Haryana Vet. (June, 2014) **53 (1)**, 18-22

Research Article

EFFECTIVENESS OF EXTENSION MESSAGES AS PERCEIVED BY LIVESTOCK OWNERS

NARESH PRASAD, S.P. SINGH*, S.S. SANGWAN and GAUTAM
Department of Veterinary and Animal Husbandry Extension Education, College of Veterinary Sciences
Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar-125 004

Received: 13.12.2013; Accepted: 17.02.2014

ABSTRACT

With the continuation of linear system of extension in animal husbandry, the importance of extension messages becomes paramount. The whole of the idea of improvement in animal husbandry largely depends on the effective delivery of such extension messages. Keeping this in view, the present study was conducted on 190 livestock owners from four districts in Haryana state and the data was collected from them by holding personal interview during the year 2013. A multistage random sampling technique was followed to select the respondents. A well structured pre-tested interview schedule was developed for this purpose. A majority of respondents perceived extension messages conveyed by the field veterinarian as 'effective' followed by 'less effective'. Only a small percentage considered these messages as 'very effective'. A higher percentage of younger farmers considered messages as 'less effective' reflecting a hunger for more appropriate and innovative messages. Education did not seem to have influenced the respondent's perception. Dependence on peers was observed on the lower side. Half of the respondents with higher annual income perceived messages as very effective with very few of them from low income category agreeing to this. Mass media exposure and perception scores were related but much less significantly. Further studies to analyse the mass media and farmers communication behaviour are advised. Need to critically evaluate the role of local staff is also emphasized.The value of coefficient of multiple determinants (R^2) indicated that all the seven independent variables explained 68.30 % variation towards communication effectiveness of messages.

Key words: Communication, effectiveness, messages, perceive, livestock owners, veterinarian

Communication is a two-way process in which the sender and receiver of information are seen as active participants who are involved in an exchange process and therefore, swap roles. It is a transactional process that involves the exchange of ideas between two or more individuals in an attempt to arrive at a convergence in meaning (Agbamu, 2006). Effective communication is a precondition for sustainable technology transfer in agriculture and the feed forward-feedback mechanisms which are important in the technology transfer process, are only made possible through communication process (Adekunle and Ojolo, 1994). A good communicator knows the audience, their wants, needs, message, and effective channel of communication applicable to audience, prepares information to be communicated carefully, speaks clearly, uses simple language that people understand and is aware of the limitation of time. Finally, a message is effective if a particular audience is persuaded. For example an effective poultry technology message is one that prompts poultry farmers to act in a way that supports the goals of extension agencies and other stakeholders. On the receipt of such a message, if the target farmers change behavior in a desired manner, it means the message is effective and the content there of will be adopted by them (Ofuoku, 2010).

With the continuation of linear system of extension in animal husbandry, the importance of such messages becomes paramount. The whole of the idea of improvement in animal husbandry largely depends on the effective delivery of such extension messages. It is through these messages that the improved ways of production and solution to current problems are communicated to the farmers. Hence, a study was undertaken in Haryana state to measure the effectiveness of extension messages delivered by the field veterinarians to the livestock owners as perceived by them.

MATERIALS AND METHODS

The study was carried out purposively in Haryana state of India. The state has high density of livestock with a large number of farmers depending on livestock for significant portion of their income. The State Department of Animal Husbandry and Dairying is the sole service providing agency and is engaged in

*Corresponding author: spsingh.vet@gmail.com

prevention and control of diseases, treatment, and other developmental activities. Delivery of innovative and problem solving messages forms an important task of the department. Therefore, the content of the study was restricted to extension communications of the department. The state is divided into four divisions namely Ambala, Rohtak, Gurgaon and Hisar. Out of 21 districts, 4 districts namely Kaithal, Panipat, Rewari and Hisar were selected randomly from each division. Next, a district-wise list of all the villages, where GovernmentVeterinary Hospital (GVH) was situated, was prepared. From the list villages numbering 7, 5, 8 and 18 were selected randomly from Kaithal, Panipat, Rewari and Hisar districts, respectively. Finally five farmers having more than 5 milch cattle/buffalo were selected from each selected village. Therefore, 190 livestock owners constituted the sample. The data were collected from selected respondents using a structured interview schedule. The schedule contained provision for collection of data about independent (age, education, social participation, annual income, media exposure, extension contact, attitude towards improved animal husbandry practices) and dependent (effectiveness of extension messages delivered) variables. The effectiveness of extension messages as perceived by the livestock owners was rated on a five point continuum based on the degree of satisfaction.The score 5, 4, 3, 2 and 1 were assigned to strongly agree, agree, neutral, disagree and strongly disagree, respectively. The data was classified and tabulated keeping in view the objectives of the study.

RESULTS AND DISCUSSION

Level of Effectiveness of Extension Messages: Overall mean score of effectiveness of extension message was 56.6 indicating by and large the messages were perceived as 'effective'. The standard deviation was 4.3 indicating a fairly well distribution of farmer's perception. For a better understanding the respondents were divided into three categories (Table 1). Almost one fourth of them perceived messages as 'less effective' with a mean score of 51.24. On the other hand, the mean score of those respondents who perceived messages as 'very effective' was 63.89; however, their number was less than one third of the total respondents. Further, it is worth mentioning that the mean scores of all the three categories of farmers were significantly different (Table 2). For further analysis, respondents were classified in three categories on the basis of independent variables (Table 3). A majority of respondents were middle aged with medium education. Most of them had low social participation, medium annual income, media exposure and extension contact. The attitude towards improved animal husbandry practices was largely favourable.

Extent of Effectiveness of Extension Messages as Perceived by Livestock Owners: Evidently majority (90.20%) of animal owners perceived the messages as "clear and easy to understand" followed by items like "messages are conveyed to them according to their level", "messages are credible", "messages are consistent with socio-cultural values and practices" and

Table 1
Level of effectiveness of extension messages as perceived by livestock owners

Level of effectiveness	Score range	Frequency (%)	Means	Standard deviation	Standard error
Less effective	45-53	45 (23.68)	51.244	1.721	0.257
Effective	54-61	117 (61.58)	56.915	2.095	0.194
Very effective	62-69	28 (14.74)	63.893	1.729	0.327
Overall	45-69	190	56.600	4.310	0.313

Table 2
Analysis of variance

Source of variation	Degree of freedom	Sum of squares	Mean squares	F-calculated	Significance
Between groups	3	2791.465	930.4883	82.67616	2.628646
Within groups	376	4231.735	11.25461		
Total	379	7023.2			

Table 3
Profile of the livestock owners

Independent variables	Category	Effectiveness of extension messages				
		Score range	Less effective n=45 (%)	Effective n=117 (%)	Very effective n=28 (%)	Overall n=190 (%)
Age	Young	19-36	23 (51.11)	45 (38.46)	11(39.29)	79 (41.58)
	Middle	37-54	16 (35.56)	60 (51.28)	11 (39.29)	87 (45.79)
	Old	55-72	6 (13.33)	12 (10.26)	6 (21.42)	24 (12.63)
Education	Low (Upto primary)	1-2	6 (13.33)	16 (13.68)	2 (07.14)	24 (12.63)
	Medium (Middle to 10+2)	3-4	35 (77.78)	81 (69.23)	19 (67.86)	135 (71.05)
	High (Graduate and above)	5	4 (8.89)	20 (17.09)	7 (25.00)	31 (16.32)
Social participation	Low	1-2	41 (91.11)	94 (80.34)	20 (71.43)	155 (81.58)
	Medium	3	2 (4.44)	15 (12.82)	5 (17.86)	22 (11.58)
	High	4-5	2 (4.45)	8 (6.84)	3 (10.71)	13 (6.84)
Annual income (in lakhs)	Low	<3	27 (60.00)	49 (41.88)	3 (10.71)	79 (41.58)
	Medium	3-5	14 (31.11)	60 (51.28)	13 (46.43)	87 (45.79)
	High	>5	4 (8.89)	8 (6.84)	12 (42.86)	24 (12.63)
Media exposure	Low	15-21	6 (13.33)	26 (22.22)	2 (7.14)	34 (17.89)
	Medium	22-27	30 (66.67)	66 (56.41)	13 (46.43)	109 (57.37)
	High	28-33	9 (20.00)	25 (21.37)	13 (46.43)	47 (24.74)
Extension contact	Low	13-18	10 (22.22)	13 (11.11)	0 (0)	23 (12.11)
	Medium	19-23	22 (48.89)	82 (70.09)	14 (50.00)	118 (62.10)
	High	24-28	13 (28.89)	22 (18.80)	14 (50.00)	49 (25.79)
Attitude	Low	18-22	18 (40.00)	32 (27.35)	7 (25.00)	57 (18.95)
	Medium	23-27	23 (51.11)	68 (58.12)	18 (64.29)	109 (57.37)
	High	28-32	4 (8.89)	17 (14.53)	3 (10.71)	24 (12.63)

"complete and adequate messages are always communicated" (Table 4). The farmers appreciated those messages which were very clear, easy to understand, timely, compatible and credible. These findings get support from the findings of Ofuoku (2012) who reported that the use of clear and comprehensible language and expression by poultry farmers promoted right interpretation of messages and feedbacks by extension agents. Further, interpretation of extension messages gets promoted by the use of simple language and expression (Isife and Ofuoku, 2008).

On the other hand, not many respondents agreed with items like, "opportunities are not given to livestock owners to express their problems and seek solutions from the department", "message create confusion among the farmers" and "messages conveyed are not in appropriate tone and approach" indicating that these are not the problem areas. However, this does not mean that all the messages are equally relevant to the farmers. Some messages have little impact on the farmers for a variety of reasons. These findings are in conformity with the results observed by Badodiya *et al*. (2010) in their study.

Relationship Between Independent Variables and Effectiveness of Extension Messages: Surprisingly, a majority of livestock owners, who perceived extension messages as less effective, belonged to younger age group. This is contrary to popular belief that the younger generation is good at receiving extension messages. Numerous extension studies can be cited to suggest that knowledge and adoption of modern/scientific practices are inversely related to age (Sharma, 2005; Prasad, 2006; Swu, 2010; Goyal, 2012). Reconciling the apparently contradictory observations is complex. However, we hypothesize that the expectations of younger respondents were probably much higher in terms of effectiveness of extension messages. This could have resulted in their assigning the rating on lower side. Further studies to unravel the paradox are advised.

Education did not seem to have influenced the respondents' perception in a significant way. This can be used to conjecture that the complexity of messages

is not an issue with the farmers. Had some of messages been complex, the variation would have been significant across different educational categories. Social participation also did not seem to have affected the scores very significantly although the coefficient of correlation was statistically significant (Table 5). It can perhaps be understood from the fact that a majority of farmers scored low on social participation and as stated earlier the messages were not very complex. Therefore the reliance on peer groups for interpretation of the messages was much less. Annual income of the respondents was significantly and positively associated with the perception scores. Notably, half of the respondents with higher annual income perceived the messages as very effective. On the other hand, only very few of those with low annual income perceived messages to be very effective. The relationship between annual income and perceived effectiveness is significant and needs further studies. It can reveal valuable information about the economic and communication behaviour of the farmers. Similarly, media exposure and perception scores were also related though to a lesser extent. Those with low media exposure were least in numbers to rate the messages as very effective. Perhaps, these are the farmers who need special attention. It is suggested that the efforts be made to identify such farmers and bring them into the extension net by relying more on direct and individual methods of extension. On the whole, a majority of respondents exhibited medium mass media exposure. Therefore greater reliance on mass media is not advisable. A cautious approach while using mass media solely is advised. There is perhaps a need to critically evaluate the mass media as tool for extension communication for livestock farmers.

The association between extension contact and perceived effectiveness scores revealed some interesting facts. First, none of the respondents with low extension score perceived messages as very effective. Second, respondents with high extension contact scores rated different extension messages equally as 'less effective' and 'very effective'. Does the difference reveal something about the ability of local veterinary staff? There is a strong case for in-depth analysis of such differences as it would help understand the extension communication vis-a-vis staff's commitment and abilities. The department should seriously consider improvement in its human resources by trainings and motivation if these differences are because of local staff's varying abilities. Attitude of respondents towards improved animal husbandry practices was also included as a variable in the study. Those with highly favourable attitude constituted only 12% of the sample with a majority being those with neutral attitude. Very few respondents with very low or highly favourable attitude considered messages to be very effective. Perhaps, there

Table 4
Effectiveness of extension messages as perceived by livestock owners (n=190)

Statement	Total score	Mean Score (%)	Ranks
Messages are credible	836	4.40 (88.0)	III
Messages are clear and easy to understand	857	4.51 (90.2)	I
Messages are conveyed according to the level of receiver	838	4.41 (88.2)	II
The message are consistent with socio-cultural values and practices	829	4.36 (87.2)	IV
Complete and adequate message are always communicated	817	4.30 (86.0)	V
Message received timely from the department	746	3.93 (78.6)	X
Generally messages motivate the farmers for taking action	787	4.10 (82.0)	IX
Message create confusion among the farmers	388	2.04 (40.8)	XIV
Message you received are acceptable to all livestock owner	799	4.20 (84.0)	VII
Opportunities are not given to livestock owners to express their problems and seek solutions from the department	386	2.03 (40.6)	XV
Message is based on fact	743	3.91 (78.2)	XI
Oral communication is preferred over written by the A.H. and Dairying Department	790	4.16 (83.2)	VIII
Message construction is positive, pleasant and diplomatic	656	3.45 (69.0)	XII
Messages are accurate and brief	800	4.21 (84.2)	VI
Messages conveyed are not in appropriate tone and in approach	390	2.05 (41.0)	XIII

Table 5

Relationship between independent variables and effectiveness of extension messages as perceived by livestock owners

Independent variables	Correlation coefficient 'r' value with effectiveness	Regression coefficient 'b' value with effectiveness		
		b	Std. Error	t-value
Age	0.083	0.037	0.027	1.374
Education	0.135	0.402	0.314	1.282
Social participation	0.157*	0.298	0.354	0.840
Annual income	0.355**	0.509	0.153	3.329
Media exposure	0.191**	0.069	0.105	0.656
Extension contact	0.260**	0.340	0.150	2.264
Attitude of farmers	0.169*	0.250	0.105	2.382
	R^2		0.683	
	F		5.823**	

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

b=Regression coefficient; t=Value of student t-test; F=Value of F-test; R^2=Coefficient of multiple determinants.

is need to critically assess the extension messages for their relevance to different types of livestock farmers.

Moreover, regression analysis (Table 5) depicted that all the background variables jointly explained about 68.30 per cent variation towards effectiveness of messages as perceived by livestock owners. The calculated F value was found to be highly significant (P<0.01).

It can be concluded from this study that a majority of the animal owners perceived moderate level of effectiveness of messages delivered by the Department of Animal Husbandry and Dairying. The attributes *viz.*, attitude of animal owners, social participation, annual income, media exposure and extension contact were found having significant relationship with perceived effectiveness of messages whereas, only age and education were found to have not so significant relationship. Further studies to understand the dynamics of farmers' communication behavior vis-a-vis extension messages delivery are required.

REFERENCES

Adekunle, C.I. and Ajolo, J.U. (1994). Effective Communication in Sustainable Agriculture Technology Transfer by the 21st Century in Nigeria. (eds. Afolayan *et al.*) In: Issues and Priorities for Nigeria Agricultural in the 21st century, Proceedings of the Inaugural Conference of the Agricultural Extension Society of Nigeria (AESON).

Agbamu, J.U. (2006). Essentials of Agricultural Communication in Nigeria. Lagos, Malthouse Press Ltd.

Badodiya, S.K., Daipuria, O.P., Shakya, S.K., Garg, S.K. and Nagayach, U.N. (2010). Perceived effectiveness of farm telecast in transfer of agricultural technology. *Indian Res. J. Ext. Edu.***10**: 109-111.

Goyal, T.C. (2012). Problems and prospects of sheep husbandry in western Haryana. M.V.Sc. thesis, LLR University of Veterinary and Animal Sciences, Hisar.

Isife, B.J. and Ofuoku, A.U. (2008). Communication in Agricultural Extension and Rural Development: Concepts and Methods. Owerri, Springfield Publishers Ltd.

Ofuoku, A.U. (2010). Communication process and effectiveness of agricultural technology messages in poultry production in Delta State, Nigeria. Unpublished Ph.D. Post-field seminar, Department of Agricultural Economics and Extension, Rivers State Univ. of Science and Technology, Port Harcourt, Nigeria.

Ofuoku, A.U. (2012). Influence of extension agents and farmers communications factors on the effectiveness poultry technology messages. *Trop. Agric. Res. Exten.* **15**: 14-23.

Prasad, N. (2006). Communication behaviour of dairy farmers of Jind district in Haryana. M.V.Sc. thesis, CCS Haryana Agricultural University, Hisar.

Sharma, K. (2005). Problems and prospects in adoption of buffalo husbandry practices in Haryana. Ph.D. thesis, CCS Haryana Agricultural University, Hisar.

Swu, I.C. (2010). Knowledge and adoption of scientific poultry production technology by broiler farmers. M.V.Sc. thesis, CCS Haryana Agricultural University, Hisar.