Content Analysis of Farm Information Communicated Through Selected Radio Programme

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ABSTRACT

In a country like India, the coverage of agriculture in print and electronic media is very negligible, though two third of our population depends on agriculture. Since its invention, radio has been regarded one of the strongest electronic media in terms of dissemination of farm information to the resource poor, less educated and illiterate farmers in different parts of the world. In the present context, the study was formulated with objectives to assess the comparative orientation and importance given to farm information by selected radio programme and to study the farmers' preferences regarding the type of farm information broadcasted through different radio programme. A detailed content analysis of the three farm programme, broadcasted by All India Radio, Kolkata at 456.6 Band and 657 KHz during April 2010 to March 2011 was done. Farm programme were divided into different categories and sub-categories. Simultaneously, two hundred farmers were selected by probability proportion method from all three sub-division of the districts of Birbhum, West Bengal to study the farmers' preferences. Sample farmers were interviewed with structured interview schedule during the study period. The study results revealed that most of the farm information was broadcasted under the 'Deliberation' category and as such on seasonality observed in terms of dissemination of farm information. Under different categories, 'Technology Transfer', 'Rural Development', Health and Sanitation', 'Rural Youth', 'Farm Women' and 'Success Story' were covered by the radio programme, whereas farmers' mostly preferred farm information regarding 'Technology Transfer', 'Rural Development', 'Agricultural Marketing' and 'Weather Forecast'.

Key Words: *Content analysis; Radio programme; Farm information; Farmers' preferences;*

In a country like India, where two third of the population depend on agriculture and one fourth of countries GDP is contributed by agriculture, it is very upsetting to note the insufficient coverage of agriculture in media including print and electronic which is even less than two percent. This is probably because farm information is not lucrative to the media organizer. As non-glamorous information it is also non-profitable to them. The Tenth Plan (2002-2007) Document recognised the problems of the extension sector and states: "The Agriculture extension machinery and information support in most states seems to have become outmoded. …..The need to revamp the extension services in the country by using print and electronic media and information technology along with the involvement of the private sector, especially the input agencies and traders, are now one of the main sources of information for the farmers. Radio, Television and the print media have become powerful means of education and technology dissemination." Driven by the facts of poor extension services and apathy of media for agriculture, the Ministry of Agriculture, Government of India has taken a bold initiative to sponsor scheme on Mass Media Support to Agriculture Extension and which is already under implementation from 2003-2004. Its primary objective is to use television and radio with their massive penetration as a vehicle that could be exploited for the purpose of extension.

In the present context of increasing importance of mass media for communication of farm information, what is expected is that an appropriate content, process, structure and system that are to be pragmatically developed. For that purpose a detailed study in relation to farm information communicated through mass media with

special reference to the content wise nature and extent of farm information through mass media, like; basis of ascertaining content to be communicated, consideration of clients' needs for the farm information, extent of credibility of farm information from scientific and users' point of view, different factors there off and so on; are of immense importance. Considering that, presently a content analysis is done in relation with the farm information communicated through All India Radio, Kolkata.

In the study on the programmes of farm and home broadcast in Radio, *Sasidhar et. al (1999)* found that nearly half of the programmes were broadcasted on agriculture followed by horticulture, animal husbandry, extension, farmwomen, sericulture and developmental programmes. Time allotment to the different subject matter areas as that of topics covered were different. Interview format was used for broadcasting majority of topics.

Singh (2001) conducted a content analysis of farm broadcast programme on All India Radio, Imphal for a period of 30 days (1 September 98 to 30 September 98). He reported that 42.50 percent of total time slot for farm programme occupied by folk plays, folk music, folk songs and short radio plays. Other programmes, which followed were, agricultural (11.65%), general (10.55%) and horticulture crop protection was broadcasted in greatest numbers (33.33%), whereas least time slot was devoted to crop nutrition (7.87%).

For the present study, three farm programmes of *All India Radio, Kolkata, namely, Chasi Bhaider Bolchhi* (Addressing the Farmers), *Uno Jamir Duno Phasal* (Double Crop in Fertile Land) and *Krishi Kathar Aasar*n (Programme on Agriculture) have been considered under present research work with the general objective of the present research work is to study the different aspects of farm information communicated through radio. The study was formulated with the following specific objectives;

- To study the comparative orientation and importance given to farm information by the selected radio programme.
- To study the farmers' preferences regarding the type of radio programme and type of farm information communicated through different radio programmes.

METHODOLOGY

According to *Berelson (1952),* content analysis is a research technique for the objective, systematic, and quantitative description of the manifest content of communication. He defined it as less restrictive and includes studies in which findings are reported in such terms as "more", "less", or "increasing". He also suggested the method of content analysis is used for analyzing the characteristics, causes and effects of content.

Universe of the study : Farm Programme from All India Radio, Kolkata at 456.6 m. Band and 657 KHz are studied and recorded for the entire study period i.e. April 2010 – March 2011. Three Farm Programmes have been identified as the universe of study which are broadcasted almost every day in Bengali language. These are as follows;

- *Chasi Bhaider Bolchhi* (Addressing the Farmers) – being broadcasted every morning at 6.30 to 6.40 am for ten minutes.
- *Uno Jamir Duno Phasal* (Double Crop in Fertile Land) – being broadcasted from 12.40 P.M to 01.00 P.M for twenty minutes.
- *Krishi Kathar Aasar* **(**Programme on Agriculture) – being broadcasted in the evening hours from 06.40 P.M to 07.30 P.M. for fifty minutes

Categorization of Farm Information : The mode of delivery or form of message delivery has observable relationship with the farmers' preference of receiving farm information from radio broadcast. *Silva and Garforth (1997)* stated that the interview format is the most effective in terms of immediate knowledge gain, followed by drama, discussion and talk form among the different radio programme format for the dissemination of information in Srilanka.

After careful study, the farm information disseminated by radio are categorized into four major categories on the basis of mode of delivery i.e. Deliberation; Interview; Radio Play; Panel Discussion

All the major categories are again separately divided into different sub-categories according to type of information broadcasted during the period of study. The sub-categories are given hereunder in tabular form.

Reliability Test of Categories and Sub-categories of Farm Information Communicated through Radio : Reliability test of the process of categorization and sub-categorization is very much essential in content analysis; and for the present study *Krippendorff's Alpha (1992)* has been calculated for the purpose of reliability test of the categorization and sub-categorization. The value of alpha for different categories and sub-categories of farm

Sub-categories of farm informations according to type of information broadcasted

Deliberation	Interview	Radio Play	Panel Discussion
Agricultural Policy	Agricultural Policy	Agricultural Policy	Agricultural Policy
Crisis	Crisis	Farm Women	Farm Women
Farm Women	Farm Women	Health & Sanitation	Health & Sanitation
Health & Sanitation	Health & Sanitation	Rural Development	Agril. Marketing
Agril. Marketing	Agril. Marketing	Rural Youth	Rural Development
Rural Development	Rural Development	Social Forestry	Rural Youth
Social Forestry	Rural Youth	Success Story	Social Forestry
Success Story	Social Forestry	Technology Transfer	Technology Transfer
Technology Transfer			Agricultural Policy

information communicated through radio was found 0.817. By following decision rule (alpha= 0.8 or above), it is found that the process of categorization and sub-categorization were reliable.

Farmers' preferences regarding the type of radio programme and Type of Farm Information ; Kumar and Se (2001) observed that most preferred mode of communication in farm radio programme among the respondents was interview method. It was preferred by 76.6 percent of the respondent. The next preferred mode was Drama (68.8%). The third and fourth preferred modes were folk songs and straight talk.

To study the farmers' perception of farm information communicated through radio, 200-sample farmers, selected by following probability proportion method from all three sub-divisions of the district of Birbhum, West Bengal, were interviewed with the structured schedule during the study period.

RESULTS AND DISCUSSION

Number of Farm Information Communicated and Time Allottement in Radio Broadcasting : As it is mentioned in the methodology part, for the purpose of content analysis of the radio programmes, farm information broadcasted through three programmes of *All India Radio, Kolkata*, namely; *Chasi Bhaider Bolchhi, Uno Jamir Duno Phasal* and *Krishi Kathar Aasar* have been studied carefully during the study period. The following table depicts the programme wise distribution of number of farm information and time allotment for farm information for different programme.

In case of radio programme some times more than one farm information were broadcasted in a single programme. So total number of farm information were taken and computed for frequency distribution. From the table, it is found that the total numbers of farm information were almost evenly distributed among the three Farm and Home broadcasts of *All India Radio, Kolkata.* Table 1 also shows that Radio broadcasted 20235 minutes of farm information during the study period. But in case of Radio, percentage distribution of time given for farm information in respect to total broadcasting time in Radio during the study period was found to be only 7.09%. Among the three programme broadcasted by *All India Radio, Kolkata, Chasi Bhaider Bolchhi* and *Uno Jamir Duno Phasal* were broadcasted for ten minutes and twenty minutes every day respectively. Whereas, Krishi *Kathar Aasar* was broadcasted every day for thirty minutes or more. That is why *Krishi Kathar Aasar* occupied the highest percentage (3.26%) and *Chasi Bhaider Bolchhi* ranked the lowest (1.27%) in the table.

Preferential Selection of Different Categories and Sub-Categories of Farm Information in Selected Radio Programme: From one year long critical study of all three farm broadcasts of *All India Radio,*

Table 1. Number and Time Allotted for Farm Information in Radio

Name of the Radio Programme	No.*	%	Total period**	Farm Information+	%
Chasi Bhaider Bolchhi	362	32.61	285480 minutes	3620 minutes	1.27
Uno Jamir Duno Phasal	373	33.60	285480 minutes	7295 minutes	2.56
Krishi Kathar Aasar	375	33.79	285480 minutes	9320 minutes	3.26
Radio (Total)	1110	100.00	285480 minutes	20235 minutes	7.09

* Total No. of Farm Information Broadcasts during the study period

** Total Broadcasting Time during the study period

+Time Allotted for Farm Information

Kolkata, it was found that *All India Radio, Kolkata* had preferential selection for mode of presentation of farm information. According to the mode of presentation, four different categories have been identified, namely; Deliberation, Interview, Panel Discussion and Radio Play under which all the farm information have been categorized. Total numbers of farm information under these broad categories have been computed and are presented in the following tables.

In radio, during the study period total number of farm information broadcasted was 1110. The farm information broadcasted in radio has been categorized in to four different categories according to the mode of presentation. Among them 'Deliberation' ranked highest (59.10%). The next categories close to 'Deliberation' were 'Interview' (17.75%) and 'Radio Play' (16.58%). Farm information broadcasted through Panel Discussion was only 6.58 per cent. So, in general, the result suggests that broadcast house preferred mostly 'Deliberation' mode of broadcasting for dissemination of farm information (Table 2).

Table 2. Distribution of Categories of Farm Information in Radio Broadcasting

Category	No.	%
Deliberation	656	59.10
Interview	197	17.75
Panel Discussion	73	6.58
Radio Play	184	16.58
Total	1110	100

For detailed study on preferential selection, each category has been divided into different sub-categories. Farm information broadcasted in relation with different sub-categories were counted separately for each category and presented in the following tables;

Table 3. Sub-Category wise Distribution of Farm Information Broadcasted under

Sub-category	'Deliberation' Category	
	No.	%
Agricultural Policy	10	1.52
Crisis	2	0.30
Farm Women	8	1.22
Health and Sanitation	12	1.83
Agricultural Marketing	23	3.51
Rural Development	171	26.07
Rural Youth	1	0.15
Social Forestry	10	1.52
Success Story	3	0.46
Technology Transfer	416	63.41
Total	656	100

Table 3 depicts the distribution of different sub-categories under 'Deliberation' category of farm information broadcasted by radio. It is found that majority of the farm information under 'Deliberation' category were related with 'Technology Transfer' (63.41%). The other major sub-categories came after 'Technology Transfer' were 'Rural Development' (26.07%) followed by 'Agricultural Marketing' (3.51%).

In case of 'Interview' category', the Table 4 again suggests that 'Technology Transfer' (27.92%) type of farm information was broadcasted in highest number. 'Health and Sanitation' (19.29%) were also given importance under 'Interview' category in Radio, followed by 'Rural Development' (13.20%). 'Farm Women' and 'Success Story' (both at 9.14%) were also received some importance when selecting farm information for radio broadcast under 'Interview' category.

Table 4. Sub-Category wise Distribution of Farm Information Broadcasted under

Sub-category	'Interview' Category	
	No.	%
Agricultural Policy	15	7.61
Crisis	4	2.03
Farm Women	18	9.14
Health and Sanitation	38	19.29
Agricultural Marketing	8	4.06
Rural Development	26	13.20
Rural Youth	9	4.57
Social Forestry	6	3.05
Success Story	18	9.14
Technology Transfer	55	27.92
Total	197	100

Under 'Panel Discussion' (Table 5), 'Rural Youth' (32.88%) and 'Farm Women' (23.29%) sub-categories of farm information were given prime importance in Radio. A considerable amount of farm information was also broadcasted in Radio about 'Technology Transfer' (16.44%). Farm information broadcasted under other sub-categories in descending order of numbers was 'Rural Development' (9.59%), 'Agricultural Marketing' (4.11%) and 'Social Forestry' (1.37%).

The Table 6 ascertains that majority of the farm information under 'Radio Play' were broadcasted on 'Rural Development' (59.78%) activities. 20.11per cent of farm information were also broadcasted on different 'Success Stories' related to farm business followed by 16.85 per cent of the farm information related with 'Technology Transfer' sub-category.

Table 5. Sub-Category wise Distribution of Farm Information Broadcasted under

Sub-category	'Panel Discussion' Category	
	No.	%
Agricultural Policy	6	8.22
Farm Women	17	23.29
Health and Sanitation	3	4.11
Agricultural Marketing	3	4.11
Rural Development	7	9.59
Rural Youth	24	32.88
Social Forestry	1	1.37
Technology Transfer	12	16.44
Total	73	100

Table 6. Sub-Category wise Distribution of Farm Information Broadcasted under 'Radio Play' Category

Sub-category	No.	%
Farm Women	4	2.17
Rural Development	110	59.78
Rural Youth	1	0.54
Social Forestry	1	0.54
Success Story	37	20.11
Technology Transfer	31	16.85
Total	184	100

As a whole, so far as the preferential selection of different major categories and sub-categories of farm information broadcasted by *All India Radio, Kolkata* are concerned, it is found that 'Deliberation', a major category was preferred most followed by 'Interview'. In case of different sub-categories, it is found that 'Technology Transfer' and 'Rural Development' were preferred most under most of the broad categories.

Monthly Distribution of Farm Information Broadcasted through Radio : As it is mentioned earlier agriculture being the seasonal activity, requirement for different kind of farm information among the farmers varies seasonally. The following Table 7 depicts the monthly distribution of farm information broadcasted through selected farm programmes of *All India Radio, Kolkata*.

In case of month wise distribution of farm information broadcasted by radio, Table 7 shows that highest number of farm information were broadcasted in the month of May (112) and month of July (107) came next to it. The highest number of farm information broadcasted in mode of 'Deliberation' mode in every month. Average results confirms that farm information under every category were more or less evenly distributed over the months of study period of one year without giving any extra attention to any particular cropping season.

Participation of Experts and Farmers in Radio Programme : Participation of experts often increases the quality of the farm programme. Farmers can get information directly from the expert and knowledgeable persons. At the same time participation of the farmers and farm people make the farm programme more farmers' oriented and field based problems are addressed properly. Farmers can also share their experience with their fellow farmers and farm people. As a whole these participation helps the farm programme to become more oriented to bottom line approach. Here, the participation of the experts and

Table 7. Month Wise Distribution of Different Categories of Farm Information in Radio

Month	Category of Farm Information				
	Deliberation	Interview	Panel Discussion	Radio Play	Total Farm Information
April 2010	32	21	4	14	71
May 2010	54	29	4	25	112
June 2010	53	15	6	14	88
July 2010	68	17	12	10	107
Aug 2010	57	16	10	13	96
Sept 2010	63	13	11	11	98
Oct 2010	47	12	7	12	78
Nov 2010	54	20	4	12	90
Dec 2010	55	18	1	18	92
Jan 2011	59	9	5	23	96
Feb 2011	54	11	5	16	86
Mar 2011	60	16	4	16	96
Total	656	197	73	184	1110
Average	54.67	16.42	6.08	15.33	92.5

others group of people in farm and home programme are computed and presented in the following table.

Table 8 envisaged that majority of the radio programme (75.66%) broadcasted without presence of any kind of experts or other people except the presenter or anchor. The presence of different group of people along with the anchor was mainly found in case of 'Interview' and 'Panel Discussion' categories of farm information in radio. It is found from the study that experts were present in only 14.05 per cent cases of the farm broadcast, whereas, farmers were present in 12.34 per cent cases. Only in 7.39 per cent and 5.05 percent cases of the farm broadcast respectively, farm women and rural youths were present. In number of cases, both experts and farmers or farmers and farm women or farmers and rural youth were found present in a single programme.

Table 8. Distribution of Presence of Different Group of People in Radio Programme

Group of People Present	No.	%
Experts	156	14.05
Farmers	137	12.34
Farm Women	82	7.39
Rural Youth	56	5.05
General (Anchor Based)	840	75.66
Total Farm Information	1110	100

Allotment of Time in Radio for Broadcasting Farm Information : Allotment of time for the farm information broadcast is also an index through which it can be understood well the extent of importance given to that particular information by the authority. In order to assess importance given by *All India Radio, Kolkata* for broadcasting farm information in terms of allotting time, total time period of farm programme are computed and stratified under different categories, which are presented below.

Table 9. Distribution of Time Allotted for Farm Information Broadcast through Radio

Time Allotted	No.	%
Up to 10 minutes	406	36.58
Above 10 minutes to 20 minutes	208	18.74
Above 20 minutes to 30 minutes	452	40.72
Above 30 minutes to 40 minutes	33	2.97
Above 40 minutes to 50 minutes	11	0.99
Total	1110	100

This Table 9 shows the distribution of time allotment for farm information broadcasted through Radio. It is evident from the study that majority of the farm information in Radio were broadcasted for duration of 20 minutes to 30 minutes (40.72%). 'Up to 10 minutes' (36.58%) came next to it. 18.74 per cent of farm information were also broadcasted in Radio for duration of 10 minutes to 20 minutes.

Farmers' Perception and Preferences of Different Radio Programme for Receiving Farm Information : In an effective communication process the responses of the receivers' is one of the most vital component. It helps to understand the need and interest of the receiver and based on which communication process can be made more effective. Here also, in order to communicate the farm information through radio more effectively, it is necessary to know the need and interest, perception and choice preferences of the farming communities about the farm information. In the following tables the preference of the farmers regarding selection of radio programme out of three radio programmes for getting farm information have been computed and presented.

Table 10. Farmers' Preference of Radio Programme for Obtaining Farm Information

Radio Programme	Preference (%)
Chasi Bhaider Bolchhi	38.92
Uno Jamir Duno Phasal	18.45
Krishi Kathar Aasar	42.63

In case of getting farm information from radio programme, *Krishi Kathar Asar* (Programme on Agriculture) ranked the highest (42.63%) in terms of farmers' preference followed by *Chasi Bhaider Bolchhi* (Addressing the Farmer), 38.92 per cent. Only 18.45 per cent farmers preferred *Uno Jamir Duno Phasal* (Double Crop in Fertile Land) for getting farm information (Table 10).

Farmers' Perception and Preferences of Different Types Farm Information Communicated by Radio: Farmers are having their own need and preferences regarding type of farm information to be received. For that reason farmers' preferences regarding different types of farm information are surveyed, computed and presented in the following tables.

Table 11 indicates that 26.48 per cent and 22.73 per cent farmers preferred to have 'Technology Transfer' and 'Rural Development' related farm information respectively from radio programme. Another 18.16 per cent farmers preferred to have weather related information from radio for their farm business

followed by 15.63 per cent farmers who preferred to have farm information on different success stories in radio regarding farm business.

Table 11. Preference for Kind of Farm Information in Radio by Farmers

Farm Information	Preference (%)
Agricultural Marketing	7.42
Agricultural Policy	5.27
Rural Development	22.73
Rural Youth	4.31
Success Story	15.63
Technology Transfer	26.48
Weather Forecast	18.16
Total	100

CONCLUSION

In case of *Radio*, most of the farm information was broadcasted under the broad category of 'Deliberation'. As such no seasonality was observed in terms of dissemination of farm information under different categories of farm information broadcasted through radio. Farm information was more or less evenly distributed in all the months of the study period.

The study envisaged that majority of the radio programme (75.66%) broadcasted without presence of any kind of experts or other people except the presenter or anchor. The presence of different group of people along with the presenter is mainly found in case of Interview and Panel Discussion categories of farm information in radio.

In terms of disseminating farm information under different categories, 'Deliberation' were mainly concentrated on 'Technology Transfer' and 'Rural Development' sub-categories. 'Interview' was found to be concentrated on 'Technology Transfer', 'Health and Sanitation' and 'Rural Development' sub-categories. On the other hand 'Panel Discussion' concentrated on 'Rural Youth' and 'Farm Women' sub-categories and 'Radio Play' concentrated on 'Rural Development', 'Success Story' and 'Technology Transfer' sub-categories for communication of farm information.

Most of the farm information broadcasted in Radio were for '20 minutes to 30 minutes' time slot. A sizable numbers of farm information were also broadcasted 'up to 10 minutes' time slot.

Now the farmers' responses have been taken in this study regarding dissemination farm information in newspapers and radio. Farmers preferred most the *Krishi Kathar Asar* (Programme in Agriculture) and *Chasi Bhaider Bolchhi* (Addressing the Farmer) for obtaining farm information. In case of type of farm information, farmers mostly sought farm information regarding 'Transfer of Technology', 'Rural Development', 'Agricultural Marketing' and 'Weather Forecast' from radio.

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