

Reprint

ISSN 1991-3036 (Web Version)

# International Journal of Sustainable Crop Production (IJSCP)

*(Int. J. Sustain. Crop Prod.)*

---

**Volume: 8**

**Issue: 1**

**August 2013**

---

*Int. J. Sustain. Crop Prod. 8(1): 1-4 (August 2013)*

## **RELATIONSHIPS OF THE SELECTED CHARACTERISTICS OF FARMERS WITH THEIR USE OF TELEVISION IN ADOPTING SELECTED TECHNOLOGIES**

M.M. RAHMAN, M.S. HUDA, M.H. RASHID, S. PARVIN AND A.F.M.S. AHSAN



**GGF**  
Nature is Power

An International Scientific Research Publisher

**Green Global Foundation<sup>©</sup>**

Publication and Bibliography Division

100 Leeward Glenway

Apartment # 1601

M3c2z1, Toronto, Canada

E-mails: [publication@ggfjournals.com](mailto:publication@ggfjournals.com), [editor@ggfjournals.com](mailto:editor@ggfjournals.com)  
[http://ggfjournals.com/ejournals/current\\_issue](http://ggfjournals.com/ejournals/current_issue)



IJSCP\*\* issn 1991-3036, HQ:19-10 cantral place, saskatoon, saskatchewan, s7n 2s2, Canada

## RELATIONSHIPS OF THE SELECTED CHARACTERISTICS OF FARMERS WITH THEIR USE OF TELEVISION IN ADOPTING SELECTED TECHNOLOGIES

M.M. RAHMAN<sup>1</sup>, M.S. HUDA<sup>1</sup>, M.H. RASHID<sup>2</sup>, S. PARVIN<sup>3</sup> AND A.F.M.S. AHSAN<sup>1</sup>

<sup>1</sup>Scientific Officer, Bangladesh Agricultural Research Institute (BARI) Joydebpur, Gazipur; <sup>2</sup>Scientific Officer, Agricultural Research Station, Burirhat, Rangpur; <sup>3</sup>Senior Scientific Officer, Bangladesh Agricultural Research Institute (BARI), Joydebpur, Gazipur.

Corresponding author & address: Md. Mizanur Rahman, E-mail: mizanur9034@yahoo.com

Accepted for publication on 5 July 2013

### ABSTRACT

Rahman MM, Huda MS, Rashid MH, Parvin S, Ahsan AFMS (2013) Relationships of the selected characteristics of farmers with their use of television in adopting selected technologies. *Int. J. Sustain. Crop Prod.* 8(1), 1-4.

The study focuses on the use of television (TV) by the farmers in adopting the selected technologies and explores its relationships with the selected characteristics of farmers. Data were obtained from 106 randomly selected TV user farmers, from a total of 302, during 02 March to April 2003 through personal interview schedule. The findings revealed that majority (61.6%) of the farmers had medium adoption while 22.7% had low adoption and 15.7% had high adoption of selected technologies by using TV. Correlation analysis indicates that among the selected characteristics of the farmers, education, farm size, annual income and duration of watching TV showed significant positive relationships with their adoption of selected technologies by using TV. On the other hand age, family size, farming experience, agricultural knowledge and innovativeness of farmers did not show any significant relationships with their adoption of selected technologies by using TV. In respect to his comparative use of TV it was found that weekly drama ranked first followed by cinema, package drama, news and Mati-O-Manush. Farmers indicated that there were seven problems which created hindrances during their watching of TV. The top of the three problems in order to importance were: excess advertisement, limited programme on agricultural development and mechanical problem during telecast.

**Key words:** farmer, television, adoption, technology

### INTRODUCTION

Television (TV) is regarded as the most powerful communication medium throughout the world. In popular perception it has been identified as a channel of entertainment, but it is widely used for information, education, sale promotion of commodities, political affairs and also extension purposes. The potential impact of television as a means of informing farmers is greater than that of any other mass media. The past researches in India about dissemination of agricultural information through television have reported significant impact of farm telecasts in increasing the technological knowledge (Mishra 1967; Singh and Sarma, 1973; Sadamate and Sinha, 1979; Sangha and Gupta, 1985).

Television is a powerful medium of mass education. In order of eradicate illiteracy from our country it can play a vital role. It can broadcast program with a view to imparting knowledge on hygiene, agriculture, food, environment and other aspects of life. Model teaching can be taught through television. For instance, Bangladesh Open University is doing better program through television. In fact television can contribute to the spread of learning and help moulding our character. A school boy as well as a grown up adult can see and hear programmes on scientific and technological subject and acquire knowledge. So television is a valuable addition to the art of teaching. Television is an audio visual communication media provides tremendous educational value to our vast majority of illiterate farmers. Though such media changes in the behavior of the farmers, their knowledge in agriculture can be increased to a large extent and modernize their practices into a parasitical way.

### METHODOLOGY

The study was conducted at three selected unions of Tukuria, Madankhali and Pirgonj under Pirgonj Upazilla of Rangpur district. Out of 302 television users farmers (those who watch television programmes of BTv) of these three union 106 (35% of the total population) farmers were selected randomly. Data were collected during March to April 2003 with the help of an interview schedule. After collection, data were compiled, analyzed and tabulated form interpreting the findings. The statistical measures such as number, mean, percent, range, and standard deviation were used to describe the personal characteristics of the farmers. To explore the relationship between the selected characteristics of the farmers and their use of television in adopting selected technologies, Pearson's Product Moment Correlation Co-efficient was used.

Use of television by the farmers in adopting selected technologies was the dependent and 09 selected characteristics of TV user farmers' were the independent variables of the study. The selected technologies were BRRI Dhan 28, IPM, Guti urea, Amrita sagar banana and Cardinal potato. The variables were: Age, Education, Family size, Farm size, Farming experience, Annual income, Agricultural knowledge, Innovativeness and duration of watching TV.

Use of television by the farmers in adopting selected technologies was measured on the basis of the extent of adoption of selected technologies by the farmer in using TV for a period of two years (2000-2001 and 2001-2002). Adoption has been measured in a number of ways in India (Ray 1991). The simplest amongst them are preparation of indexes. Bose and Saxena (1965) developed an adoption index by asking farmers as how many

improved practices recommended by the extension service they had adopted and for how many years. The summation of the numbers of the years and the selected technologies were used to make the index. A more rigorous and widely used method of measuring adoption by the formula of adoption index which was developed by Chattapadhyay (1963).

According to him the adoption quotient is the ratio scale designed to quantify the adoption behavior of an individual. The method of adoption quotient is more accurate as it involves all the related concepts like potentiality, extent, time consistency and weight age.

However, the overall selected technologies adoption index in the study was computed by using the following formula:

$$\text{Adoption index} = \frac{\sum e/p}{P_s} \times 100$$

$\sum$  = Summation of e/p

e = Extent (i.e. actual adoption) of adoption of selected technologies in a particular land in a particular year

p = Potentiality (i.e. possible adoption) of selected technologies in a particular land in a particular year

P<sub>s</sub> = period under study of selected technologies

In this study it is of two years i.e. 2000-2001 and 2001-2002. The selected technologies adoption index was expressed in percentage.

## RESULTS AND DISCUSSION

### Some basic features of individual characteristics of farmers

The basic statistical values of the individual characteristics were shown in Table 1 which is shown in self-explanatory.

Table 1. Descriptive statistics of independent variables

Name of the variable	Scoring method	Possible score	Observed score	Mean	SD.
Age	Actual years	-	22-58	36.30	9.4
Education	Rated score	-	0.0-14	7.052	4.018
Family size	Rated score	-	3-14	6.32	2.20
Farm size	Actual (in ha)	-	0.78-3.71	1.714	0.683
Farming experience	Actual (years)	-	4-35	15.70	6.87
Annual income	Actual (1 = Tk.1000)	-	24.2-124.1	51.592	20.185
Agricultural knowledge	Computed score	0-50	14-32	24.08	3.94
Innovativeness	Computed score	0-20	5-14	8.75	1.67
Duration of watching TV	Actual (in hour)	-	1.00-3.85	2.319	0.579

### Adoption of selected technologies by using television

The adoption of selected technologies of the respondents in number ranged from 25 to 68 against the possible range of 0 to 100. Based on the adoption score, the respondents were classified into three categories as shown in Table 2. Data contained in Table 2 revealed that about 61.6% of the farmers had medium adoption of selected technologies compared to 22.7% had low and only 15.7% had high adoption.

Table 2. Adoption of selected technologies by using television

Categories	TV user farmers			
	Number	Percent	Mean	SD.
Low adoption (up to 34)	25	22.7		
Medium adoption (35-52)	64	61.6	42.268	8.881
High adoption (>52)	17	15.7		
Total	106	100		

### Relationship between the Selected Characteristics of the Farmers and their use of Television in Adopting Selected Technologies

Relationship between the selected characteristics of the farmers and their use of television in adopting selected technologies were tested by computing coefficient of correlation which are shown in Table 3. The result showed that education of the farmers had significant and positive relationship with their adoption of selected

technologies by using TV because the farmers who had higher education also had higher adoption of selected technologies. Similar findings were also observed by Hamid (1995) and Islam (2002).

Farm size of the farmers had significant and positive relationship with their adoption of selected technologies by using TV. The finding is quite rational, because adoption of selected technologies is relatively costly. Large farmers get more scope than the small farmers as they can invest money for adoption of selected technologies. Many researchers (Haque 1993; Khan 1993; Chowdhury 1997) observed the similar significant positive relationships between these two variables.

Annual income of the farmers had significant and positive relationship with their adoption of selected technologies by using TV because adoption of technologies usually require considerable amount of money. It needs more amount of fertilizer, insecticides and adoption of different intercultural practices. Thus, the availability of money is essential to solve the financial convenience of the farmers to a considerable extent. Pal (1995), Chowdhury (1997) and Hussen (2001) also found the similar findings.

Table 3. Relationship between the Selected characteristics of the farmers and their use of television in adopting selected technologies (N=106)

Selected characteristics (independent variables)	Computed “r” Values	Tabulate “r” Value with df 104 (N-2)		
	Adopting of selected technologies by using TV	0.05 level	0.05 level	0.001 level
Age	-0.008 <sup>NS</sup>			
Education	0.314 <sup>***</sup>			
Family size	-0.008 <sup>NS</sup>			
Farm size	0.196 <sup>*</sup>			
Farming experience	-0.83 <sup>NS</sup>	±0.190	±0.249	±0.314
Annual income	0.263 <sup>**</sup>			
Agricultural knowledge	0.044 <sup>NS</sup>			
Innovativeness	0.122 <sup>NS</sup>			
Duration of watching TV	0.256 <sup>**</sup>			

NS = Not significant; \* = Significant at 0.05 level of probability; \*\* = Significant at 0.01 level of probability; \*\*\* = Significant at 0.001 level of probability

The duration of watching TV of the farmers had significant and positive relationship with their adoption of selected technologies by using TV. This implies that the higher duration of Watching TV of the farmers, the higher was their adoption of selected technologies. It indicates that duration of Watching TV was probably helpful for the farmers for their adoption of agricultural technologies.

## CONCLUSION

The education, farm size, high income and duration of watching TV of the farmers had significant positive with their adoption of selected technologies by using TV. This means that higher the education, large farm size, high income and high duration of watching TV of the TV user farmers higher was their adoption of technologies. Education makes an individual more responsible and more accountable. The farmers having large farm size, high income can invest appreciable amount of money in their adoption of selected technologies by using TV, where as TV user farmers having small farm size, low income are frightened to spend money in the adoption of selected technologies on the other hand duration of watching TV implies that more interesting and educational programmes should be designed by the TV authority so that farmers spend their leisure time more the watching television so that farmers can adopt the technology easily.

## REFERENCES

- Bose AB, Saxena PC (1965) The Diffusion of Innovation in West Rajstan, *Anthropology*, 18, 138-151.
- Chattapadhyay SN (1963) A Study of Some Psychological Correlates of Adoption of Innovations in Farming A. Ph. D Thesis. Jadavpur University, Calcutta.
- Chowdhury MSA (1997) Adoption of Selected BINA Technologies by the Farmers of Boira Union in Mymensingh District. M. S. (Ag. Ext. Ed.) Thesis. Department of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh. Bangladesh.
- Hamid MA (1995) Farmers’ Awareness on Environmental Pollution Caused by the Use of Agro-chemicals in Two Selected Villages of Bangladesh Agricultural University Extension Centre. M. S (Ag. Ext. Ed.) Thesis. Department of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.

Haque MM (1993) Adoption of Improved Practices in Sugarcane Cultivation by the Sugarcane Growers of Sreepur Under Gazipur District. M. S. (Ag. Ext. Ed.) Thesis. Department of Agricultural Extension Education, Bangladesh Agricultural University Mymensingh, Bangladesh.

Hussen MA (2001) Farmers' Knowledge and Adoption of Modern Sugarcane Cultivation Practices. M. S. (Ag. Ext. Ed.) Thesis. Department of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.

Islam MS (2002) Adoption of Modern Agricultural Technologies by the Farmers of Sandwip, M. S. (Ag. Ext. Ed.) Thesis. Department of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.

Khan MAH (1993) Adoption of Insecticides and Related Issues in the Villages of Pachon Union, Madaripur District. M. S. (Ag. Ext. Ed.) Thesis. Department of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.

Mishra AN (1967) Impact of Television of Farmers Unpublished. M. Sc Thesis. IARI, New Delhi.

Pal SK (1995) Adoption of Recommended Sugarcane Cultivation Practices by the Farmers of Two Selected Centre of North Bengal Sugar Mills. M. S. (Ag. Ext. ed.) Thesis. Department of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.

Ray GL (1991) Extension Communication and Management. Calcutta: Naya Prokash.

Sadamate VV, Sinha BP (1979) Farmers Education Through TV. *Indian Journal of Extension education*, 13(3&4), 37.

Sangha GS, Gupta MP (1985) Credibility of TV as a Source of Information. *Indian Journal of Extension Education*, 21(L1 & 2), 74-76.

Singh R, Sarma SK (1973) A Comparative Study of Adoption of HYV Program by the Farmers of TV and Non TV Villages. *Indian Journal of Extension Education*, 9(3&4), 92-101.