Farmers' Perception About the Credibility of Different Channels for Communicating Farm Information

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1. Introduction

So far communication of farm information through different channels are concerned, farmers' preference regarding the type of farm information as well as the types of channels are of paramount importance. For receiving farm information farmers actually depend on the credibility of the different channels for the purpose. Here credibility is the prestige, reputation, faith, impression, honor, respect, confidence, reliability or any such perception which the audience (clients) hold about the information sources or channels. The source and/or channels credibility may vary according to the types of farming, previous experience, socio-economic status, mass media exposure, information need and other characteristics of the audience. Supe (1971) defined credibility of information sources/channels as the degree to which trust is associated with particular sources of information to be accurate and useful for the purpose and for obvious reason framers use those channels which they perceive to be credible. Previous studies show variations of results regarding farmers' perception about channels' credibility, e.g., Sangha and Kalra (1993) revealed that radio was accorded the first rank on the basis of the farmers' perception of credibility for receiving farm information and was followed by television, agricultural magazine, newspapers, audio cassettes and agricultural films in order of their descending credibility.

Patel, Parmer and Dubey (1995) reported that radio, television, rural agricultural extension officer, progressive farmers, newspapers, magazines and local leaders were ranked in the descending order of credibility bas perceived by farmers.

Besides the perception of channels' credibility farmers are having varied need of the type of information to be received. For example, Singh (1990) reported that tribal farmers in Meghalaya required information much in the areas of cultural practices followed by new varieties, soil and water conservation, marketing and storage, plant protection, farm tools and implements, fisheries production, fertilizers and manure, poultry production, agricultural credit / loans and animal husbandry / dairying in the same descending order of ranking.

Keeping this background in mind the present study has been conducted in the four villages of Thuraiyur Taluk of Tiruchirapalli district of Tamil Nadu with the major objective to enumerate the different types of farm information communicated through different channels and to enumerate the credibility of different channels of communication with reference to different categories of farmers as well as different farm activities or practices.

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2. Methodologies

Altogether 100 households from four villages (25 from each study village) werte selected with equal representation of marginal, small and big farmers as respondents of the present study. The farmers classification is as used by the government of Tamil Nadu i.e. Marginal Farmers with a land holding $\leq$ 0.5 ha in irrigated condition or $\leq$ 1 ha in rainfed condition. Small Framers with a land holding of 0.5 -- 1 ha in irrigated condition or 1 -- 2 ha in rainfed condition and large farmers own a land larger than small farmers.

To enumerate the relative credibility of different channels, seven information channels like, Radio, Television, Newspaper, Assistant Agricultural Officer (A.A.O), Agricultural Officer (A.O), Neighbors and Other Information Channels (which include cooperatives, input dealers etc,) have been taken into consideration. Nine different major aspects of agriculture (practices) have been selected to enumerate the types of information received by the framing communities from the above stated channels. The selection of different channels and agricultural practices have been done on the basis of pilot survey conducted among the respondents regarding the major agricultural practices they receive / need information as well as the important channels they use for the purpose.

These selected agricultural practices were regarding, Varietal (X_1), Land Preparation (X_2), Fertilizer and manure application (X_3), Plant Protection (X_4), Land Reclamation (X_5), Irrigation (X_6), Soil Testing and Soil Fertility (X_7), Harvesting and Storage (X_8), Marketing (X_9).

Information have been collected from different categories of farmers separately. Farmers were asked to indicate the extent of information received with respect to each identified practices from different identified information channels in a 3 point scale as developed by Roy et al (1964) containing three different degrees of information reception like, "very much", "much" and "not so much" with corresponding score value of 3, 2 and 1.

Moreover, farmers were asked to indicate the credibility of different channels with reference to communicating farm information related with different identified practices on the same scale as used in the earlier part containing three different degrees of credibility like, "very much useful", "useful" and "not so useful" with corresponding score value of 3, 2 and 1. The sum of the score of each channels with respect to each practices given by different categories of farmers constitute the total score obtained by each channels with respect to different practices. Higher the score value higher the credibility of the channel. The analyses have been done separately for different categories of farmers as well as for all categories together. Lastly Kruskal Wallis test has been employed to enumerate the homogeneity / heterogeneity of different farming categories so far as their perception regarding credibility of different channels are concerned.

3. Results and Discussion

3.1. Types of Information Received

From Table - 1 it can be found that marginal farmers received relatively lesser amount of information (Score Value 424) than the small farmers (Score Value 509) with respect to all the practices. Moreover,

large farmers received much information (Score Value 530) than small farmers with a slight exception in case of practices like, Fertilizers and Manure Application (X_3), Land Reclamation (X_5) and Irrigation (X_6).

From Table 1 it can also be observed that, irrespective of different farming categories, farmers received maximum information with respect to practices like, Plant Protection (X_4) obtaining Score Value of 250 followed by Fertilizers and Manure Application (X_3, Score Value 234), Varietal (X_1, Score Value 211), Marketing (X_9, Score Value 151), Soil Testing and Soil Fertility (X_7, Score Value 142), Harvesting and Storage (X_8, Score Value 141), Land Reclamation (X_5, Score Value 123) Land Preparation (X_2, Score Value 111) and Irrigation (X_6, Score Value 100) in descending order of information reception.

Table 1. Extent of Farm Information Received by the Framers from Different Channels

Information Received With Regard to	Score obtained by Different Practices as Perceived by Farmers			
	Marginal	Small	Large	All Categories
X_1 Varietal Aspects	61	71	79	211
X_2 Land Preparation	34	38	39	111
X_3 Fert. & Manure application	67	84	83	234
X_4 Plant Protection	75	86	89	250
X_5 Land Reclamation	33	47	43	123
X_6 Irrigation	33	34	33	100
X_7 Soil Testing & Soil Fertility	40	48	54	142
X_8 Harvesting & Storage	39	48	54	141
X_9 Marketig	42	53	56	151
Total Score	424	509	530	1463

3.2. Credibility of Different Information Channels as Perceived by Marginal Farmers

Table 2 represents Score Value in relation to farmers' perception about the credibility of different channels with respect to different identified practices for the marginal farmers. In case of Varietal aspects , A.A.Os (Score Value 58) were found to be the most credible channel of information followed by A.Os (Score Value 56), Radio (47), Neighbors (46), Other Information Channels (44), Newspaper (40) and Television (Score Value 36) in descending order of importance.

Table 2. Credibility of Different Channels with Respect to Different Practices as Perceived by Marginal Farmers

Sl. No	Information Channels	Score Obtained by Different Channels with Respect to Different Practices					
		Varietal	Land / Soil	Fert. & Manures	Plant Protection	Harvesting & Storage	Marketing	Total Score
1	Radio	47	36	53	57	36	36	265
2	Television	36	33	41	41	33	34	218
3	Newspaper	40	33	44	46	33	33	229
4	A.A.O.	58	39	65	74	38	39	313
5	A.O.	56	39	65	66	38	38	303
6	Neighbors	48	33	57	64	33	38	271
7	Other Info. Channel	44	35	47	54	39	39	258
	Total Score	327	248	372	402	250	258	1857

In case of practices related with Land / Soil, again A.A.Os and A.Os (Score Value 39) were found to be the most credible channel followed by Radio (36), Other Information Channels (35), Television, Newspaper and Neighbors all with Score of 33 in descending order of credibility.

For the practices related with Fertilizers and Manure and Plant Protection again A.A.Os (Score 65 and 74 respectively) were perceived as the most credible channels followed by A.Os. (Score 65 and 66), Neighbors (57 and 64), Radio (53 and 57), Other Information Channels (47 and 54) Newspaper (44 and 46) and Television (Score 41 for both) in descending order.

For the practices related with Harvesting and Storage, Other Information Channels (Score 39) were perceived to be the most credible channels followed by A.A.Os and A.Os. (Score 38 for both), Radio (36), Neighbors, Newspaper and Television (Score 33 for all) in descending order of credibility.

In case of practices related with Marketing of farm produce, Other Information Channels, A.A.Os. and A.Os. (Score 39 for all) were found to be the most credible channel followed by Neighbors (38), Radio (36), Television (34) and Newspaper (33) in decreasing order of credibility.

The total Score obtained by different channels of information cumulatively for all the practices under consideration depict that A.A.Os (Score 313) were perceived as the most credible channel by the marginal farmers followed by A.Os (Score 303), Neighbors (271), Radio (265), Other Information Channels (258), Newspaper (229) and Television (Score 218) in decreasing order of credibility.

On the other hand it can also be observed from this table that the information related with Plant Protection (Score 402) were found to be the most received / needed information as perceived by the marginal farmers so far as the total score obtained by each practices (cumulative score of all channels) are concerned followed by Fertilizers and Manure (Score 372), Varietal aspects (327), Marketing aspects (258), Harvesting and Storage (250) and Land and Soil (248) in decreasing order of necessity.

3.3. Credibility of Different Information Channels as Perceived by Small Farmers

Table 3 represents Score Value in relation with relative credibility of different channels with reference to different farm practices as perceived by the Small Farmers. So far as the Varietal aspects, Land / Soil, Fertilizer and Manure application and Plant Protection measures were concerned A.A.Os were found to be perceived as most credible channel (Score Value 65, 42,74 and 75 respectively) followed by A.Os (Score 57, 40, 64 and 64, incase of Plant Protection measures, Radio also obtained same Score of 64) as second in rank of preference. For Varietal aspects and Land / Soil, Other Information Channels (Score Value 51 and 39) were ranked third whereas, for the practices related with Fertilizers and Manure application, Radio ranked third (Score Value 58). In case of Varietal aspects, Radio ranked fourth (Score Value 50) but in case of Fertilizer and Manure application and Plant Protection measures, Other Information Channels were ranked fourth (Score Value 57 nor the both). In case of Land /Soil, Newspaper and Neighbors ranked fourth with same Score Value of 36 followed by Radio (35). In case of Varietal aspects, Newspaper and Neighbors were perceived to be ranked fifth and sixth with Score Value of 46 and 45 respectively. Whereas, for the practices like, Fertilizer and Manure application and

Plant Protection measures, Neighbors and Newspaper were found to be ranked fifth and sixth (Score Value 51 and 57 respectively for Neighbors and 50 and 49 respectively for Newspaper).

Incase of practices related with Harvesting and Storage and Marketing, Other Information Channels and A.A.Os were ranked first and second by the Samll Farmers (Score Value 46 and 49 respectively for Other Information Channels and 37 and 38 respectively for A.A.Os). Neighbors also ranked second for the practices related with Marketing with the same Score Value.

Table 3. Credibility of Different Channels with Respect to Different Practices as Perceived by Small Farmers

Sl. No	Information Channels	Score Obtained by Different Channels with Respect to Different Practices						
		Varietal	Land / Soil	Fert. & Manures	Plant Protection	Harvesting & Storage	Marketing	Total Score
1	Radio	50	35	58	64	35	37	279
2	Television	36	35	38	37	34	32	215
3	Newspaper	46	36	50	49	35	35	251
4	A.A.O.	65	42	74	75	37	38	331
5	A.O.	57	40	64	64	35	37	297
6	Neighbors	45	36	51	57	35	38	262
7	Other Info. Channel	51	39	57	59	46	49	301
	Total Score	350	263	392	405	257	269	1936

The other credible channels of information as perceived by Small farmers in relation with practices related with Harvesting and Storage were, A.Os, Radio, Newspaper and Neighbors all ranked third with the same Score Value of 35 . In case of practices related with Marketing of the farm produce the other credible channels in order of descending credibility were, A.Os and Radio (Score Value 37) followed by Newspaper (Score Value 35). Television was found to be perceived as the least credible channel irrespective of all the identified practices.

The Total Score obtained by different channels cumulatively for all the identified practices showed that, A.A.Os were perceived as the most credible channel by the Small Farmers (Score Value 331) followed by Other Information Channels (301), A.Os (297), Radio (279), Neighbours (262), Newspaper (251) and Television (Score Value 257) in decreasing order of importance.

On the other hand it is also observed that the total Score obtained by different practices cumulatively for all the information channels portrait that information related with Plant Protection (Score 405) were found to be the most received and/or needed information for the Small Farmers followed by Fertilizers and Manure (392), Varietal (350), Marketing (269), Land/Soil (263) and Harvesting and Storage (257) in descending order of their importance.

3.4. Credibility of Different Information Channels as Perceived by Large Farmers

Table 4 represents Score Value in relation with the credibility of different channels as perceived by the Large Farmers with respect to different identified practices. It can be observed from the Table that, in case of Varietal aspects, A.A.Os were found to be most credible source (Score Value 73) followed by

A.Os (69), Other Information Channels (65), Radio (63), Newspaper (55), Neighbors (39) and Television (38) in decreasing order of credibility.

In case of practices related with Land / Soil, A.Os were found most credible channel (Score value 49) followed by A.A.Os (48), Other Information Channels (44), Radio (43), Newspaper (37), Television (34) and Neighbors (33) in descending order of credibility.

Table 4. Credibility of Different Channels with Respect to Different Practices as Perceived by Large Farmers

Sl. No	Information Channels	Score Obtained by Different Channels with Respect to Different Practices						
		Varietal	Land / Soil	Fert. & Manures	Plant Protection	Harvesting & Storage	Marketing	Total Score
1	Radio	63	43	67	70	36	35	314
2	Television	38	34	39	40	34	34	219
3	Newspaper	55	37	56	58	35	36	277
4	A.A.O.	73	48	83	85	38	39	366
5	A.O.	69	49	74	74	40	40	346
6	Neighbors	39	33	43	45	33	33	226
7	Other Info. Channel	65	44	67	69	55	56	356
	Total Score	402	288	429	441	271	273	2104

For the practices related with Fertilizer and Manure application, A.A.Os were ranked first (Score 83) followed by A.Os (74), Other Information Channels and Radio (67), Newspaper (56), Neighbors (43) and Television (39) in decreasing order of credibility.

In case of practices related with Plant Protection measures, again A.A.Os ranked first (Score Value 85) followed by A.Os (74), Radio (70), Other Information Channels (69), Newspaper (58), Neighbors (45) and Television (40) in descending order of credibility.

For the practices related with Harvesting and Storage and Marketing, Other Information Channels, A.Os and A.A.Os were ranked first, second and third (Score Value 55 and 56 for Other Information Channels; 40 and 40 for A.Os and 38, 39 for A.A.Os respectively). For Harvesting and Storage other channels in decreasing order of credibility were, Radio (36), Newspaper (35), Television (34) and Neighbors (33). And for the aspects related with Marketing other important channels in descending order of credibility were, Newspaper ((36), Radio (35), Television (34) and Neighbors (33).

The total Score obtained by different channels cumulatively for all the practices showed that A.A.Os (Score Value 366) were the most credible channels followed by Other Information Channels (356), A.Os (346), Radio (314), Newspaper ((277), Neighbors (226) and Television (219) in the descending order of importance.

The total scores obtained by different practices of cultivation cumulatively for all the channels of information showed that information related with Plant Protection measures (Score Value 441) were found to be most needed information for the large farmers followed by Fertilizers and Manure application

(429), Varietal (402), Land / Soil (288), Marketing (273) and Harvesting and storage (271) in decreasing order of necessity.

3.5. Credibility of Different Information Channels as Perceived by All Categories of Farmers

Table 5 represents the Score Value with respect to credibility of different communication channels in relation with different identified farm practices as perceived by all categories of farmers. It can be observed that for the practices related with Varietal aspects, Land / Soil, Fertilizers and Manure application and Plant Protection measures, A.A.Os and A.Os were ranked first and second in the credibility continuum (Score Value 196, 129, 222, 234 respectively for A.A.Os and 182, 128, 203, 204 respectively for A.Os).

In case of Varietal aspects other information channels in order of decreasing credibility were, Radio and Other Information Channels (both scored 160), Newspaper (141), Neighbors (130) and Television (110).

Table 5. Credibility of Different Channels with Respect to Different Practices as Perceived by All Categories of Farmers

Sl. No	Information Channels	Score Obtained by Different Channels with Respect to Different Practices						
		Varietal	Land / Soil	Fert. & Manures	Plant Protection	Harvesting & Storage	Marketing	Total Score
1	Radio	160	114	178	191	107	108	858
2	Television	110	102	118	118	101	103	652
3	Newspaper	141	106	150	153	103	104	757
4	A.A.O.	196	129	222	234	113	116	1010
5	A.O.	182	128	203	204	113	116	946
6	Neighbors	130	102	151	166	101	109	759
7	Other Info. Channel	160	118	171	182	140	144	915
	Total Score	1079	799	1193	1248	778	800	5897

In case of Land / Soil, Other Information Channels ranked third (Score 118) followed by Radio (114), Newspaper (106), Television and Neighbors (102).

For the practices related with Fertilizers and Manure application, Radio ranked third (178) followed by Other Information Channels (171), Neighbors (151), Newspaper (150) and Television (118) in decreasing order of credibility.

For the practices related with Plant Protection, Radio ranked third in the credibility continuum (191) followed by Other Information Channels (182), Neighbors (166), Newspaper (153) and Television (118).

In case of practices related with Harvesting and Storage and Marketing, Other Information Channels were ranked first (140 and 144), followed by A.A.Os (113 and 116, A.Os also ranked second for Marketing with the same Score of 116), A.Os for Harvesting and Storage and Neighbors for Marketing were ranked third (113 and 109 respectively), Radio was ranked fourth for both the practices (107 and 108), Newspaper fifth (103 and 104), Television ranked sixth (101 and 103) and Neighbors ranked seventh for the practices related with Harvesting and Storage.

On the other hand it can also be observed that the total score obtained by different farm practices cumulatively for all the channels showed that information related with Plant Protection measures were perceived to be the most needed information by all categories of farmers (Score Value 1248) followed by Fertilizers and Manure application (1193), Varietal (1079), Marketing (800), Land / Soil (799) and Harvesting and Storage (778) in descending order of importance.

3.6. Homogeneity Study of Farmers' Perception Regarding Credibility of Different Channels

Table 6 represents the results of the Kruskal Wallis Test conducted for testing the homogeneity and / or heterogeneity of the farmers' perception about the credibility of different channels in communicating farm information. For calculation, total score assigned by different categories of farmers against each information channels (cumulative score of all the identified practices of cultivation) have been considered. The results of the test showed that the calculated critical KW value 1.92 was less than the table value which implied that there was no difference among the different groups of farmers so far as their perception regarding credibility of different channels were considered or in other words farmers were homogeneous in this respect.

Table 6. Results of Kruskal Wallis Test for Homogeneity Testing of Farmers' Perception about Credibility of Different Channels

Sample Farming Categories	Observed Score Values with Respective Ranks of Information Channels						
	Radio	Television	Newspaper	A.A.O.	A.O	Neighbors	Other Info. Channels
Marginal	265 (9)	218 (2)	229 (5)	313 (16)	303 (15)	271 (10)	258 (7)
Small	279 (12)	215 (1)	251 (6)	331 (18)	297 (13)	262 (8)	301 (14)
Large	314 (17)	219 (3)	277 (11)	366 (21)	346 (19)	226 (4)	356 (20)

Figures in the parentheses indicate the respective ranks.

$K = 3$, $nj = 7$ (number of practices); $N = 21$ (number of observation 7 practices X 3 cat. of farmers)

$$R = \frac{N+1}{2} = 11 \qquad R_1 = \frac{64}{7} = 9.14 \qquad R_2 = \frac{72}{7} = 10.29 \qquad R_3 = \frac{95}{7} = 13.57$$

$$KW = \frac{12}{21 \times 22} = \{7(9.14)^2 + 7(10.29)^2 + 7(13.57)^2 - 3(22)\} = \frac{12}{21 \times 22} \times 2615 - 66 = 1.92$$

4. Conclusion

From the present study it can be concluded that Large Farmers received highest amount of farm information followed by Small Farmers and Marginal Farmers in decreasing order of information reception. Large Farmers as they are in better-off situation their access to different information channels were much higher in contrast to other categories of farmers. Moreover, as they were having large land holding with higher investment capacity, seek more farm information in comparison to other categories of farmers.

From all the results presented in the Table 2,3,4,and 5 it can be concluded that far all the categories of farmers extension agents like A.A.Os and A.Os (ranked first and second for almost all kind of

information) were found to be the most trusted information channels for receiving farm information. The findings were in line with the findings of Singh and Prasad (1974); Singh and Sarkariah (1968); Satpathy, Patra and Chand (1978).

Other Information Channels which include cooperatives, input dealers, Cane Officers were ranked third which was supported by the study of Sandhu and Lal (1976).

Radio, though popular among farmers came in the fourth rank and this finding was supported by the studies of Kishore and Rai (1974); Mathur, Singh and Lokhande (1974). Newspaper was accorded fifth rank which was in tune with the study of Swaheny (1967) and Television was accorded last rank which was in tune with the study of Patel, Nahatkar and Sharma (1995).

On the other hand, from the results of the present study it is found that farming communities are having preference / need regarding different types of farm information. The results revealed that irrespective of different categories farmers received or preferred / need to receive maximum information regarding plant protection measures which was in tune with the findings of Bhalaral, Halyal and Patel (1986); Patel and Suryavanshi (1995). The other important aspects of farmers' preference were fertilizers and manure application, varietal aspects, marketing, land / soil related aspects and aspects related with harvesting and storage in descending order of importance.

Moreover, the study also depicted that the farmers of different categories were homogeneous in nature so far as their perception about credibility of different information channels are concerned. It is suggested for the communication specialists to take into account the farmers' preference as well as their need whenever planning for communicating farm information through certain channels of communication.

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