

THE INFLUENCE OF PTV IN THE INTRODUCTION OF AGRO-INNOVATIONS AMONG THE FARMERS OF BHAKKAR

Dr. Muhammad Aslam Parvez

*Assistant Professor, Department of Mass Communication
Gomal University, Dera Ismail Khan (NWFP)*

Badaruddin Soomro

*Assistant Professor, Department of Mass Communication
University of Sindh, Jamshoro*

Summaira Riffat

*Assistant Professor, Department of Statistics,
Government Girls College No.1, Dera Ismail Khan (NSFP)*

Abstract

The study in hand deals with the cognition and adoption of agro-innovation by the farmers of Bhakkar via Pakistan Television Network for the justification that TV presents both audio and visual that can influence larger number of rural masses, even when they are illiterate. This empirical research analysis resolves the habits of exposure and perception of 53249 farm families towards PTV agriculture programs. Identically comparison has been drawn between new and traditional ways of cultivation, seeing that the study hypothesis that The higher the exposure to PTV Agriculture programs, the greater the farming cognitive effects on farmers. And, higher the exposure to PTV Agriculture programs, higher the cognitive effects of Agriculture innovations. After deriving the Univariate frequency distribution of all related variables the data has been tested and analyzed by Chi, Square and Yule's Q test to know the existent, strength of relationship between independent and dependent variables of this study. It is revealed by data analysis that majority of the respondents are frequently expose to PTV Agricultural programs and by frequent adoption of the agricultural advices there happened an increase in the production. This study concludes that PTV agriculture-based programs have cognitive, affective and connective positive impacts at significant level in hypothesized direction.

Introduction

Agricultural technology is developing day by day. Almost daily there is some new agricultural innovation. According to Evenson and Jha (1973) the important task of the day is to find better and faster means of communication to bridge the gap between the latest research and their applicability. In recent years,

advances in mass media techniques have made it economical for the government to facilities to villages, thereby enabling officials to reach mass audiences with rapid, standardized and accurate messages about development. Television being both audio and visual can influence larger number of rural masses.

Peasants everywhere have been exposed to television, a mass medium, which is a novelty to them. It could be assumed that there has been an increase of modernization processes among the peasants in the area (Hayami & Ruttan, 1971) even though they are still labeled as traditional peasants however need has always been felt necessary to carry out an empirical research in order to know the role of television in modernization.

Quite often people think that TV has a much greater impact upon cognitive change and attitude in comparison with the other media of mass communication.

It is obvious that without the involvement of communication models it will be difficult to find out the impact of TV-exposure among the peasants. In other words, how does the information flow from TV broadcasts produce an impact on cognitive change as well as attitudinal change of the peasants? Does it go through one step model, hypodermic needle model, two-step flow model or other available models?

Innovativeness is the degree to which an individual adopt new ideas relatively sooner than others (compare: Roger, 1983). It is measured by asking respondents about utilization of new methods or new practices and when they started to use them.

It appeared that the effects of TV on peasants had existed both through one-step flow as well as two -step flow model of communication. However, the two-step flow hypothesis was the most likely to occur. The one-step flow hypothesis occurred only in very limited cases in that it dealt most with knowledge change, but much with attitude change. An interesting question may be raised as to how the two step flow model of communication work to exert an effect on knowledge and attitude of the peasant. A most of the peasants were unable to understand information they watched on TV. This very limited processing ability of the peasants made it difficult for them to utilize valuable information from the TV programs. As a result, they had to go to educate

villagers and opinion leader for further explanation – and to ask for their opinions too. (See Guatemala 1978 Anderson, 1977; Ascroft, 1973; Behrman, 1968)

Patel & Ekpere, (1978) say that TV still does not touch the subconscious mind of the common peasants – And common people as well as – who constitute the bulk of the nation. So, what could be done – and should be done? The answer is simple: the media should increase and improve its rural broadcasting in the real sense. Viewed from the point of communication theory, agenda setting function of mass communication postulates among other things that media-agenda should be constantly in accord with public or audience-agenda.

This theory or model is adapted from a modification of the original model of agenda-setting function of mass communication by theory of Understanding Peasant Behavior (1967) The classical theory of media agenda vis-à-vis audience –agenda implies, in essence, that issues which are regarded to be important by the media will also be regarded as such by the audience, which is in contrast to reality. According to this theory a televised issue may be regarded as important by the audience if it is featured frequently and prominently, if it takes a reality large amount of broadcast time it is enriched with visual and graphic elements and so on. Thus, according to this theory the agenda setting function of the Television which broadcast so frequently and prominently high society's daily achievements as well as big city life, will be regarded as important by the peasants living in the remote villages most of whom are still poor and illiterate. This is really in contrast to or not endorsed all the way by our empirical findings. What is regarded to be a very important message by the communicator is not necessarily important for the member of the audience because they may perceive the message differently from what is really intended by the mass communicator. (Axinn & Thorat, 1972; Herdt, 1971) According to Rogers (1983) the audience of mass communication has a tendency to perceive messages selectively. Roger postulated that the tendency of the audience to interpret communication messages is always in term of their existing attitude and beliefs. And the mass media channels do not have high ability to overcome the selective processes of the audience as

interpersonal channels do. It found that the peasants in the villages usually regarded most of the news programs of the beyond their comprehension and their needs. It appeared in most cases that they did not understand the news and were not very interested in them either.

Pakistan Television

Television was not invented by a single inventor, instead many people working together and alone, contributed to the evolution of TV. The history traces back to the year 1831 when Joseph Henry's and Michael Faraday's work with electromagnetism made possible the era of electronic communication to begin. The pioneering efforts were made in 1862 by abbe Giovanna Caselli who invented his "panatela Figure" and became the first person to transmit a still image over wires. Scientists May and Smith experimented in 1873 with selenium and light, which opened the door for inventors to transform images into electronic signals. While in 1930 Charles Jenkins broadcasted the first TV commercial.

PTV is a public limited company with an authorized capital of Rs.2.000 billion. The Government holds entire paid up share capital of Rs.1778.413 million. The PTV recorded profit in 2002 with a leap of Rs.287 million from Rs.1431 million to Rs.1718 million in advertising income and from Rs.148 million net operating loss to Rs.38 million net operating profit.

PTV-2 has started a new channel 'PTV-world' on July 1998. While PTV World News a new satellite channel was launched in the face of tough international competition and with the objective of providing update news for 24 hours. Channel-3 is providing a homely atmosphere to all family viewers. PTV National is providing different local News as well as entertainment in all languages in different part of the country. AJK TV is a Kashmiri Channel, providing different programs for local viewers, Kashmiri news and Gojri news Prime TV in UK, telecasts PTV Dramas and Documentaries for European people especially Pakistanis living Europe. Pakistan Television serves the following languages in its daily transmission:

AREA	LANGUAGE
Local	Urdu, Hindko, Siraiki, Pushto, Punjabi, Sindhi, Balochi, Brahvi, Kashmiri, Gojri
Foreign	English

Pakistan Television (PTV-1) programmes fare is a balanced combination of information and entertainment. General programme categories are music (1.74%), religious (7.65%). News and current affairs (8.66%), Women and Children and Youth-Students (4.44%).Drama (4.29%), Sports local (7.65%), foreign sports (4.42%) Stage Shows (13.34%) General Programs (including documentaries, features, features, literary programs and anniversaries) (6.99%), education programmes (3.38%), PTV World/PTV-2 (0.56%), Time Sale (12.06%), Commercials (4.04%), announcement (5.57%) and repeat programs (18.81%)

The total area of Pakistan is about 80 million hectares (79.6 million hectares) of which 25.2% is cultivated area, 10% is clutureable waste and 3.6% is under forests. (Total 39.8%) The remaining 60% of the area consist of deserts and mountains. (Agriculture Report 1998)

Bhakkar is a big agricultural district and third big in size of the Punjab province holding land scattered in miles. Bhakkar is contributing a lot in the field of Agriculture. It has four Tehsiles, Bhakkar, Darya Khan, Mankerah, and Kaloor Kot. (Agriculture Report 1998)

Total Geographical Area -----	518459Acres
Total Cultivated Area -----	43612Acres
(a) Area under crops-----	430249 Acres
(b) Area under orchard -----	4369 =
(c) Area under vegetables-----	1502 =
-----Total uncultivated Area-----	82339 Acres
-----Culture able waste -----	36452 =
-----Area under forests-----	5792 =
-----Area not for Cultivation -----	40095 =

Table -1
Tenure classification of farms:

A	Owner Cultivators	23598
B	Owner cum Tenants	20233
C	Tenants	9418
<i>Total</i>		<i>53249</i>

Source: (Agriculture Report, 1998)

Crops:

All the major crops and minor crops are grown in the Bhakkar. These are classified onto food crops and cash crops.

Food Crops including, Wheat, Rice, Maize, Grams etc are grown in huge quantity in Bhakkar.

Cash Crops including, Cotton and Sugarcane are also cultivated on a vast area, while oil seeds and vegetable oil are also grown. (Agriculture Report 1998)

Due to electricity provision in most of the area, the use of TV is become more common. Similarly, absence of the restriction of Cable or satellite equipments for viewing makes it most viewed Channel by the less privileged class including farmers. Farmers watch TV programs an expose to PTV Drama, Sports, and News, Religious and Agricultural programs. Due to its audio and visual qualities and lack of other means of communication, PTV is providing Education, Information and Entertainment. Farmers are getting inspiration from these programs in regard to agro-innovations.

- (1) *FASLOON KI KASHT SONA CHANDI KE SAATH*
- (2) *KISAN TIME*
- (3) *KISANOON KE NAAM AHAM ZAREE PAIGHAM*

Objectives of the Study

- To explore the habits of exposure and perception of farmers towards PTV agriculture programs.
- To compare new and traditional ways of cultivation.
- To explore the cognitive and adoptive level of farmers.

Hypotheses

1. The higher the exposure to PTV Agriculture programs, the greater the farming cognitive effects on farmers
2. The higher the exposure to PTV Agriculture programs, the higher the cognitive effects of Agriculture innovations.

Methodology

This study used the cross sectional survey research technique. Systematic simple random sampling technique was employed to draw a representative sample of one hundred farmers from a universe of 53249 farming families of Tehsil Bhakkar. The data was collected from on a self administered questionnaire through face-to-face interview technique. The close-end questions were asked on Likert-type scale. The questionnaire for interview schedule was constituted to elicit information about Frequency of exposure to agricultural programmes on television, amount of cognition about cultivation, level of respondents' attitude and extent of adoption of this cognition. The questionnaire also contains questions to explore the ratio of increase in production by practicing the PTV given agro- advices.

Data Analysis

After deriving the Univariate frequency distribution of all related variables the data were tested and analyzed by Chi, Square and Yule's Q test to know the existent, strength of relationship between independent and dependent variables of this study. Before providing final test of study's hypothesis it is customary to present descriptive statistics in term of Univariate frequency distribution, on each of the major variable involve in the study.

Table – 2

Univariate frequency distribution of watching TV

S.No.	Category	Frequencies	% age
1	Yes	96%	96%
2	No	04	04%
	Total	100	100%

Explanation

The above table – 2 reveals that 96% of the farmers are exposing to PTV and only 4% not watch TV.

Table – 3

Univariate frequency distribution of watching of various Agri programs on PTV.

S.No.	Category	Sona Chandi	% age	Ahem Paugham	% age
1.	V.frequently	18	18%	46	46%
2.	Frequently	28	28%	26	26%
3.	Rarely	13	13%	12	12%
4.	Never	30	30%	09	09%
5.	DK	11	11%	07	07%
	Total	100	100%	100	100%

Explanation

The table – 3 indicates that frequent exposure farmers towards various agri programs are, 46% and 72% respectively.

Table – 4

Univariate frequency distribution of devoting attention to various Agri programs

S.No.	Sona Chandi	% Age		Ahem Poigam	% Age	
1.	24	24	24%	34	34	34%
2.	44	44	44%	52	52	52%
3.	26	26	26%	09	09	09%
4.	06	06	06%	05	05	05%
	100	100	100%	100	100	100%

Explanation

68% and 86%, Sona Chandi and Ahem Zaree Paugham

Table - 5

Univariate frequency distribution of the sources which aware the farmers about the crops diseases

S/N	Category	Rel a	% age	White cane age	% age	Bark Borer	% age	Pink age	% age	Total age	% age	Pink age	% age	Girdler age	% age	Kela age	% age	Sooty age	% age	Virus age	% age	Surian age	% age	Dermal age	% age	Inert age	% age
1.	Radio	11	11%	13	13%	12	12%	10	10%	8	8%	5	5%	4	4%	8	8%	10	10%	13	13%	14	14%	11	11%	11	11%
2.	PTV	12	12%	10	10%	8	8%	13	13%	14	14%	10	10%	8	8%	10	10%	12	12%	10	10%	8	8%	13	13%	10	10%
3.	PTV2	4	4%	6	6%	5	5%	3	3%	5	5%	3	3%	04	04%	06	06%	3	3%	2	2%	6	6%	5	5%	3	3%
4.	Agri Bank	2	2%	4	4%	8	8%	5	5%	3	3%	2	2%	1	1%	4	4%	2	2%	3	3%	4	4%	3	3%	2	2%
5.	Agri Dept	11	11%	12	12%	18	18%	14	14%	12	12%	14	14%	18	18%	15	15%	13	13%	12	12%	14	14%	12	12%	15	15%
6.	Own obs	36	36%	30	30%	35	35%	26	26%	27	27%	36	36%	40	40%	34	34%	28	28%	30	30%	27	27%	35	35%	32	32%
7.	Epp farmers	16	16%	18	18%	10	10%	20	20%	21	21%	25	25%	15	15%	13	13%	20	20%	16	16%	18	18%	15	15%	22	22%
8.	All	10	10%	7	7%	4	4%	9	9%	10	10%	5	5%	10	10%	10	10%	12	12%	14	14%	9	9%	6	6%	5	5%
	Total	100	100%	100	100%	100	100%	100	100%	100	100%	100	100%	100	100%	100	100%	100	100%	100	100%	100	100%	100	100%	100	100%

Explanation

According to this table 5 mostly formers know about the diseases though their own observations and through experience farmers. Radio and inform them very less as show in this table.

Table – 6
Univariate frequency distribution of increase in production
by adopting the agri advises

S.No	Category	Frequencies	% age	
1.	10 to 20%	18	18	18%
2.	20 to 30%	46	46	46%
3.	30 to 40%	20	20	20%
4.	40 to 50%	07	07	07%
5.	Zero %	09	09	09%
	Total	100	100	100%

Explanation

The table 6 above that 46% farmers says that their production increase from 20 to 30%. While 9% say there is no increase in the production by adopting agree advises.

Table – 7
Univariate frequency distribution of using the
new technology by farmers

S.No	Category	Frequencies	% age	
1	Yes	74	74	74%
2	No	26	26	26%
	Total	100	100	100%

Explanation

This table 7 reveals that 74% farmers use the new technology and 26% don't use new technology.

Table – 8

Univariate frequency distribution of watching the various content of PTV2 program “Kissan Time”

[illegible]

Explanation

The above table 8 reveals that farmer to PTV-2 program Kissan Time is reasonable. The table reveals that 79% farmers use the recommended seeds and fertilizers frequently. And only 8% use rarely the recommended seeds & fertilizers.

Table – 9
Univariate frequency distribution of using the
various land cultivating instruments

s.n	Category	Tiller	%age	Raju hall	%age	RH	%age	haro	%age	Balk blade	%age	front load	%age	suhaga	%age	mallah	%age
1.	v.frequently	81	81%	9	9%	16	16%	66	66%	50	50%	04	04%	45	45%	06	06%
2.	Frequently	07	07%	17	17%	12	12%	13	13%	23	23%	09	09%	15	15%	05	05%
3.	Least	06	06%	20	20%	19	19%	02	02%	05	05%	32	32%	09	09%	10	10%
4.	Less	02	02%	18	18%	10	10%	00	00%	05	05%	11	11%	08	08%	15	15%
5.	As required	04	04%	36	36%	43	43%	19	19%	17	17%	44	44%	23	23%	64	64%
	Total	100	100%	100	100%	100	100%	100	100%	100	100%	100	100%	100	100%	100	100%

Explanation

The above table 9 shows that farmers use Tiller, Haro, Bach Black and Suhaga frequently while others are used as required.

Table – 10

Univariate frequency distribution of PTV assisting the farmers

S. No	category	frequencies	% age	
1	Yes	81	81	81
2	No	19	19	19

Explanation

According to above 10th table 81% farmers give positive response and 19% farmers give negative response.

BIVARIATE FREQUENCY DISTRIBUTION, CHI SQUARE

Independent variable: Exposure to PTV Agro programs.

Dependent variable: Adoption of Agro Advises.

	LO	HI	
LO	A 11	B 13	Total 24
HI	C 8		64
	Total 19	69	28

Formula:
Here
$$\chi^2 = \frac{\sum (O - E)^2}{E}$$

χ^2 = Chi Square
 \sum = Sum Values
 O = Observed frequencies
 E = Expected frequencies

In this table, observed frequencies are given but there is no expected frequency. So we first derive the expected frequencies by using the following methods.

$E = \frac{\text{Row total}}{\text{No of columns}}$

Now row I, $E = 24/2 = 12$

Row II, $E = 64/2 = 32$

Now, Chi square of each cell is derived.

$$\text{Cell A: } X^2 = \frac{E(0-E)^2}{E}$$

Put the values in formula

$$= \frac{(11-12)^2}{12} = 1/12 = 0.083$$

$$\text{Cell B: } X^2 = \frac{E(0-E)^2}{E}$$

$$X^2 = \frac{(13-12)^2}{12} = 1/12 = 0.083$$

Put the values in formula

$$\text{Cell C: } X^2 = \frac{E(0-E)^2}{E}$$

$$= \frac{(8-32)^2}{32}$$

$$= \frac{(24)^2}{32}$$

$$= \frac{576}{32} = 18.00$$

$$\text{Cell D: } X^2 = \frac{E(0-E)^2}{E}$$

Put the value in formula

$$= \frac{(56-32)^2}{32}$$

$$= \frac{(24)^2}{32}$$

$$= 576$$

$$32 = 18.00$$

$$\text{Total } \chi^2 = 36.166$$

$$\begin{aligned} \text{df: } &= (r - r) (c - 1) \\ &= (2 - 1) (2 - 1) \\ &= 1 \end{aligned}$$

Level of significance = 5%

The tabulated value of chi square for one degree of freedom at 5% level of significant is 3.841 while calculated value is 36.166, so our research hypotheses is

Supported

Yules Q

		+		
+		a	b	-
-		c	d	

$$Q = \frac{(bc) - (ad)}{(BC) + (ad)} \quad \text{or} \quad \frac{\text{Inconsistent cell} - \text{consistent cell}}{\text{Inconsistent cell} + \text{consistent cell}}$$

Where a, b, c and d are the four cells of table.

$$Q = \frac{(bc) - (ad)}{(BC) - (ad)}$$

put the value in formula.

$$= \frac{(13 \times 8) - (11 \times 56)}{(13 \times 8) + (11 \times 56)}$$

$$= 104 - 616$$

$$104 + 616$$

$$= 512$$

$$720$$

$$= -0.711$$

There is negative relationship between two variables.

Findings and Conclusion

In this study the data analysis shows that majority of respondents are young and their education level is primary to intermediate.

Data analysis reveals that 96% farmers are exposed to PTV Agri programs. 44 % farmers watch TV2 to 4 hours in a day and 27% 1 to 2 hours in a day while only one percent watches TV 8 to 10 hours a day.

The study also reveals that 73% farmers expose to PTV Agro programs frequently and 19% rarely watch TV. While 33% farmers expose to PTV-2 frequently and 34% watch rarely 64% of the frames like to watch PTV programs in Urdu language and 22% likes in all languages. Data also reveals that 33% farmers watch the programs of Islamabad center and 34% watch Lahore center's programs.

Data analysis also reveals that the ratio exposure to PTV Agro News and Ads is 49% and 46% respectively while 14% and 30% farmers are never exposed to Agro news and Ads respectively.

Ratio frequency of farmers Exposure to PTV Sona Chandi programs is 72% frequently and only 9% never watch Sona Chandi programs. While frequent exposure to PTV-2 Agri program Kissan Time is 41% and 23% farmers never watch this program.

68% farmers devote much attention to Sona Chandi program and 86% farmers devote attention to Ahem Zaree Paugham before the khabarnama.

The data analysis also reveals that farmers know about the crop disease through their own experiences and from experts' farmers.

The study also indicates that 64% farmers adopt the agro advises frequently, and 6% never adopt the advices. In the view of 46% farmers their production increase up to 20% to 30% and 7% farmers say that their production increase from 40% to 50% by adopting the agro advices, While 9% farmers are not in the favour of increase in production due to T.V exposure.

The data also show that 74% farmers use new technology and 26% farmers do not use the new technology while 42% farmers say that new technology has high cost.

The study analysis reveals that 41% farmers say that their expense decrease with the use of new technology. According to

data analysis 53% farmers are in favour of the old methods as compared to new methods of cultivation, While 62% farmer say that old methods are very cheap than the new.

Data analysis reveals the frequent exposure of the farmers toward the various content of Kissan Time Such as, news, advices, script, talks, Kissan Bathrk, fair video and Kissan doctor is 60%, 56%, 44%, 55%, 42%, 45%, 56%, and 37% respectively.

The study also explains that farmers' exposure to Sona Urea, Kissan Urea, DAP and Angro Urea is very much frequent. It is 93%, 95%, 62% and 62% respectively. While the exposure of Baber sher is very little As data reveals that 79% farmers use the recommended seeds and fertilizers frequently while 75% farmers use the seeds and fertilizers according to experts' recommendations. The study also indicates that Tiller, Haro, Back blade and Suhaga are used frequently by the farmers.

Data analysis also reveals that 81% farmers think that PTV is assisting the farmers in cultivation and 80% farmers easily understand and 9% can't understand the language of PTV agro programs.

According to the findings strong relationship exists between the exposure to PTV agriculture programs and cognitive level of the farmers is concluded.

It is concluded that exposure to PTV agro programs influenced the behavior of the farmers about Agriculture innovations.

References

- Academy for Educational Development. (September, 1978) The Basic Village Education Project Guatemala'. Final Report. Washington. D.C.: AED.
- Anderson, M. A. (August 1977)"CARE Preschool Nutrition Project: Phase II Report." Unpublished report from CARE, New York.
- Ascroft, J.(1973) Extension and the Forgotten Farmer: First Report of a Field Experiment. Bulletin No. 37, Department of Sciences, Wageningen: Wageningen Agricultural University.
- Axinn, George H., and Thorat, Sudhakar(1972). Modernizing World Agriculture: A Comparative Study of Agricultural Extension Education Systems. New York: Praeger Publishers.
- Bhakkar Agriculture Report, 1998

- Behrman, Jere. (1968) *Sit ft ply Response it! Underdeveloped Agriculture: A Case Study of Tour Major Ann/ml Crops in Thailand, 1937 — 1963-* Amsterdam: North Holland Publishing Co.
 - Evenson, Robert, and Jha, Davanatha: (October-December 1973) "The Contribution of Agricultural Research Systems to Agricultural Production in India." *Indian Journal of Agricultural Economics* 28, no. 4 212-230
 - Hayami, Yujiro, and Ruttan, Vernon W,(1971) *Agriculture Development: An International Perspective*. Baltimore: Johns Hopkins Press,.
 - Herdt, Robert W. (August 1971). "Resource Productivity in Indian Agriculture." *American Journal of Agricultural Economics* 53, no. 3
 - Patel, A. U. and Ekpere, J. A. (1978) "Characteristics; and Radio Listening Behavior of Farmers And Impact on Knowledge of Agricultural Innovations." *Agricultural Administration*: 83-90
 - Rogers, Everett M. (1983) *Diffusion of Innovations*. 3rd ed. New York: Free Press.
 - The Relevance of traditional Economic theory of Understanding Peasant Behavior :(1967) *A Cane Study of Rice Supply Response in Thailand. 1940-1963*. Discussion Paper No. 37. Philadelphia: Economic Research Services Unit, Department of Economics, and University of Pennsylvania.
-