

Radio: An Educational Media to Transfer Agricultural Information among Farmers

Neetu Kumari¹, S.B. Choudhary², S.K. Jha³ and S.R.K. Singh⁴

1.Ex-PG Student (M.Sc.), B.H.U. Varanasi, U.P.

2. Scientist, 3. Sr.Scientist, CRI for Jute and Allied Fibres, Barrackpore, Kolkata

4. Sr. Scientist (Ag Ext.), Zonal Project Directorate, Zone VII (ICAR), JNKVV Campus, Jabalpur, M.P.

Corresponding author e-mail: neetubhu2000@gmail.com

ABSTRACT

Radio is a powerful mass medium having reach up to the unreached mainly because of low cost and its ability to be present and used everywhere, which suits to the purse of poor and marginal farmers of developing country like India. Researchers proved that it is one of the most effective media in promoting agriculture and development in rural areas, particularly as a tool for the delivery of quick information. A quasi-experimental study was designed to determine the effectiveness of the radio as an educational media to transfer agricultural information to farmers. A total of 63 subjects were selected randomly from two districts of Bihar. Based on scheduled programme on specific topic of interest to be broadcast by All India Radio Station, Darbhanga, a questionnaire was prepared for pre- and post-tests. The results indicated that the sample constituted 88.6 per cent male and 11.4 per cent female. 79.2 per cent of the farmers in the study were married; 48.9 per cent were illiterate and most were between 33-45 years old (48.9%). Most of the respondents had 6-10 members in their family (62.4%). Educational intervention through radio caused significant knowledge enhancement from 4.10 to 6.80 of a total 10, clearly indicating the effective role of radio to improve awareness of farmers. What is required is that an appropriate content, process, structure and system to be developed for such programmes.

Key words: Radio; Mass medium; Effective media; Educational media; All India Radio;

We are living in a knowledge driven world where knowledge is the ultimate power. Over the decade mass media have played a pivotal role in imparting public knowledge in various fields to the common man. Among the mass media, radio and television have been considered as the best cultural and education media, largely due to their wide and vast range of viewers (*Tancard and Verner, 2005*). Radio is the most widespread and trusted mass media mainly due to its low cost and its ability to be present and used everywhere. In agriculture, need and aspiration of farmers are widely varying across agro-geographical situation amidst various socio-cultural taboos. To serve such a diverse clients, extension agents have used different media and methods to communicate location specific need based new and emerging technologies. Efficacy of these diverse tool and methods of communication have been tested by many researchers and educators (*Nazari M.R. et al., 2010*). These

knowledge help to develop educational resources in order to communicate effectively with farmers besides identifying the information needs of farmers (*Rama et al., 2003*).

In India; very little efforts have been given for specific research on these aspects of mass media in general and radio in particular. Further, introduction of technology intensive western model of information and communication technology had led to ignorance of radio as education media. Of late, implementation of these ICT especially in rural India seems tough mainly due to the fact that majority of the people are resource poor and illiterate. This encourages rediscovery of effectiveness of radio as mass media. In this backdrop the present study was conducted to determine the role of radio on the enhancement of farmer's agricultural knowledge and to ascertain the kind of programme to be broadcasted by radio for integrated rural development.

METHODOLOGY

The present research, a quasi-experimental study, aims to determine the role of radio in enhancing farmer’s agricultural knowledge. The study based on agricultural and rural programme broadcast by All India Radio, Darbhanga in “*Krishi aur grih yekansh*” a hindi programme. To take the farmers response, two village chosen randomly from two districts namely, Darbhanga and Madhubani, Bihar. 20 farmers from each village were randomly selected and made samples for this study (80 farmers). Based on the scheduled programme namely “*Uttam beej utpadan ki vidhi*” in agricultural and rural programme “*Krishi aur grih aekansh*” in the coming weeks a questionnaire was prepared. The scheduled date of broadcasting was (on 05/09/2013). With the prepared questionnaire, eighty farmers were interviewed before broadcasting of programme on 03/09/2013 and after broadcasting of the programme on 07/09/2013. To ensure that the farmers listen the programme, a brochure was provided and given to them after the pre-test in which the exact time of the programme was mentioned. SPSS software and statistical tests of χ^2 , t-test and analysis of variance (ANOVA) were used for the analysis and interpretation of the information.

RESULTS AND DISCUSSION

Socio-economic attributes: The sample constituted about 89 per cent male and 11 per cent female. About 79 per cent farmers in the study were married; about

49 per cent farmers were illiterate and most were between 33-45 years old (forty nine percent). Most of the respondents had 6-10 members in their family (62.2%).

Table 1. Socio-economic attributes of the respondents

Attributes	Category	No.	%
Gender	Male	56	88.9
	Female	7	11.1
Marital status	Married	50	79.4
	Unmarried	13	20.6
Education	Literate	30	47.6
	Illiterate	33	52.4
Age (in years)	<33	14	22.2
	33-45	31	49.2
	>45	18	28.6
Family size (member)	<6	15	23.8
	6-10	39	61.9
	>10	9	14.3
Land holding	Landless	16	25.4
	Small/marginal	29	46.0
	Large	18	28.6

Table 2 illustrates the level of knowledge of farmers with regard to 10 questions before and after intervention which showed that for all questions, level of their knowledge had increased significantly (P<0.05). The maximum and minimum rise in farmers’ knowledge related to questions 3 and 8 respectively.

The results showed that the number of corrected answers had increased during the post-test. The average score increased from 4.10 during pre-test to 6.80 during the post-test for radio programme (Table 3). The findings

Table 2. Frequency of correct response to pre- and post-test among farmers by questions

Items	Correct response				χ^2	p
	Pre-test		Post-test			
	No.	%	No.	%		
Importance of quality seeds	17	26.9	44	69.8	17.94	0.001***
Seed production system in India	16	25.4	39	61.9	28.89	0.001***
What is certified seed	19	30.2	43	68.3	3.41	0.006**
Source of registered seed	47	74.6	48	76.2	29.42	0.001***
Site for seed production	33	52.4	46	73.0	48.26	0.001***
Sowing time	27	42.9	44	69.8	43.51	0.001***
Seed rate and sowing method	31	49.2	36	57.1	33.88	0.001***
Intercultural operation	34	53.9	36	57.1	28.11	0.001***
Disease and pest control	27	42.9	41	65.1	16.09	0.001***
Harvesting and post-harvest processing of seed	18	28.6	28	44.4	36.76	0.001***

* Indicates statistical significant at p<0.01
 **Indicates statistical significant at p<0.001

of the study showed that educational intervention through radio caused significant knowledge enhancement from 4.10 to 6.80 of a total 10, clearly indicating the effective role of radio to improve awareness of farmers. This result is in agreement with that of *Nazari M.R. et al (2010)*. *Chapman et al. (2003)* in his study about role of radio in agricultural extension in Ghana reported that 83 per cent of respondents believed that the messages of radio were true affirmatively, while 17 per cent would not answer the question.

Table 3. Mean scores of farmers' knowledge by pre-test and post-test

Participants	Pre-test		Post-test		t	p
	Mean	SD	Mean	SD		
63	4.10	1.94	6.80	1.50	19.53	0.001*

*Indicates statistical significant at $p < 0.001$

Correlation study was used to explore the relationship between farmer's knowledge level and gender, age, marital status, family size, educational level and land holding size. Table 4 represents the correlation coefficient of the dependent variable, farmer's agricultural knowledge level with six independent variables.

Table 4. Coefficient of correlation with farmer's agricultural knowledge level and six socio-economic variables

Variables	Correlation coefficient (r)
Gender	0.875**
Marital status	0.065
Education	0.280*
Age	0.435**
Family size	0.650**
Land holding	0.856**

$r > 0.279$; * significant at 5% level of significance,
 $r > 0.360$; **significant at 1% level of significance

The result revealed that knowledge level had a positive and significant correlation with all the socio-economic variables except marital status. The revelation is similar with the findings of Nazari M.R. et al (2010). Already, affectivity and penetrance of radio has been established by various workers across field viz. teaching mathematics to school children and for teacher training

and other curricula ; health and education; changes in farming practices and improving production; improvement of nutrition education and family planning and health management. In developing countries such as Pakistan (Abbas et al., 2003) and Africa (Hambly, 2007), radio is considered as an informal educational tool which is vital for development and farming systems. Therefore such a powerful mass media will effectively support agricultural extension in vast and diverse country like India. What is required is that an appropriate content, process, structure and system to be develop for such rural areas programme.

CONCLUSION

Mass media offers effective channels for communicating agricultural messages, which can increase knowledge and influence behaviour of the intended audience. Broadcast media have the ability to disseminate information to large audiences efficiently; the radio can be a particularly important channel. Since radio plays a more important role in public education, producers should be familiar with the latest programme structures to be able to meet the needs of people by employing appealing methods. Based on the research findings, the farmer's literacy level plays an influential role in the extent of his/her use of available media. The relevant institutes and organisations should provide appropriate opportunities for the development of formal and informal education in a move to decrease illiteracy levels in rural communities.

Paper received on : January 06, 2014

Accepted on : March 25, 2014

REFERENCES

- Abbas, M. Sheikh, A.D., Muhammad, S. and Ashfaq, M. (2003). Role of electronic media in the adoption of agricultural technologies by farmers in the central Punjab- Pakistan. *Intl. J. Agri.Biol.*, **5**: 22-5.
- Chapman, R., Blench, R., Kranjac-Berisavljevic', G. and Zakariah, A.B.T. (2003). Rural radio in a agriculture extension: The example of vernacular radio programs on soil and water conservation in N. Ghana. Agricultural Research and Extension Network (AgREN). Network Paper No. 127.
- Hambly, H. (2007). Communicating Agricultural Research in Africa: The New Role of Rural Radio. Available: <http://www.comminit.com/en/node/223240/36>.
- Nazari, Moh. Reza and Abu Hassan Hasbullah (2010). Radio as an Educational Media: Impact on Agricultural Development. *SEARCH: The Journal of the South East Asia Research centre for Communication and Humanities*. **2** :13-20
- Rama, B. Radhakrishna, Nelson, L., Franklin, R. and Kessler, G. (2003). Information sources and extension delivery methods used by private longleaf pine landowners. *J. of Ext.*, **41**(4) : 52-56
- Tancard, J. and Verner, S. (2005). Communication Theories. Transl: Dehghan. A. Iran: Tehran University Press.

