Indian Journal of Extension Education
Vol. 55, No. 4 (October-December), 2019, (7-11)

An Appraisal of Extension Service Delivery through Mobile Veterinary Units (MVUs) in Odisha

Anupama Jena[1]*, Mahesh Chander[2], Sushil Kumar Sinha[3], Pragya Joshi[4], Deepa Singh[5] and Devesh Thakur[6]

ABSTRACT

An ingenious way of livestock service delivery at farmers' doorstep through Mobile Veterinary Units (MVUs) under *Rastriya Krishi Vikas Yojana* (RKVY) is operational in all the 314 blocks of Odisha, with one of the objectives being to educate people on scientific livestock farming technologies. The study was conducted with a sample size of 90 farmers and 23 veterinary service providers *viz*., Veterinary Surgeons (VSs) and Livestock Inspectors (LIs) to analyze the efficacy of extension service delivery by MVUs and farmers' demand for livestock extension activities. The study concluded that, MVU professionals were very often associated with activities *viz*., awareness camp and home visit. Besides these, supply driven activities, input supply and training programmes for better animal husbandry were the most needed activities by the farmers. The service providers expressed that lack of time for extension activities and unawareness of farmers about importance of extension activities, were the major problems they faced while performing extension activities.

Keywords: Mobile veterinary unit, RKVY, Extension service delivery, Veterinary surgeon, Livestock inspector

INTRODUCTION

Information is the fifth need of man after air, water, food and shelter (Bachhav, 2012). Rural poor livestock owners are quiescent in information related on scientific livestock farming practices, diseases and prevention measures, credit facility and recent technological innovations which results in modest production. Balit *et al.* (1996) opinioned that adequate access to knowledge and information is the least expensive input to improve rural agricultural development. However, low productivity of animals owing to low knowledge level of the owners remains an unresolved challenge for the future (Singh *et al*., 2016). Due to non-availability of proper information and communication network system, need based information dissemination center and improved technological dissemination to the farmers, agriculture is becoming less remunerative (Meitei and Devi, 2009). The demand for information on livestock production is growing, both in the sense of demands expressed by the farmers themselves, and in the more general sense of a growing potential for increasing production through delivery of information (Morton and Mathewman, 1996) as lack of technical guidance and lack of knowledge about causes and treatment of diseases has always been constraint in dairy and poultry entrepreneurship (Gupta *et al*, 2013). The functioning of various livestock development agencies especially the State Departments of Animal Husbandry (SDAH) in relation to the extension education performed by them need to be analyzed so as to ascertain a paradigm for livestock extension service (Chander *et al.,* 2010). Limited technical manpower to disseminate information in rural and remote areas, lack of transport and communication facilities, inadequate

[1,4,5]Ph.D. Scholar, [2]Principal Scientist and Head, Division of Extension Education, ICAR-Indian Veterinary Research Institute, Izatnagar-243122, Uttar Pradesh
[6,3]Assistant Professor, Department of Veterinary and Animal Husbandry Extension Education, COVAS, CSKHPKV, Palampur, H.P.
*Corresponding author email id: anupamajenap62@gmail.com

financial support to technology transfer and less infrastructure facility create huge technology gap among rural farming communities (Meitei and Devi, 2009). The use of information by a user is defined by demand of information and disposition of the information channel (Lee, 1996). As information is the life blood for increasing productivity, information delayed is fruitless and in order to support farm level decisions and minimize the loses inclusion of farmers' communication network need to be focused (Ravi Kumar *et al*., 2015). So there should be some mechanism which makes intended information to reach the poor promptly. Considering this, Mobile Veterinary Unit (MVU), an initiative of Odisha Government (operational in all the 314 blocks of Odisha, since 10th July 2010) with many objectives includes better delivery of livestock services at farmers' doorstep in their preferred time. One of such objectives is to educate people on scientific livestock farming technologies. In MVU, a team of professionals comprising one Veterinary Surgeon (VS), one Livestock Inspector (LI) and one attendant, move to organize animal health camps in remote villages which are often neglected. Total working days for a MVU in a month are 20 days. Every working day, the team organizes one livestock health camp to benefit livestock owners of a minimum of two villages. The camps are organized on Monday to Friday in every week. The rest two days are for compiling monthly report and attending meeting. The specific objective of the study was to document extension services provided by the MVU, farmers' demand on extension services and problems faced by service providers while delivering the extension services. The study will directly help to improve the extension service delivery system of MVU.

METHODOLOGY

The study was carried out in Kandhamal district, one of the rural districts of Odisha, possessing less developed communication facility with maximum percentage of area covered with forests and hills. Due to inadequate transportation facility and distant location of veterinary institutions, this area has been considered suitable for study the functioning of Mobile Veterinary Units (MVUs). In the12 administrative blocks of Kandhamal district, 12 MVUs were functioning to deliver extension services. Three blocks were selected randomly for this study. From each block, 3 villages, where MVUs had already provided services, were selected purposively. In the next stage, from the 9 selected villages, 10 farmers from each village, who had availed the services of MVU, were selected randomly. As such, 90 farmers in total were selected for the study. Further, from 12 MVUs of Kandhamal district, 12 veterinarians and 11 livestock inspectors, who were working in the 12 MVUs, were selected for to study the service providers' view.

Primary data were collected from the farmers and the service providers through a pre-tested interview schedule and questionnaire respectively. A list of statements, describing need of extension services by farmers and eliciting constraints in delivering extension services through MVUs, was administered separately to the farmers and service providers, respectively. The pre-tested questionnaires were distributed to all the veterinarians and livestock inspectors during monthly meeting to document their response on functioning of MVUs. Farmers were requested to give score for each felt need of extension activities on a 4 point continuum as highly needed, moderately needed, less needed and 'not needed' with a respective score of three, two, one and zero. Further, for ascertaining the constraints faced by service providers in delivering the services, frequency and percentage of respondents for each constraint were collected.

The weighted mean score analysis, was found appropriate to derive the results from collected data. Total Weighted Score (TWS) was calculated by adding each respondent's score. The Total Weighted Mean Square (TWMS) was calculated using the following formula

$$TWMS = TWS / N$$

Where,

TWMS- Total Weighted Mean Score

TWS- Total Weighted Score

N= Sample Size

Based upon the values of TWMS, the farmers' need on extension activities, for sustainable animal husbandry was ranked.

RESULTS AND DISCUSSION

The result reveals that service providers of MVU, 'very often' conducted extension activities viz., awareness camp (72.2%) followed by farm and home visit, contrarily non focused on mass media exposure. Rarely training programme and campaign was organised.

Government should take necessary action to carry out all such activities by MVU personnel, as effective mixture of extension activities educate the farmers' about scientific animal husbandry practices. Similar finding, attaining the low level of mass media exposure could be due to lack of awareness of agricultural programmes and farm magazines were reported by Dympep and Dolli (2016). However, the findings contradicts the findings of Ravikumar (2005), who found in his study that 65.00 percent of respondents never did any farm and home visit, 72.50 per cent never associated with any group meeting type activities and 82.5 per cent never conducted any campaign under SDAH in India.

All the respondents confirmed that they received banners and 18.20, 8.70, 4.30 per cent received poster, folder/ leaflets and manuals, respectively from MVU for educating livestock farmers (Table 2). It could be inferred from the Table 2 that MVU was providing banners only to all the block level MVUs and other extension aids to educate farmers, was not adequately supplied. Since MVU is working to provide livestock advisory services to farmers, supply of adequate extension aids will supplement the service delivery more effectively. Ravikumar (2005) also reported that 50.00 percent of L.Is did not receive any extension aid from SDAH, while majority of L.Is and V.Ss had received folders, followed by posters.

Table 2: Distribution of service providers according to response on provision of extension aids

Type of extension aid	LI (n=11)	VS (n=12)	Total (N=23)
Poster	2(18.18)	3(25)	4(18.2)
Folder/leaflet	1(9.1)	1(8.3)	2(8.7)
Manual	1(9.1)	0(0)	1(4.3)
Banner	11(100)	12(100)	23(100)

Figures in the parentheses indicate percentage.

Input supply in terms of fodder seeds, fodder slips, medicines, pesticides and fertilizers were the top most demand among the farmers of Kandhamal district, as direct transient benefit is visible and will attract the farmers to avail the services. Training programmes on scientific animal husbandry practices was the 2nd preferred need of farmers, as MVU had very rarely imparted training. Information regarding livestock insurance was the next preferred need of farmers' since they aware of the importance of insurance, during unexpected loss or death or disability of animals. Information on credit facility in terms of source, term, interest rate and subsidy rate was ranked fourth by farmers. They are not able to avail the direct benefit from government and non-government initiatives due to their lack of knowledge on eligible credit facilities. Similarly, farmers expressed that direct monetary benefits from extension professionals, information need on market trend, prices of livestock product and value addition, seasonal animal diseases control and prevention measure, advanced technological knowledge for better

Table 1: Extension activities performed by MVU personnel

Name of activities	L.I. (n=11)				V.S. (n=12)			
	Very often	Often	Rarely	Never	Very often	Often	Rarely	Never
Awareness camp	8 (72.72)	3 (27.27)	0 (0)	0 (0)	9 (74.99)	3 (24.99)	0 (0)	0 (0)
Campaign	0 (0)	0 (0)	1 (9.09)	10 (90.90)	0 (0)	0 (0)	1 (8.33)	11 (91.66)
Group discussion	0 (0)	4 (36.36)	7 (63.64)	0 (0)	0 (0)	5 (41.66)	7(58.33)	0 (0)
Farm and home visit	7 (36.36)	4 (63.63)	0 (0)	0 (0)	8 (66.66)	4 (33.33)	0 (0)	0 (0)
Mass media exposure	0 (0)	0 (0)	0 (0)	11 (100)	0 (0)	0 (0)	0 (0)	12 (100)
Training programme	0 (0)	0 (0)	1 (9.09)	10 (90.90)	0 (0)	0 (0)	2 (16.66)	10 (83.34)

Figures in the parentheses indicate percentage.

Table 3: Ranking of Extension services needed by farmers (n=90)

S.No.	Farmers' need	TWS	TWMS	Rank
1.	Input supply (seeds, pesticides, fertilizers *etc.*	35	3.91	I
2.	Training programme on scientific animal husbandry practices	348	3.867	II
3.	Information regarding livestock insurance	347	3.856	III
4.	Credit facility in terms of source, term interest rate and subsidies	292	3.244	IV
5.	Direct monetary benefits	282	3.13	V
6.	Information on market trend, prices of livestock products and value addition	276	3.06	VI
7.	Seasonal diseases control and prevention	274	3.04	VII
8.	Advanced technological knowledge	266	2.89	VIII
9.	Demonstration at farmers' field	252	2.8	IX
10.	Work-shop at district veterinary dispensary	178	1.98	X

(TWS: Total Weighted Score, TWMS: Total Weighted Mean Score)

management, demonstration at farmers' field and work-shop at district level veterinary dispensary were also their preferred needs in the order of priority.

Table 4 revealed that lack of time followed by unawareness of farmers were the most felt constraints by VSs and LIs, respectively while performing extension activities. In Kandhamal district, most of the V.S posts in MVU were vacant. So the block level officers *i.e.* either Block Veterinary Officer (BVO) or Veterinary Surgeon (VSs) were additionally looking after MVU, besides their regular duties. It is practically very difficult and mostly they were devoting their time in disease preventive activities leaving less time for extension activities. Carrying out extension activities need prior preparation, consider farmers' felt and unfelt need, arrangement of extension aids in appropriate combination and motivate the farmers to attain the programme. Singh *et al*. (2014) also reported that, the SDAH, though considered being the major agency to cater to the needs of the livestock farmers, their role is limited to treatment, vaccinations and artificial insemination (AI) services.

Table 4: Distribution of service providers according to problems faced while performing extension activities

Reasons	LI (n=11)	VS (n=12)	Total (N=23)
Farmers did not cooperate	1(9.1)	1(8.3)	2(8.7)
Improper guidance	1(9.1)	1(8.3)	2(8.7)
Timely extension activities not feasible	3(27.3)	11(91.7)	14(60.9)
Less No. of attenders	4(36.4)	10(83.3)	14(60.9)
Less extension aid	8(72.7)	11(91.7)	19(82.6)
Poor physical facility	3(27.3)	1(8.3)	4(17.4)
Extension personnel are not trained properly	1(9.1)	0(0)	1(4.3)
Farmers' are not aware	9(81.8)	11(91.7)	20(87)
Lack of time	10(90.9)	10(83.3)	20(87)

Figures in the parentheses indicate percentage
(L.I- Livestock Inspector, V.S- Veterinary Surgeons)

Studies reveal that most of the states do not possess staff devoted specifically to livestock extension and in most cases it was restricted to one to two staffs who are relatively junior staff members looking after livestock extension work for whole state (Matthewman and Ashley, 1996; Kurup, 2003; Ahuja *et al.,* 2000). Infeasibility to conduct timely extension activities was also perceived as important constraints, as some extension activities are time specific like information on seasonal livestock diseases, control and prevention measures, management and feeding practices. Since, MVU has to cover all the distance villages; nearly two months are required to conduct the next training in any particular village. It questions the feasibility to deliver prompt extension services. Some other findings related to problems in performing extension activities well support these findings of problems in extension service delivery through MVU. The veterinary service personnel act more as veterinarians performing treatment, vaccination and AI to livestock than extension personnel to disseminate the needy technologies. This could be due to the reason that veterinary functionaries have to perform 25 multifarious activities in which extension is considered for rationalizing

their job chart (Venkatadri, 2002). Ravikumar (2005) found out that, the expenditure incurred over the years by various SDAH in India on livestock extension activities was found only around one to three percent of their total budget and the non-availability of attenders were the most severe constraints felt by both LIs and VSs of SDAH.

CONCLUSION

The Livestock Inspector revealed that farmers were not aware about the importance of the extension services delivered by MVU which necessitates the MVU personnel to spend more time in making them aware of such activities before performing the intended extension activities. Adequate extension aids in appropriate combination will enhance the service quality, and persuade the farmers to attain the programme. In MVU, it was also felt that less man power for performing extension activities, as both VSs and LIs were busy in delivering preventive and curative services. Hence exclusive extension personnel for performing extension work only can resolve the problem. All these discussions conclude that extension service delivery is an important part and parcel of livestock service delivery. For achieving a better animal husbandry production and productivity in Odisha, focus should be strengthened in extension service delivery activities on par with veterinary health care service delivery.

Paper received on : October 15, 2019
Accepted on : November 11, 2019

REFERENCES

Ahuja, V., George, P.S., Ray, S., Mc Connell, K., Kurup, M.P.G., Gandhi, V., Deininger, D.U. and Haan, D.C. (2000). Agricultural services and the poor, case of livestock health and breeding services in India, Indian Institute of Management (IIM), Ahmedabad, The World Bank, The Swiss Agency for Development and Cooperation.

Bachhav, N. (2012). Information Needs of the Rural Farmers: A Study from Maharashtra, India: A Survey, Library Philosophy and Practice (e-journal), available at 866.http://digitalcommons.unl.edu/libphilprac/866, accessed on October, 2016.

Balit, S., Calvelo, R.M. and Masias, L. (1996). Communication for development for Latin America: A regional experience, FAO, Rome Italy.

Chander, M., Dutt, T., Ravikumar, R.K. and Subrahmanyeswari, B. (2010). Livestock technology transfer service in India: A review, *Indian Journal of Animal Sciences*, **80**(11), 1115–25.

Dympep, A. and Dolli, S.S. (2016). Effectiveness of grass-root level unit in extension delivery services in Karnataka, *Indian Journal of Extension Education*, **52**(1&2), 56-60.

Gupta Bhavana, Kher, S.K. and Nain M.S. (2013). Entrepreneurial Behaviour and Constraints Encountered by Dairy and Poultry Entrepreneurs in Jammu Division of J&K State, *Indian Journal of Extension Education*, **49**(3&4), 126-129.

Kurup, M.P.G. (2003). Livestock in Orissa: The socio-economic perspective, Indo-Swiss Natural Resource Management (NRM) programme, Manohar Publishers and Distributors, New Delhi.

Lee, M.K.O. (1996). Information access behaviour and expectation of quality: Two factors affecting the satisfaction of users of clinical hospital information systems, *Journal of Information Science*, **22**(3): 171–199.

Matthewman, R. and Ashley, S. (1996). The generation, assembly and delivery of information on livestock production: A case study of India, Natural Resources Institute, Overseas Development Administration, UK.

Meitei, L.S. and Devi, T.P. (2009). Farmers' information need in rural Manipur: An assessment, *Annals of Library and Information Studies*, **56**, 35-40.

Morton, J. and Matthewman, R. (1996). Improving livestock production through extension: Information needs, institutions and opportunities, Network paper 12, London, ODI.

Ravikumar, R.K. (2005). Livestock Extension Activities under state department of animal husbandry in India - An institutional Analysis, Thesis, PhD (Unpub.), IVRI, Izatnagar, India.

Ravikumar, K., Nain, M.S., Singh Rashmi, Chahal, V.P. and Bana, R.S. (2015). Analysis of farmers' communication network and factors of Knowledge regarding agro metrological parameters, *Indian Journal of Agricultural Sciences*, **85**(12), 1592-1596.

Singh, A.S., Singh, K., Imtiwati and Kumar, C. (2014). Livestock production through extension education- A Review, *Agricultural Reviews*, **35**(1), 1-13.

Singh, A., Sidhu, S., Hundal, J.S. and Chahal, U.S. (2016). Information sources for Indian livestock farmers, *Journal of Livestock Science*, **7**, 150-156.

Venkatadri, S. (2002). Technology adoption in livestock sector for poverty alleviation: constraints and prospects, Proceedings of National Seminar on Rural Technology and Poverty Alleviation, National Institute of Rural Development (NIRD), Hyderabad.