are considered to take care of the livestock extension needs (Chander et al., 2010, Anonymous. 2012). The Government of India (GOI, 1998) spends below 10 % on livestock extension activities. The State Departments of Animal Husbandry (SDAH) - the major stakeholders for the livestock development in India is mostly dominated by animal health concerns with negligible attention to production related advice to farmers. Moreover, their spending on livestock extension activities is only around 1-3 % of their total budget (Ravikumar, 2005). Only one centrally sponsored scheme on “Livestock extension and delivery services” with a budgetary outlay of Rs.15.00 crore was proposed by Department of Animal Husbandry, Dairying and Fisheries (DAHDF) during the 11th plan period. To cater to the diverse needs of livestock farmers, among others an efficient livestock extension education system is required. The National Sample Survey Organization (Anonymous, 2005) in its survey of 51,770 farmer households across the country revealed that only 5.1 % of the households were able to access information on animal husbandry as against 40.4 % households accessing information on modern...
technology for crop farming. Livestock extension delivery in India is being carried out by different organization broadly classified as public delivery system and private delivery system. Various government institutions which are involved in public delivery system are Directorate of extension, ICAR, NDDB, KVKs, SAUs, SVUs, SDAH etc. but we are still lacking an efficient extension system for livestock services so a concept called private extension service delivery system has gained popularity in livestock sector which includes Farmers’ organizations, Agro processing companies, NGOs, Agri clinics, Agri-business houses, Individual consultants, Consultancy firms etc.

2. Livestock Extension Delivery Institutes

2.1 Public Delivery Institutes

2.1.1 Department of Animal Husbandry, Dairying and Fisheries

(DADF) is one of the Departments in the Ministry of Agriculture and came into existence with effect from 1st February, 1991, by converting two divisions of the Department of Agriculture and Cooperation namely Animal Husbandry and Dairy Development into a separate Department. The Fisheries Division of the Department of Agriculture and Cooperation and a part of the Ministry of Food Processing Industries were later transferred to this Department with effect from 10th October, 1997. The Department is responsible for matters relating to livestock production, preservation, protection from disease and improvement of stocks and dairy development, and also for matters relating to the Delhi Milk Scheme and the National Dairy Development Board. It also looks after all matters pertaining to fishing and fisheries, inland and marine. The Department advises State Governments/Union Territories in the formulation of policies and programmes in the field of Animal Husbandry, Dairy Development and Fisheries. Report of the Working Group on Animal Husbandry and Dairying for the Tenth Five-Year Plan (2002-2007) for the first time treated livestock extension differently from crop related extension activities, so a separate sub-group was created to address the issues concerning livestock extension activities.

2.1.2 State Department of Animal Husbandry (SDAH)

At the state level, the Animal Husbandry Department (AHD) is the major stakeholder as far as livestock productivity is concerned. The AHD with its huge infrastructure, however, is primarily involved in treatment and handling of sick animals for which it has a clear mandate (Singh et al., 2014). With more effective control of serious diseases such as Rinderpest (now eradicated from India) and Newcastle disease and more easily available treatment for many other conditions, animal health constraints are gradually being overcome (Morton and Matthewman, 1996; Gandhi, 1998). The SDAH have the widest mandate for livestock development and are best placed to deliver livestock production. Veterinary functionaries are expected to perform twenty-five multifarious activities in which extension is one (Venkatadri, 2002). They are available throughout the country for livestock owners to consult for information on livestock related issues, organize livestock fairs, shows, camp, competitions and programmes for cattle, poultry, small ruminants and pigs.

2.1.3 Directorate of Extension Education

Directorate of extension was set up in 1958 in the wake of launching of Community Development Programmes and National Extension Service throughout the country in 1953. It is the nodal agency in the Department of Agriculture and Cooperation, Ministry of Agriculture for agricultural extension programmes at the national level. Major policy guidelines on extension matters are laid down by the Extension Division, the Directorate of Extension, a subordinate office under Department of Agriculture Cooperation and Farmers Welfare provides requisite technical and managerial support in ensuring effective implementation of all Extension initiatives across all States/UTs of the Country through its following functional areas each governed by a separate Unit/Cell.

2.1.4 Indian Council of Agricultural Research

The Indian Council of Agricultural Research (ICAR) is an autonomous organization under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture and Farmers Welfare, Government of India. Formerly known as Imperial Council of Agricultural Research, it was established on 16 July 1929 with it’s headquarters at New Delhi. It comprises 99 ICAR institutes and 55 agricultural universities spread across India. The council serves as the national apex organization for coordinating, guiding and managing agricultural research and education including horticulture, fisheries and animal sciences throughout the country.

2.1.5 National Dairy Development Board

It was founded by Dr. Verghese Kurien in 1965 with it’s main office at Anand, Gujarat. The chairman of NDDB at present is Sri. T. Nanda Kumar. NDDB works with milk producers’ co-operatives, private
dairies entrepreneurs and consumers. It also Endeavour’s to-ordinate NGOs and social and voluntary organizations related to the dairy sector. NDDB provides consulting services to milk producers’ co-operative societies and private dairies. It is also involved in developing and upgrading the knowledge and skills of stakeholders through various types of practical training, workshop/seminar, extension and research activities (nddb.gov.np).

2.1.6 Krishi Vigyan Kendra

KVK places a special emphasis on training and education of farmers, entrepreneurs, farm women, rural youth, financial institutions, extension functionaries as well as voluntary organizations. It plays a First Line Extension role-A linkage between research and the field. Presently 665 KVKs are established all over India (www.icar.org.in).

2.1.7 Extension Education Institutes (EEIs)

With the 100 % financial and technical sponsorship of central government through the Directorate of Extension, GOL 4 EEIs are in position at Hyderabad, Anand, Nilokheri and Jorhat. These institutes cater to the training needs of the trainers, besides, research and extension work in their respective areas of operation. As such, their activity profile as also the mandate does not reflect any direct and significant bearing for livestock development.

2.1.8 Agricultural Technology Management Agency (ATMA)

ATMA is a society of key stakeholders involved in agricultural activities for sustainable agricultural development in the district. It is a focal point for integrating Research and Extension activities and decentralizing day to day management of the public Agricultural Technology System (ATS). It is a registered society responsible for technology dissemination at the district level. As a society, it would be able to receive and expend project funds, entering into contracts and agreements and maintaining revolving accounts that can be used to collect fees and thereby recovering operating cost. It started with the World Bank funding initially in selected districts of 7 states, since the ATMA is being seen as a major instrument to revitalize agricultural extension system in India. In the 11th Plan document, the sub-group on Livestock Technology Transfer Service too has stressed the role of ATMA in improving the livestock sector performance. Public sector services are not the preferred option for accessing information on modern technologies in livestock production (Chander and Rathod, 2015), so an effective extension machinery and access to inputs can improve productivity by adopting latest technologies which can be provided by private extension services.

3. Private Extension Services

Private Extension Service is defined as the services rendered in the area of veterinary, agriculture and allied sectors by extension personnel working in private agencies or organizations for which farmers are expected to pay a fee and it can be viewed as supplementary or alternative to public extension services (Gowda et al., 1999).

4. NGOs in Livestock Services

4.1 BAIF (Bhartiya Agro Industries Foundation)

It was started basically to provide cattle breeding services in area where government was unable to reach out with support of government and external aid. Later on during the course of privatization and restructuring the animal husbandry department started to face shortage of staff. This again curtailed the services from the department. This paved way for the entry of BAIF in wider area. Currently BAIF operates in 8 states. It follows a complete recovery model called self sustainable model. The farmers have started paying 100 to 150 rupees per A.I.

4.2 Raymond Group Based J.K. Trust Gram Vikas Yojana

It also started to invest in cattle breeding services; their mode of operation is different from BAIF because they collect money both from the farmers and government.

4.3 Emergence of Contract Farming and Resulting Privatization

Encouraging private investment and provision of foreign direct investment up to 51 % has resulted in entry of private players in poultry and dairy sectors. In poultry a high degree of privatization started from supply of day old chick to procurement of marketable broiler and selling to final consumer i.e. from hatchery to dinning concept. Private dairies have been established over dairy cooperatives for ex. nestle, smith line, cavin care, ABT, Hindustan lever, Heritage, etc. these corporate house operate with farming community through a contract agreement in which they provide variety of input services to like breeding, feed, treatment and disease prevention to the farmers and farmers provide them with their final product according to given recommendation.
4.4 Agri Clinic and Agri Business Centre

The Ministry of Agriculture and farmers welfare, Government of India, in association with MANAGE has launched a unique programme to take better methods of farming to each and every farmer across the country.

This programme aims to tap the expertise available in the large pool of Agriculture Graduates. Irrespective of whether you are a fresh graduate or not or whether you are currently employed or not, you can set up your own AgriClinic or AgriBusiness Centre and offer professional extension services to innumerable farmers.

The main aim of the agri-clinic and agri-business centre scheme is to provide accountable extension services to farmers through technically trained agricultural graduates at the village level. The programme is financed through bank loans, with the central government providing 25% of the cost as a subsidy. The plan is to establish 5000 agriclincs to provide testing facilities, diagnostic and control services and other consultancies on a fee for service basis.

4.5 Pashu Sakhi/Livestock Nurse

Pashu Sakhis are mainly semi-literate or illiterate woman who treat goats and demonstrate scientific knowledge about goat rearing. They provide veterinary services in return of nominal fees and provide door step services as well. Pasu Sakhi, a woman empowerment model in animal husbandry which is being carried out through Mahila Kisan Sashaktikaran Pariyojana (MKSP), a sub-component of National Rural Livelihood Mission (Ponnusamy et al., 2016).

5. Need for a Specialized Livestock Extension Service

With the livestock sector assuming the important role in the national economy, there is further requirement to improve the present state of livestock sector. Livestock production has been steadily growing, faster than any other agricultural sub-sector, and it is foreseen by 2020, livestock sector will account for more than half of total agricultural output in economic terms. Further, to reach the growth rate of 4% in the agriculture sector as envisaged in the 11th plan, the growth in livestock sector becomes more essential for which role of extension service especially the information input becomes vital (Chander et al., 2010). Most models try to integrate livestock into general extension systems by providing cross training of crop specialists in the areas of livestock production and vice-versa. But in practice, its availability has been patchy and the course work too short and too classroom based (Morton and Matthewman, 1996). This obviously affected the quality of the extension service to livestock owners, which had inhibited them in adoption of modern livestock technology (Rao et al., 1992). Moreover, the highly specialized livestock extension service has different requirements since it has distinct features from crop extension due to longer time-scale of animal production, slower speed of technology development, lack of synchronous of different animals, difficulty in demonstrating merits because of their poor observability, frequently dispersed and non-uniform needs of livestock owners (Matthewman et al., 1997; Rao and Kherde, 1985).

Livestock extension services to the farmers have the potential to play the key role in improving livestock productivity but despite of its importance livestock extension has been treated somewhat casually as is evident from the organizational structure, budget and staffing for extension activities both at central and state levels.

6. Limitations Faced by Public Extension Services

The public extension services have lot of shortcomings as it is poorly funded with weak human capacity i.e. Extension worker to farmer ratio is less (Qamar, 2006). Public extension services are more supply driven rather than demand driven and use top down approach (Alex et al., 2001). Limited access by women and people in remote areas (Alex et al., 2001) Due to change in style of production from subsistence to commercial production the old style of public extension is becoming outdated. Implementation of large central and state sector schemes consumes a major share of the extension staff’s time, it poorly serves tribal areas and remote locations, and mostly works in isolation, potential of Information and Communication technology remains unexploited (Jinraj, 1999). Several of the states are barely able to pay the salaries of their extension functionaries, leave alone provide funds for demonstrations, mobility and upgrading skills (DAC, 2002). Extension programmes leave very little flexibility to block and village-level functionaries to modify programmes as per requirement of the area (Sulaiman et al., 2005).

7. Need of Transfer of Extension from Public to Private Sector

Problems and shortcomings of public extension system has given way to the growth of private extension system as it is thought that private extension system is more effective service provider then public extension system as well as there is an effective
demand for advisory services and hence farmers can spare some cost on private service providers. Apart from it the public sector services poorly serves tribal areas and remote locations, implementation of a large number of central and state sector schemes consumes a major share of their time, it continues to see technology dissemination as its main role while other support needs of farmers remain unattended (Sulaiman and Hall 2002) and works in isolation without any partnership with organizations having complementary skills. The potential of Information and Communication technology remains unexploited by the public extension system and the centralized planning and implementation of extension programmes and the associated bureaucratic procedures leave very little flexibility to the block and village-level functionaries to modify programmes based on farmers’ needs, local circumstances and emerging problems and opportunities. Moreover development of technologies has shifted focus from herd level prevention to individual animals and traditional livestock farming is shifted to commercialized operations more suitable for private handling.

8. Need in Extension of Private Practice to Poorer Areas

To have efficient private practices in poorer areas following measures should be practiced:

a) In these areas cost are high and return are low so income guarantee may be provided to private veterinarians.
b) Invest in training members of the community to provide basic health advice.
c) A cadre of paravets with lower level of training and lower income expectations might be developed for poultry and small ruminant.
d) Equip paravet for production and health care advice as these areas have poor infrastructure and large distance.
e) Support development of membership organization mainly dairy cooperatives.

9. Lessons for Public Extension Services

a) Extension plus- they should go for providing integrated services i.e a number of services should be delivered together and not just one at a time (Sulaiman and Hall 2004).
b) Partnership- government agencies should go for partnership with private service providers for efficient service delivery.
c) Experimentation, reflection and learning- they should move beyond the common blue print of practices being followed and should analyze the outcome obtained and learn from mistakes. (Sulaiman et al., 2005).

Delivery of livestock related information concerning production, management, marketing, deworming, vaccination, prevention and control of disease etc. through livestock extension system should be made a prime concern by central and state government. As livestock has become an integral part of livelihood and living of rural and urban population this information is very much needed in present scenario. A sense of business should be developed among the beneficiaries so that they think of acquiring livestock related enterprises as business and excel in them. A separate livestock extension department must be established by the government which will help in improving the economic and living profile of the livestock owners and our country as a whole.

10. Conclusion

Livestock extension service delivery is not much strengthened in our country and a lot of scope for development is present. The public service delivery system of our country is not much effective and basically focuses on increase in production performance of the livestock whereas other factors like management are overlooked. Private delivery system for extension services has although taken initiative to provide with the latest service at doorstep a lot of support and work is to be done for its efficient working and development. So an efficient public private partnership can be looked upon as a better option and hope for future to provide the beneficiaries with needed services and in this way they will also be able to learn from each other's shortcomings and the livestock owners will get efficient service delivery through a strong information delivery chain.

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