Identification of various sources of farm information and their credibility among small and marginal farmers of Khurda and Bhadrak Dist of Odisha

Tapas Ranjan Ray¹, Dr Bibhu Santosh Behera², Prof KSS Rakesh³, ,Prof P Kalifungwa⁴

1.		PhD Student, LIUTEBM University, Lusaka, Republic of Zambia and Project
		Officer, Adani Foundation
	2.	Research Mentor, LIUTEBM University, Lusaka, Republic of Zambia
		3. Director, Out Reach, LIUTEBM University

4. Prof Patrick Kalifungwa, Vice-Chancellor, LIUTEBM University

Extended Summary

Majority of the world's poor are in Asia Pacific region, despite vast improvements over past decades. About 800 million people in Asia and The Pacific live on less than a dollar per day. More than 40 percent alone are found in the South Asia region. In spite of urbanization, the rural population continues to grow in many of the countries.

Introduction at a glance

Agriculture is the key sector of the Indian economy. More than 60 percent of the population relies on agriculture as a means of livelihood. Small holdings agriculture is important for raising agriculture growth, food security and livelihoods in India. It may be noted that Indian agriculture is the home of small & marginal farmers (80%). Therefore, the future of sustainable agriculture growth and security in India depends on the performance of small and marginal farmers. Agricultural Census data shows that there were about 1.21 billion agricultural holdings in India in 2011-12. About 67 percent are rural. Majority are in agriculture. Although it contributes only 15 percent of GDP, the share of workers is about 55 percent. Marginal and small farmers dominated. About 60 percent of cultivated area is rain fed as only 40 percent of area is under irrigation. Rural poverty is 41 percent in 2004-05. Thus, there are significant land inequalities in India. Small holdings play important role in raising agricultural development & poverty reduction.

The lives and livelihoods of small and marginal farmers of Odisha are in jeopardy, while more than 80 percent of the total workforce is directly dependent on agriculture. This includes about 3.4 million cultivator and 2.1 million agricultural laborers. Agriculture is the backbone of the state economy,

employing over 65 percent of the total workforce and 80 percent of the workforce in rural areas 82 percent are small and marginal farmers.

Usually small and marginal farmer illiterate and ignorant about current information. They collect their information from co-farmer, television and radio. The information and communication plays vital role in the development of agricultures which provide appropriate & timely information for the growth and development of small and marginal farmers.

Agriculture plays a pivotal role in the Indian economy. Although its contribution to gross domestic product (GDP) is now around one sixth, it provides employment to 56 per cent of the Indian workforce. Also, the forward and backward linkage effects of agriculture growth increase the incomes in the non-agriculture sector. The growth of some commercial crops has significant potential for promoting exports of agricultural commodities and bringing about faster development of agro-based industries .Thus agriculture not only contributes to overall growth of the economy but also reduces poverty by providing employment and food security to the majority of the population in the country and thus it is the most inclusive growth sectors of the Indian economy. The 12th Five Year Plan Approach Paper also indicates that agricultural development is an important component of faster, more inclusive sustainable growth approach.

The role of small farms in development and poverty reduction is well recognized .The global experience of growth and poverty reduction shows that GDP growth originating in agriculture is at least twice as effective in reducing poverty as GDP growth originating outside agriculture . Small holdings play important role in raising agricultural development and poverty reduction.

The objective of this paper is to examine the role and challenges of small holdingagriculture in achieving agricultural growth, food security and livelihoods in India. The paper also shows that market oriented reforms are not sufficient and government intervention and other support are needed for small holdings to achieve the above goals. It is known that small farmers face several challenges in the access to inputs and marketing. They need a level playing field with large farms in terms of accessing land, water, inputs, credit, technology and markets.

Review of Literature

Sangha and Gupta (1995) reported that Television was considered as the most credible sources of information for agriculture by the rural T.V. viewers followed by Agricultural university, Radio, Block extension staff & relatives friends neighbours.

Kubde et al. (1996) revealed that the opinion leaders should be regularly informed about the new agricultural technology & agricultural development programmes. Tajuddin and Mohan (1996) reported that among various extension tools, tried to transfer the technology, communication through written words i.e. the publication of articles and write ups in journals/magazines and newspaper had better response among the farmers.

Dangi and Intodia (1996) concluded that the small and marginal farmers under T &V System were visited regularly by the extension field functionaries well equipped with the recommended package of practices.

Joshi and Vekaria (1997) reveled that hardly 37 percent of farmers were contacted regularly by the V.L.WS. He also reported that 25 percent of the farmers were not contacted at their yields.

Appa Rao (1997) reported that 87 percent of the village agricultural extension workers stated that mass media were used in transfer of technology to contact farmers and 31 percent of the VEWs stated that group discussion was very often used in technology transfer to small and marginal farmers.

Malaviya and Singh (1998) concluded that among media sources demonstration was most credible in disseminating farm messages followed by general meetings exhibitions, T.V. telecast, audio-visual films training, discussion & radio broadcast. They also reported that family members bud highest credibility in disseminating farm messages followed by friends neighbours rural leaders & Key communicators.

Popat and Salvaliya (1999) reported that more than half (53 percent) of the small and marginal farmers were the most regular in attending the meetings of V.L.Ws. They also revealed that majority (61 percent) of the small and marginal farmers .sometimes got satisfactory answers from the V.L.Ws. as 42 percent of them felt it necessary to discuss with somebody else for better understanding of the messages. Gupta (1999)

revealed that majority of the small and marginal farmers sought information regarding modern, agricultural extension officers.

Research Methodology

RESEARCH METHODOLOGY

The systematic planning and conduct of a piece of research programme demands an appropriate research methodology. This is a vital pre requisite of any research study since, it has a direct bearing on the relevance and validity of the research findings. In the realm of social science, again, it is essential to use a standard method of research design, appropriate techniques of measurement of variables and rules or procedures for the testing of observations.

This chapter deals with various research procedures followed by the investigator to analyze the problem during the course of investigation .They have been presented in detail under the following headings:

- 1. Selection of problem
- 2. Plan of work
- 3. Location of the study
- 4. Pilot Study
- 5. Preparation of the interview schedule
- 6. Sampling
- 7. Pre-testing
- 8. Interviewing
- 9. Measurement procedures
- 10. Concept and operationalization with scoring key
- 11. Processing and analysis of data

Result & Discussion

TO IDENTIFY VARIOUS SOURCES OF FARM INFORMATION AND THEIR CREDIBILITY AMONG SMALL AND MARGINAL FARMERS.

SOURCES OF INFORMATION

Information sources play major role for dissemination of improved agricultural practices to the farming community. Improved agricultural information flows from the

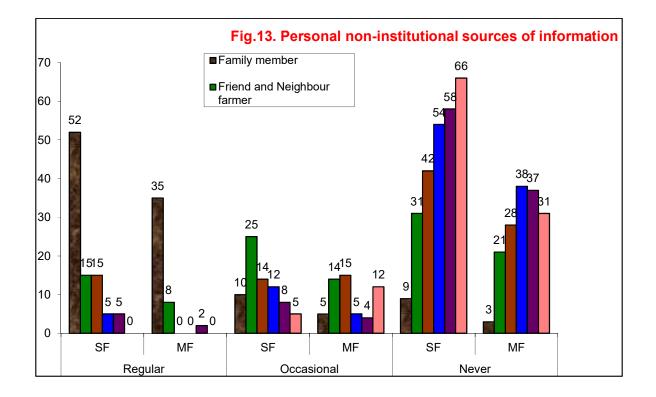
source to the ultimate users. They gather the information and step into scientific agriculture. So information sources play vital role in determining the effectiveness of communication. In the present study the data was collected to test the contact of the respondents with the following 3 (three)groups of information sources.

- 1. Personal non Institutional sources
- 2. Personal Institutional sources
- 3. Impersonal sources
- 4. Table-6.2.1

Contact with personal non institutional sources of information by small and marginal farmers

N=114

Personal	Regular		Occasional Never			
non- institutional source	SF	MF	SF	MF	SF	MF
Family member	52(73.23)	35(81.39)	10(14.08)	5(11.62)	9(12.67)	3(6.97)
Friend and neighbour farmer	15(21.12)	8(18.60)	25(35.21)	14(32.55)	31(43.66)	21(48.83)
Progressive farmer	15(21.12)	-	14(19.71)	15(34.88)	42(59.15)	28(65.11)
Peer Group/ Social clique	5(7.04)	-	12(16.90)	5(11.62)	54(76.05)	38(88.37)
Opinion leader	5(7.04)	2(4.65)	8(11.26)	4(9.30)	58(81.69)	37(86.04)
Input dealer	-	-	5(7.04)	12(27.90)	66(92.95)	31(72.09)



The data presented in Table 6.2.1 revealed that, six categories of personal noninstitutional sources of information were normally utilized for obtaining various agricultural information by the small and marginal farmers. It was observed that 73.23 percent of small farmers had regular contact with their family members for information flow. Similarly, 81.39 percent of marginal farmers got information from their family members.Thedatarevealed that underpersonal non-institutional sources,family member of small farmer and marginal farmer were perceived as main source of information followed by friend and neighbours. The small and marginal farmers usually meet and discuss about different farming practices.The small and marginal farmers exchange their ideas, views and experiences with their family member and friend and neighbor and many a time they take decisions about farm innovations by discussing different angles with their friend and neighbours.Friend and neighbours play vital role for dissemination of improved agricultural innovations.The marginal farmer get more information from input dealer also. However it was interesting to observe that the contact of respondents with progressive farmers for information sharing was not so encouraging which was hampering the farmer to farmer model of extension.

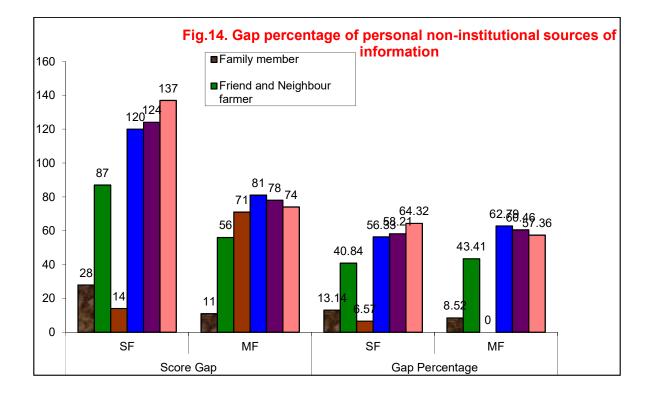
Table-6.2.2

Gap percentage of contact with personal non institutional sources of information used by small and marginal farmers

N = 114

Personal non-institutional	Score Gap		Gap Percentage	
source	SF	MF	SF	MF
Family member	28	11	13.14	8.52
Friend and Neighbour farmer	87	56	40.84	43.41
Progressive farmer	14	71	6.57	55.03*
Peer Group/ Social clique	120	81	56.33	62.79
Opinion leader	124	78	58.21	60.46
Input dealer	137	74	64.32	57.36

*Significant critical ratio value observed



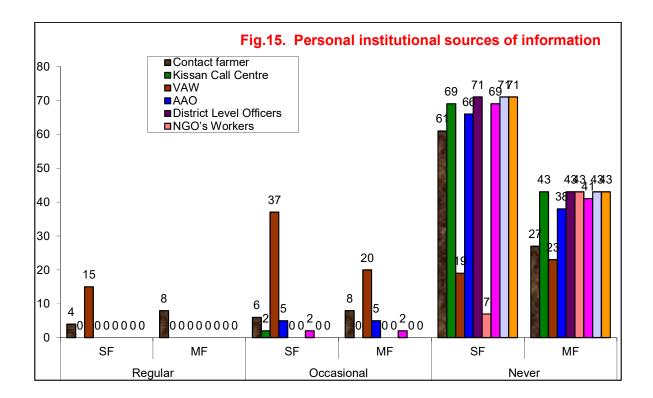
The data presented in table 6.2.2 revealed that, six categories personal noninstitutional sources of information sources were normally utilized for obtaining various agricultural information by thesmall and marginal farmers. The gap percent of input dealer of small and marginal farmer were 64.32 percent and 57.36 percent. This data shows that small and marginal do not take any help from input dealer. This reveals that input dealer do not play important role in dissemination of farm related activities because they do not visit to the small and marginal farmers field to demonstrate and advertise their products for sales promotion usually it was seen that most of the times instead of visiting thefarmers fields and conducting demonstration, the input dealers simply meet the retailer and wholesaler. Therefore most of the small and marginal farmers are very less exposed to the input dealer. Further, as significant critical ratio value was observed between the small and marginal farmers, it can be concluded that, marginal farmers had less contact towards the personal –non institutional sources of information than the small farmers.

Table-6.2.3

Contact with personal institutional sources of information used by small and marginal farmers

N=114

Personal institutional	Regular		Occasional		Never	
source	SF	MF	SF	MF	SF	MF
Contact farmer	4(5.63)	8(18.60)	6(8.45)	8(18.60)	61(85.91)	27(62.79)
Kissan Call Centre	-	-	2(2.81)	-	69(97.18)	43(100)
VAW	15(21.12)	-	37(52.11)	20(46.51)	19(26.76)	23(53.48)
AAO	-	-	5(7.04)	5(11.62)	66(92.95)	38(88.37)
District Level Officers	-	-	-	-	71(100)	43(100)
NGO's Workers	-	-	-	-	7(100)	43(100)
OUAT	-	-	2(2.81)	2(4.65)	69(97.18)	41(95.34)
KVK	-	-	-	-	71(100)	43(100)
Scientist	-	-	-	-	71(100)	43(100)



The data presented in table 6.2.3 revealed that nine categories of information and communication sources were normally utilized for obtaining various agricultural information by the small and marginal farmer. The frequency and percentage of VAW in regular and occasional contact were 15(21.12) small farmer and 37(52.11) small farmer were regular contact. The frequency and percentage of VAW in occasional contact were 37(52.11) marginal farmer. The frequency and percentage of contact farmer of small farmer in regular were 4(5.63) and occasional contact were 15(21.12). The frequency and percentage of contact farmer of marginal farmer in regular contact were 8(18.60) and 8(18.60) occasional contact were 6(8.45) and 8(18.60). The frequency and percentage of AAO among small and marginal farmer were 5(7.04) small farmer and 5(11.62) marginal farmer occasionally contact.

From the above findings it was observed that, VAWand contact farmer plays vital role for dissemination of improved agricultural innovations.VAWswere the main source of information among all other personal institutional source of information was coming frequent contact with small and marginal farmers. VAWs has direct contact because VAW being a professional expert at village level among small and marginal farmer. The VAW has direct and regular link with small and marginal farmers at grassroot level. All agricultural information pass to the small and marginal farmers through the VAWs. Therefore, VAWs were perceived as the most important sources to communicate agricultural information to the small and marginal farmers. Contact farmers were perceived as important sources of information next to VAW. AAO was not in regular contact with the small and marginal farmers because AAO supervise the work of VAWs and they visit small and marginal farmers field and give advice and suggestions in the field of agriculture.

Table-6.2.4

Personal institutional	Score	Gap	Gap Perce	entage
source	SF	MF	SF	MF
Contact farmer	128	62	60.09	48.06*
Kissan Call Centre	140	86	65.72	66.67
VAW	75	76	35.21	58.91*
AAO	137	81	64.31	62.78
District Level Officers	142	86	66.67	66.67
NGO's Workers	142	86	66.67	66.67
OUAT	140	84	65.72	65.11
KVK	142	86	66.67	66.67
Scientist	142	86	66.67	66.67

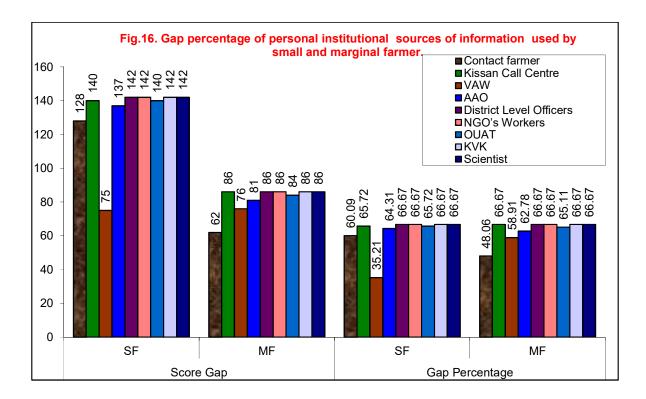
Gap percentage of personal institutional sources of information used by small and marginal farmers.

*significant critical ratio value observed

The gap percentage of kissan call centre of small farmerswere 65.72 percent. The gap percentage of kissan call centre of marginal farmer were 66.67 percent. The gap

percentage of district level officers of small and marginal farmers were 66.67 percent. The gap percentage of NGO's workers of small and marginal farmers were 66.67 percent. The gap percentage of AAO of small farmers were 64.3 and marginal farmers were 62.78 percent. The gap percentage ofOUAT of small farmers were 65.72 and marginal farmers were 65.11 percent. The gap percentage of KVK of small farmer were 66.67 percentand marginal farmers were 66.67 percent. The gap percentage of Scientist of small farmers were 66.67 percentand marginal farmers were 66.67 percent. The gap percentage of VAW of small farmers were 35.21 percent and marginal farmers were 58.91 percent.

From the above findings revealed that VAW are the main source of transfer of information and technology.VAWs plays vital role in dissemination of improved agricultural practices as compared to other sources of information.



Further, as significant critical ratio value was observed between the small and marginal farmers, it can be concluded that, marginal farmers had equal contact towards the personal – institutional sources of information than the small farmers.

TABLE-6.2.5

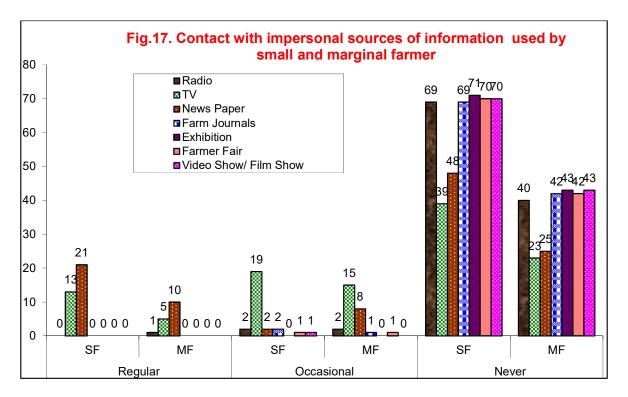
Contact with impersonal sources of information usedby small and marginal farmers

N=114

Impersonal	Regular		Occasional		Never	
sources	SF	MF	SF	MF	SF	MF
Radio	-	1(2.32)	2(2.81)	2(4.65)	69(97.18)	40(93.02)
TV	13(18.30)	5(11.62)	19(26.76)	15(34.88)	39(54.92)	23(53.48)
News Paper	21(29.57)	10(23.25)	2(2.81)	8(18.60)	48(67.60)	25(58.13)
Farm Journals	-	-	2(2.81)	1(2.32)	69(97.18)	42(97.67)
Exhibition	-	-	-	-	71(100)	43(100)
Farmer Fair	-	-	1(1.40)	1(2.32)	70(98.59)	42(97.67)
Video Show/ Film Show	-	-	1(1.40)	-	70(98.59)	43(100)

The above table 6.2.5 revealed that the frequency and percentage of newspaper among small and marginal farmers were 21(29.57) and 10(23.25) in regular contact. Occasional contact were 2(2.81) and 8(18.60) followed by TV 13(18.30) and 5(11.62) regular contact. Occasional contact of frequency and percent of the small farmer were 19(26.76). Occasionalcontactof frequency and percent marginal farmers were 15(34.88).

With regard to impersonal sources, the above table 6.2.5 indicated that TV and newspaper were found to be the foremost sources of agricultural information .The above findings depicts that TV and newspaper plays important role for dissemination of agricultural information to the respondents. The coverage of newspaper is more than TV due to its less cost and easy to read, no need to depend on electric power etc.



Every day, there are agricultural information with pictures in newspaper which provides necessary and up-to-date information to the farmers. TV is a popular audio-visual aid in which people can both see and hear. So the agricultural programmes in TV become more interesting and meaningful.Due to high cost, requirement of electricity for its operation, ithas lesser importance than newspaper.Nowadays radio sets wasused by very less respondents as it is traditional sources of information.Farm Journals though provide agricultural information but it was not available in time and they were not aware of such kind of information. Exhibition, farmers fair and video show/film show were not occasional in use. So the every respondents were not aware of this type of sources of information.

Table-6.2.6

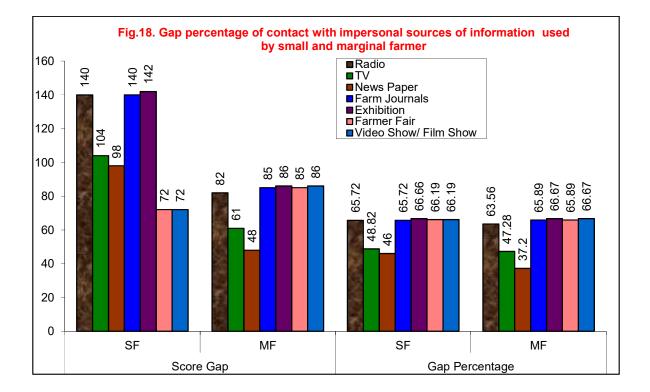
Gap percentageof contact with impersonal sources of information used by small and marginal farmers.

N=114

Impersonal sources	Score Ga	Score Gap		entage
	SF	MF	SF	MF
Radio	140	82	65.72	63.56
TV	104	61	48.82	47.28
News Paper	98	48	46.00	37.20
Farm Journals	140	85	65.72	65.89
Exhibition	142	86	66.66	66.67
Farmer Fair	72	85	66.19	65.89
Video Show/ Film Show	72	86	66.19	66.67

*significant critical ratio value observed

The gap percentage of farm journals of small farmers were 65.72 percent. The gap percentage of farm journals of marginal farmers were 65.89 percent. The gap percentage of exhibition of small farmers and marginal farmers were 66.67 percent. The gap percentage of video show/film show of small farmers were 66.19 percent and marginal farmers were 66.17 percent. The gap percentage of farmer's fair of small farmer were 66.19 percent and marginal farmers were 65.89 percent. The gap



percentage of radio of small farmer were 65.72 percent and marginal farmers were 63.56 percent more as compared to newspaper were 46 percent of small farmers and 37.20 percent of marginal farmers. The gap percentage of TV of small farmers and marginal farmers were 48.82 percent and 47.28 percent respectively. This shows that respondents get more information related to agricultural activities from newspaper and T.V as compared to other sources of information.

Source Credibility

Credibility of sources indicate the trustworthiness as perceived by the small and marginal farmers. The following tables indicated the frequency and percentage of credibility and not credibility of various information sources, asperceived by the small and marginal farmers.

Table-6.2.7

Credibility of personal non institutional sources of information used by small and marginal farmers.

N=114

Sources of information	Credible		Not Credil	ible	
	SF	MF	SF	MF	
Family member	62(87.32)	40(93.02)	9(12.67)	3(6.97)	
Friend and Neighbour farmer	30(42.25)	22(51.16)	41(57.74)	21(48.83)	
Progressive farmer	19(26.76)	15(34.88)	52(73.23)	28(65.11)	
Peer Group/ Social clique	17(23.94)	5(11.62)	54(76.05)	38(88.37)	
Opinion leader	10(14.08)	5(11.62)	61(85.91)	38(88.37)	
Input dealer	5(7.08)	5(11.62)	66(92.95)	38(88.37)	

The frequency and percentage of family member credibility among small and marginal farmers were 62(87.32)percent and 40(93.02) respectively. The above findings under the table 6.2.7 revealed that, family member and friends and neighbour were more credible than other sources of information because they were available in time and help in agricultural work and also they are nearer to the respondents.

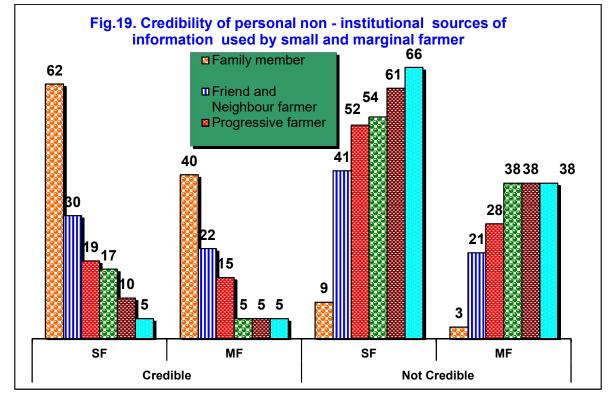


Table 6.2.8

Credibility gap percentage of personal non institutional sources of information used by small and marginal farmer

N=114

Sources of information	Score Gap		Gap Percentage	
	SF	MF	SF	MF
Family member	9	43	6.33	34.12*
Friend and Neighbour farmer	41	61	28.87	48.41*
Progressive farmer	52	68	36.61	53.96*
Peer Group/ Social clique	54	40	38.02	31.74
Opinion leader	61	78	42.95	61.90*
Input dealer	66	78	46.47	61.90*

*significant critical ratio value observed

The gap percentage of family member among small and marginal farmers were 6.33 and 34.12 respectively. The gap percentage of friend and neighbour farmer among small and marginal farmers were 28.87 and 48.41 respectively. The gap percentage of peer group/ social clique among small and marginal farmers were 38.02 percent and 31.74 percent respectively. The gap percentage of progressive farmer of small farmer were 36.61 percent and marginal farmers were 53.96 percent. The gap percentage of opinion leader among small and marginal farmers were46.47 percent andmarginal farmers were 61.90 percent. So it may be concluded that the credibility gap was maximum with respect to input dealers.

Further, as significant critical ratio value was observed between the small and marginal farmers, it can be concluded that, marginal farmers had less credibility towards the personal-non institutional sources of information than the small farmers.

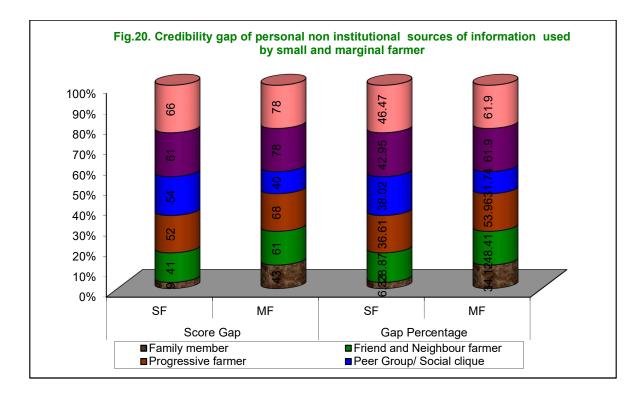


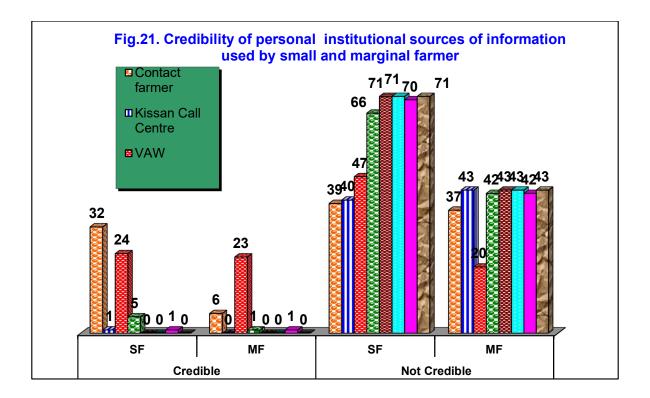
Table-6.2.9

Credibility of personal institutional sources of information used by small and marginal farmers.

N=114

Personal institutional source	Credible		Not Credible	
	SF	MF	SF	MF
Contact farmer	32(45.07)	6(13.95)	39(54.92)	37(86.04)
Kissan Call Centre	1(1.40)	-	40(56.33)	43(100)
VAW	24(33.80)	23(53.48)	47(66.19)	20(46.51)
AAO	5(7.04)	1(2.32)	66(92.95)	42(97.67)
District Level Officers		-	71(100)	43(100)
NGO's Workers		-	71(100)	43(100)
OUAT extension agent	1(1.40)	1(2.32)	70(98.59)	42(97.67)
KVK person	-	-	71(100)	43(100)

The frequency and percentage of crediblesources of information of VAW among small and marginal farmers were 24(33.80) and 23(53.48) respectively. The frequency and percentage of credible sources of information of contact farmers among small and marginal farmers were 32(45.07) and 6(13.95) respectivelybecause majority of small and marginal farmers sought information regarding modern agricultural technology from the VAWs and considered this information source to be more credible than other sources under study. The reasons may be VAWs had direct personal contact with the small and marginal farmers. VAWs usually visits the farmers field and give information regarding modern agricultural practices from time to time. The frequency and percentage of credible sources of information of contact farmers among small and marginal farmers were 32(45.07) and 1(2.32). The frequency and percentage of credible sources of information of VAWs among small and marginal farmers were 24(33.80) and 23(53.48) respectively. The small and marginal farmers perceived agricultural AAO officers not credible source. AAO officers being technical expert at block level, they occasionally come in direct contact with the small and marginal farmers and provides technical advice and suggestions to solve different agricultural problems encountered by the respondents.



The above findings under the table 5.2.9 revealed that contact farmer and VAW are more credible than other sources of information.

Table 6.2.10

Credibility gap percentage of personal institutional sources of information used by small and marginal farmer

N=114

Personal institutional source	Score (Gap Gap Percenta		entage
	SF	MF	SF	MF
Contact farmer	39	77	27.46	61.11*
Kissan Call Centre	98	83	69.01	65.87
VAW	47	60	33.09	47.61*
AAO	76	82	53.52	65.07
District Level Officers	-	-	-	-
NGO's Workers	71	83	50	65.87*
OUAT	70	82	49.29	65.07*
KVK	71	82	50	65.87*

* Significant critical ratio value observed

Gap percentage of VAW among small and marginal farmers were 33.09 and 47.61 percent respectively. The gap percentage of contact farmers among small and marginal farmers were 27.46 and 61.11 percent respectively.

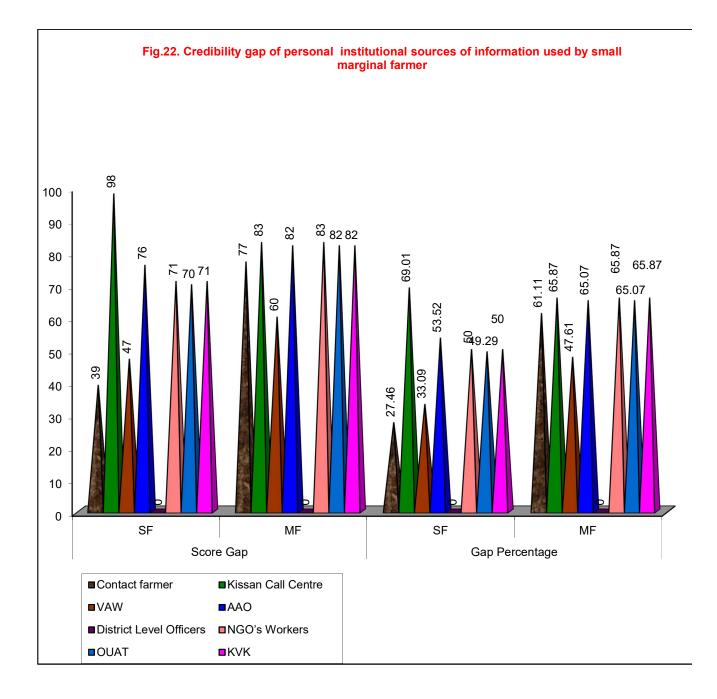


Table 6.2.11

Credibility of impersonal sources of information used by small and marginal farmer

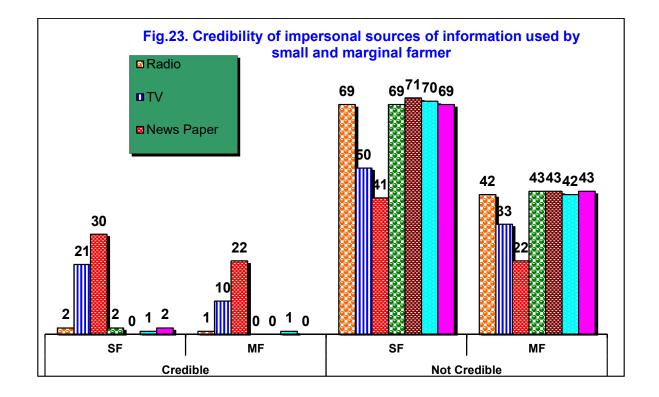
N=114

Impersonal sources	Credible		Not Credible	
	SF	MF	SF	MF
Radio	2(2.81)	1(2.32)	69(97.18)	42(97.67)
TV	21(29.57)	10(23.25)	50(70.42)	33(76.74)
News Paper	30(42.25)	22(51.16)	41(57.74)	22(48.83)
Farm Journals	2(2.81)	-	69(97.18)	43(100)
Exhibition	-	-	71(100)	43(100)
Farmer Fair	1(1.40)	1(2.32)	70(98.59)	42(97.67)
Video Show/ Film Show	2(2.81)	-	69(97.18)	43(100)

The frequency and percentage of T.V among small and marginal farmers were 21(29.57) and 10(23.25) respectively. The frequency and percentage of newspaper among small and marginal farmers were 30(42.25) and 22(51.16) respectively. Newspaper were easily available in local language and it is easy to read and understand. The respondents learns new things from newspaper and discuss among their friends and neighbor farmers. Television were credible source next to newspaper. Though it is an impressive powerful audio-visual medium and farmers can hear as well as see different agriculture and allied sector programmes.

Newspaper and T.V play vital role in dissemination of agriculture technology to the farmers field.

The above findings under the table 6.2.11 revealed that, news Paper and TV were more credible than other sources of information.



Conclusion

Here the researcher wants to represent various sources of information on Small & Marginal Farmers and their impact in extension machineries. By utilization of all sources on effective manner the farmers may attain all empowerment.

Small and marginal farmers have easy accessibility to VAWs and contact farmers. VAW solves different farming problems of the contact farmers and also make necessary arrangement for availability of input, subsidies and arranges training and meeting in the village. But maximum credibility gap was observed with kissan call centre as personal institutional source of information.

Further, as significant critical ratio value was observed between the small and marginal farmers, it can be concluded that, marginal farmers had less credibility towards the personal sources of information than the small farmers.

References

1.Hasanullah, M. (1995) A study of small and marginal farmers in Bangladesh. Journal of Ext. Syst., 6(1): 74 – 86.

2.Joshi, V.D. and Vekaria, R.S.(1996) The V.L.W. – farmer link. Agric. Ext. Rev., 3 (4):13.

3.Kadam, R.R. (1996) Role performance of small and marginal farmers in T & V system. Maharastra J. Ext. Edu., 19 (2): 164 – 168.

4.Kubde, V.R., Kalantri, L.B. and Joshi, A.M. (1996) Role performance of opinion leaders in Agricultural development. Maharastra J. Ext. Edu., 8: 213-216.

5.Malaviya, S.A. and Singh. V. (1998) Source credibility: Farm messages. Maharastra J. Ext. Edu. , 9.

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