# **Research Article**

# COMMUNICATION BEHAVIOUR OF ATMA BENEFICIARIES IN MADHUBANI DISTRICT OF BIHAR

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Abstract: The communication behaviour of farmers may be defined as his expression of outcome of different dimensions such as information seeking behaviour (input), information processing behaviour and information dissemination behaviour (output). Information input refers to all activities performed by a farmer for the gaining of information from various sources like formal, informal, mass media and para professional sources. Information processing refers to all the activities performed by a farmer for evaluation, storage and transformation of information in appropriate manner. Information output refers to dissemination of information to others. This study was conducted in Madhubani district of Bihar. A sample size of 260 ATMA respondents of which all were received training on cultivation of rice, wheat and potato was selected from 20 villages. The data were collected by interviewing the ATMA respondents personally with the help of structured interview schedule. Frequency and percentage analysis were used for analyzing and interpreting the data.

**Keywords:** Agriculture, Behaviour, Communication, Farmer, Information

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#### Introduction

Communication and information play vital role in public and private extension system. Information has a vital role to play in improving and sustaining agricultural production of any country. Timely availability of relevant information is vital for effective performance of farmers and increase productivity [1]. Communication from different sources and channels are the essence of extension, which provides knowledge and information for rural people to modify their behaviour in the ways that provide sustainable benefits to them and to the society [2]. Communication helps in imparting training to people and coordinating various activities from the creation of awareness regarding the adoption of new technologies [3]. The communication behaviour of farmers may be defined as his expression of outcome of different dimensions such as information seeking behaviour, (input), information processing behaviour and information dissemination behaviour (output). Information input refers to all activities performed by a farmer for the gaining of information from various sources like formal, informal, mass media and para professional sources. Information processing refers to all the activities performed by a farmer for evaluation, storage and transformation of information in appropriate manner. Information output refers to dissemination of information to others. Therefore, the present study was undertaken to analyze communication behaviour of ATMA respondents.

## Methodology

The study was conducted in Madhubani district of Bihar. The sample size of two hundred sixty was selected based on proportionate random sampling method from four selected blocks. An interview schedule was used to collect the data on various communication sources utilized by the ATMA respondents for information seeking, information processing and information sharing behaviour. The collected data were analyzed by using frequency and percentage analysis.

# **Results and Discussion**

### Information Input Behaviour

Information input behaviour refers to acquire and utilize information in both human

and technological contexts.

### Personalized sources

It is clear from [Table-1] that respondents 'most often' acquired personalized sources of information from kisan salahkar (70.8%), assistant technology manager (60.0%), agriculture coordinator (58.1%), block technology manager (55.8%), block agriculture officer (15.4%), farmer friend (8.8%), agricultural university scientist/ KVK scientist (6.2%), NGO representative (1.9%) and district agriculture officer (1.2%) respectively. In case of 'often' acquired personalized sources of information from block technology manager (BTM) (38.1%), agriculture coordinator (34.2%), assistant technology manager (ATM) (33.5%), block agriculture officer (29.2%), kisan salahkar (22.3%), farmer friend (19.2%), agricultural university scientist/ KVK scientist (8.8%), NGO representative (6.9%) and district agriculture officer (4.2%) respectively. In case of 'sometime' acquired personalized sources of information from NGO representative (73.1%), district agriculture officer (53.5%), farmer friend (44.2%), block agriculture officer (43.1%), agricultural university scientist/ KVK scientist (27.7%), agriculture coordinator (6.5%), block technology manager (BTM) (4.2%) and assistant technology manager (ATM) (3.8%) respectively. In case of 'never' acquired personalized sources of information from agricultural university scientist/ KVK scientist (57.3%), district agriculture officer (41.2%), farmer friend (27.7%), NGO representative (18.1%), block agriculture officer (12.3%), assistant technology manager (ATM) (2.7%), kisan salahkar (2.3%), block technology manager (BTM) (1.9%) and agriculture coordinator (1.2%) respectively.

# Non-professional source

It is clear from [Table-1] that respondents 'most often' acquired nonprofessional sources of information from neighbour (34.2%), friends (27.3%), family members (18.8%) and relatives (13.5%) respectively. In case of 'often' acquired information from friends (34.2%), family members (25.4%), neighbour (23.8%), and relatives (22.3%) respectively. In case of 'sometime' acquired information from relatives (46.2%), family members (41.5%), neighbour (36.9%) and friends (35.8%).

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Table-1 Distribution of respondents on the basis of their frequency and percentage regarding information input behaviour, N=260

SN	Sources of information	,	Frequency and percentage				
Α	Personalized sources	Most Often	Often	Sometime	Never		
1	Block agriculture officer	40(15.4%)	76(29.2%)	112(43.1%)	32(12.3%)		
2	District agriculture officer	3(1.2%)	11(4.2%)	139(53.5%)	107 (41.2%)		
3	Block technology manager (BTM)	145(55.8%)	99(38.1%)	11(4.2%)	5(1.9%)		
4	Assistant technology manager (ATM)	156(60.0%)	87(33.5%)	10(3.8%)	07(2.7%)		
5	Farmer friend	23(8.8%)	50(19.2%)	115(44.2%)	72(27.7%)		
6	Agriculture coordinator	151(58.1%)	89(34.2%)	17(6.5%)	03(1.2%)		
7	Kisan salahkar	184(70.8%)	58(22.3%)	12(4.6%)	06(2.3%)		
8	Agricultural university scientist/ KVK scientist	16(6.2%)	23(8.8%)	72(27.7%)	149 (57.3%)		
9	NGO representative	5(1.9%)	18(6.9%)	190(73.1%)	47(18.1%)		
В	Non Professional Sources						
1	Family members	49(18.8%)	66(25.4%)	108(41.5%)	37(14.2%)		
2	Neighbour	89(34.2%)	62(23.8%)	96(36.9%)	13(5.0%)		
3	Friends	71(27.3%)	89(34.2%)	92(35.8%)	08(3.1%)		
4	Relatives	35(13.5%)	58(22.3%)	120(46.2%)	47(18.1%)		
С	Mass Media Sources						
1	News paper	29(11.2%)	41(15.8%)	73(28.1%)	117 (45.0%)		
2	Farm literature (Farm magazines, Leaf lets, Folders, Circular letter, Journals)	23(8.8%)	40(15.4%)	82 (31.5%)	115 (44.2%)		
3	Radio	69(26.5%)	65(25.0%)	81(31.2%)	45(17.3%)		
4	Television	73(28.1%)	58(22.3%)	77(29.6%)	52(28.0%)		
5	Mobile	87(33.5%)	95(36.5%)	61(23.5%)	17(6.5%)		
6	Farmer fair /Agricultural exhibition	71(27.3%)	92(35.4%)	86(33.1%)	11(4.2%)		
7	Agricultural film show	00(0.0%)	33(12.7%)	55(21.1%)	172(66.1%)		
8	Agricultural meetings	48(18.5%)	69(26.5%)	94(36.2%)	49(18.8%)		
D	Para Professional Sources						
1	Local leaders	11(4.2%)	24(9.2%)	88(33.8%)	137(52.7%)		
2	Progressive farmers	55(21.2%)	71(27.3%)	95(36.5%)	39(15.0%)		
3	FIGs farmers	25(9.6%)	32(12.3%)	47(18.9%)	156 (60.0%)		
4	Inputs dealers	71(27.3%)	81(31.2%)	94(36.2%)	14(5.4%)		

Table-2 Distribution of respondents on the basis of their frequency and percentage regarding information processing behaviour, N=260

	rable-z distribution of respondents on the basis of their frequency and percentage regarding information processing behaviour, N=200						
SN	Processing activities Frequency and percentage						
a	Information Evaluation	Most Often	Often	Sometime	Never		
1	Discussed with agricultural scientists	08(3.1%)	16 (6.2%)	83 (31.9%)	153 (58.8%)		
2	Discussed with neighbours	73 (28.1%)	38 (14.6%)	86 (33.1%)	63 (24.2%)		
3	Discussed with relatives	30(11.5%)	95(36.5%)	75(28.8%)	60(23.0%)		
4	Discussed with local leaders	05(1.9%)	17(6.5%)	54(20.8%)	184(70.8%)		
5	Discussing with farmer friend	13(5.0%)	22(8.5%)	73(28.1%)	152(58.5%)		
6	Discussed with FIGs farmers	17(6.5%)	23(8.8%)	43(16.5%)	177(68.1%)		
7	Discussed with input dealers	85(32.7%)	101(38.8%)	52(20.0%)	22(8.5%)		
8	Judged in the light of climatic conditions	36(13.8%)	59(22.7%)	98(37.7%)	67(25.8%)		
9	Judged in the light of past experience	86(33.1%)	66(25.4%)	86(33.1%)	22(8.5%)		
b	Information Storage						
1	Taking notes	11(6.5%)	29(11.2%)	81(31.2%)	133(51.2%)		
2	Preserve the printed literature like leaflets,	26(10.0%)	51(19.6%)	92(35.4%)	91(35.0%)		
	bulletins, booklets, etc				, ,		
3	By memorizing	195(75.0%)	33(12.7%)	13(5.0%)	19(7.3%)		
4	By conveying to family members & asking	38(14.6%)	27(10.4%)	167(64.2%)	28(10.8%)		
	them to remember						
5	Recording the information	36(13.8%)	42(16.2%)	93(35.8%)	89(34.2%)		
С	Information Transformation						
1	By normal conversion	80(30.8%)	74(28.5%)	64(24.6%)	42(16.2%)		
2	By preserving hint notes	15(5.8%)	31(11.9%)	116(44.6%)	98(37.7%)		
3	By demonstration	19(7.3%)	43(16.5%)	125(48.1%)	73(28.1%)		
4	Discussing in the farmer school	48(18.5%)	65(25.0%)	77(29.6%)	70(26.9%)		
5	Giving lectures	39(15.0%)	45(17.3%)	66(25.4%)	110(42.3%)		
6	Reading in newspapers	21(8.1%)	26(10.0%)	60(23.1%)	153(58.8%)		

Table-3 Distribution of respondents on the basis of their frequency and percentage regarding information output behaviour, N=260

SN	Source of information	Frequency and percentage				
		Most Often	Often	Sometime	Never	
1	To my family members	38(14.6%)	78(30.0%)	134(51.5%)	10(3.8%)	
2	To my relatives	18(6.9%)	79(30.4%)	132(50.8%)	31(11.9%)	
3	To my neighbours	45(17.3%)	130(50.0%)	74(28.5%)	11(4.2%)	
4	To my friends	23(8.9%)	153(58.8%)	77(29.6%)	07(2.7%)	
5	To the person contacted me	20(7.7%)	58(22.3%)	166(63.8%)	16(6.2%)	
6	To the farmer of neighbouring village	16(6.2%)	48(18.5%)	172(66.2%)	24(9.2%)	
7	To those who are cultivating in my land	6(2.3%)	21(8.1%)	77(29.6%)	156(60.0%)	

In case of 'never' acquired information from relatives (18.1%), family members (14.2%), neighbour (5.0%) and friends (3.1%) respectively.

#### Mass Media

It is clear from [Table-1] that respondents 'most often' acquired mass contact sources of information from mobile (33.5%), television (28.1%), radio (26.5%), farmer fair /agricultural exhibition (27.3%), agricultural meetings (18.5%), newspaper (11.2%), farm literature (farm magazines, leaf lets, folders, circular letter, journals) (8.8%) and agricultural film show (00%) respectively. In case of 'often' acquired information from mobile (36.5%), farmer fair /agricultural exhibition (35.4%), agricultural meetings (26.5%), radio (25.0%), television (22.3%), newspaper (15.8%), farm literature (farm magazines, leaf lets, folders, circular letter, journals) (15.4%) and agricultural film show (12.7%) respectively. In case of 'sometime' from agricultural meetings (36.2%), farmer fair /agricultural exhibition (33.1%), radio (31.2%), farm literature (farm magazines, leaf lets, folders, circular letter and journals) (31.5%), television (29.6%), newspaper (28.1%), mobile (23.5%) and agricultural film show (21.1%) respectively. In case of 'never' acquired information from agricultural film show (66.1%), newspaper (45.0%), farm literature (farm magazines, leaf lets, folders, circular letter and journals) (44.2%), television (28.0%), agricultural meetings (18.8%), radio (17.3%), mobile (6.5%) and farmer fair /agricultural exhibition (4.2%) respectively.

### Para professional sources

It is clear from [Table-1] that respondents 'most often' acquired para professional sources of information from inputs dealers (27.3%), progressive farmers (21.2%), FIGs farmers (9.6%), and local leaders (4.2%) respectively. In case 'often' information from input dealers (31.2%), progressive farmers (27.3%), FIGs farmers (12.3%), and local leader (9.2%) respectively. In case of 'sometime' acquired information from progressive farmers (36.5%), inputs dealers (36.2%), local leaders (33.8%) and FIGs farmers (18.9%) respectively. In case of 'never' acquired information from FIGs farmers (60.0%), local leaders (52.7%), progressive farmers (15.0%) and inputs dealers (5.4%) respectively. It may be concluded that in case of information input behaviour most of the respondents acquired of information from kisan salahkar, neighbour, mobile, inputs dealers, block technology manager, friends and input dealers.

### Information Processing Behaviour

Information Processing Behaviour defined by [4] defined that information processing deals with evaluation of received information, i.e., diagnosis, analysis, synthesis or deciding, storage of information i.e., noting, indexing, categorizing and transformation i.e., reproducing in suitable form, amplification or reduction of initial information.

### Information Evaluation

It can be inferred from [Table-2] that respondents had 'most often' evaluated of information by judge in the light of past experience (33.1%), discussed with input dealers (32.7%), discussed with neighbours (28.1%), judge in the light of climate condition (13.8%), discussed with relatives (11.5%), discussed with FIGs farmers (6.5%), discussing with farmer friend (5.0%), discussed with agricultural scientists (3.1%) and discussed with local leaders (1.9%) respectively. In case of 'often' evaluated of information discussed with input dealers (38.8%), discussed with relatives (36.5%), judge in the light of past experience (25.4%), judge in the light of climate condition (22.7%), discussed with neighbours (14.6%), discussed with FIGs farmers (8.8%), discussing with farmer friend (8.5%), discussed with local leaders (6.5%) and discussed with agricultural scientists (6.2%) respectively. In case of 'sometime' evaluated of information by judge in the light of climate condition (37.7%), judge in the light of past experience and discussed with neighbours (33.1%), discussed with agricultural scientists (31.9%), discussed with relatives (28.8%), discussing with farmer friend (28.1%), discussed with local leaders (20.8%), discussed with input dealers (20.1%) and discussed with FIGs farmers (16.5%) respectively. In case of 'never' evaluated of information by discussed with local leaders (70.8%), discussed with FIGs farmers (68.1%) discussed with agricultural scientists (58.8%), discussing with farmer friend (8.5%), judge in the light of climate condition (13.8%), discussed with neighbours (58.5%), discussed with relatives (23.0%), discussed with input dealers and discussed judge in the light of past experience (8.5%) respectively.

### Information Storage

The [Table-2] shows that respondents 'most often' stored of information by memorization (75.0%), by conveying to family members and asking them to remember (14.6%), recording the information (13.8%), preserve the printed literature like leaflets, bulletins, booklets, etc (10.0%), and taking notes (6.5%) respectively. In case of 'often' stored of information by preserve the printed literature like leaflets, bulletins, booklets, etc (19.6%), recording the information (16.2%), by memorization (12.7%), taking notes (11.2%) and by conveying to family members and asking them to remember (10.4%) respectively. In case of 'sometime' stored of information by conveying to family members and asking them to remember (64.2%), recording the information (35.8%), preserve the printed literature like leaflets, bulletins, booklets, etc (35.4%), taking notes (31.2%) and by memorization (5.0%) respectively. In case of 'never' stored of information by taking notes (51.2%), preserve the printed literature like leaflets, bulletins, booklets, etc (35.0%), recording the information (34.4%), by conveying to family members and asking them to remember (10.8%) and by memorization (7.3%) respectively.

#### Information Transformation

It is clear from [Table-2] that respondents transferred 'most often' information from by normal conservation (30.8%), discussing in farmer school (18.5%), giving lecture (15.0%), reading in newspaper (8.1%), by demonstrating (7.3%) and by preserve hint notes (5.8%). respectively. In case of 'often' transferred of information by normal conservation (28.5%), discussing in farmer school (25.0%), giving lecture (17.3%), by demonstrating (16.5%), by preserve hint note (11.9%) and reading in newspaper (10.0%) respectively. In case of 'sometime' transferred of information by demonstrating (48.1%), by preserve hint note (44.6%), discussing in farmer school (29.6%), giving lecture (25.4%), by normal conservation (24.6%) and reading in newspaper (23.1%) respectively. In case of never' transferred of information by reading in newspaper (58.8%), giving lecture (42.3%), by preserve hint note (44.6%), by demonstrating (48.1%), discussing in farmer school (26.9%) and by normal conservation (16.2%) respectively. It may be concluded that information processing behaviour has been categorized into three parts are: a. information evaluation, b. information storage and c. information transformation. The most of the respondents evaluated, storage and transformation of information by judge in the light of past experience, discussed with input dealers, by memorization, preserve the printed literature and by normal conservation.

## Information Output Behaviour

Information output refers to dissemination of information to others. It is clear from Table that respondents 'most often' disseminated of information to my neighbours (17.3%), to my family members (14.6%), to my friends (8.9%), to the person contacted me (7.7%), to my relatives (6.9%), to the farmer of neighbouring village (6.2%) and to those who are cultivating in my land (2.3%) respectively. In case of 'often' disseminated of information to my friends (58.8%), to my neighbours (50.0%), to my relatives (30.4%),to my family members (30.0%), to the person contacted me (22.3%), to the farmer of neighbouring village (18.5%) and to those who are cultivating in my land (8.1%) respectively. In case of 'sometime' disseminated of information to the farmer of neighbouring village (66.2%), to the person contacted me (63.8%), to my family members (51.5%), to my relatives (50.8%), to my friends and to my neighbours (29.6%), to those who are cultivating in my land (28.5%) respectively. In case of 'never' disseminated the information to those who are cultivating in my land (60.0%), to my relatives (11.9%), to the farmer of neighbouring village (9.2%), to the person contacted me (6.2%), to my neighbours (4.2%), to my family members (3.8%) and to my friends (2.7%) respectively. It may be concluded that in case of information output behaviour most of the respondents' dissemination of information to my neighbours and to my friends.

#### Conclusion

The results concerning to different dimensions of communication behaviour of ATMA respondents indicates that in case of information input behaviour most of the respondents acquired of information from kisan salahkar, neighbour, mobile, inputs dealers, block technology manager, friends and input dealers. Information processing behaviour has been categorized into three parts are: a. information evaluation, b. information storage and c. information transformation. The most of the respondents evaluated, storage and transformation of information by judge in the light of past experience, discussed with input dealers, by memorization, preserve the printed literature and by normal conservation. In case of information output behaviour most of the respondents' dissemination of information to my neighbours and to my friends.

Application of research: Study help for information processing behaviour

Research Category: Agriculture Communications

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**Ethical approval:** This article does not contain any studies with human participants or animals performed by any of the authors.

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