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DIFFERENTIAL CREDIBILITY OF SELECTED SOURCES OF INFORMATION
FOR ADOPTION OF AGRICULTURAL TECHNOLOGY IN THE
UNDERDEVELOPED AREAS OF LUDHIANA DISTRICT

by

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partial fulfilment of the requirements for
the degree of

MASTER OF SCIENCE
in
EXTENSION EDUCATION



Department of Extension Education
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Ludhiana

1980

DECLARATION

This is to certify that this thesis
entitled, "Differential creditability of selected
courses of information in the adoption of agricultural
techniques in the underdeveloped areas of Ludhiana
District", submitted for the degree of Master of
Science, in the subject of Extension Education at
the Punjab Agricultural University, is a genuine
work of the author.

To

The Department of Extension Education
Punjab Agricultural University
Ludhiana


The assistance and help received during the
course of investigation have been fully acknowledged.

(Signature)
Author

CERTIFICATE I

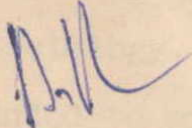
This is to certify that this thesis entitled, " Differential Credibility of Selected Sources of Information in the Adoption of Agricultural Technology in the Underdeveloped Areas of Ludhiana District", submitted for the degree of Master of Science, in the subject of Extension Education of the Punjab Agricultural University, is a bonafide research work carried out by Mr. Vikrant Rai Mehta under my supervision, and that no part of this thesis has been submitted for any other degree.


The assistance and help received during the course of investigation, have been fully acknowledged.

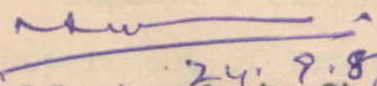
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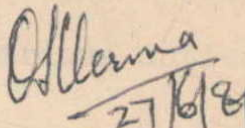
CERTIFICATE II

This is to certify that the thesis entitled,
"Differential Credibility of Selected Sources of
Information in the Adoption of Agricultural Technology
in the Underdeveloped Areas of Ludhiana District,"
submitted by Mr. Vikrant Rai Mehta, to the Punjab
Agricultural University, in partial fulfilment of the
requirements for the degree of Master of Science in the
subject of Extension Education, has been approved by the
Student's Advisory Committee, after an oral examination
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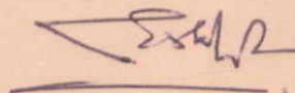
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(Vikrant Rai Mehta)

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CHAPTER I

INTRODUCTION

The concept of Indian agriculture as a 'way of life' has undergone a profound change in the recent years. Indeed, during the last decade, it has passed from the phase of subsistence farming to a progressive and modern one. This change is the result of many factors - interrelated and interacting in which agriculture information communication has been playing an important role.

Modernization of India lies in the development of her hundreds of millions of rural people whose chief means of livelihood ^{is} directly or indirectly, agriculture. Any amount of efforts made to develop these teeming millions, is worthwhile. But, the success of national programmes for agricultural transformation, depends mainly upon the quick dissemination of farm innovations in an intelligent and compatible manner, among the farmers. Small number of highly successful individuals, or small

areas of fast economic growth, will not remove the poverty and backwardness of the country as a whole, until the large masses of our country are enabled to participate effectively in the national effort towards progress, and also share an equitable proportion of the fruits of such progress. This is essential to motivate the farmers to take a decision either to adopt a new innovation, or to reject a traditional practice.

There is a need for a credible medium of communication which is effective not only in drawing attention and creating awareness, but also in developing interest through well planned messages, treated and presented in a variety of ways. The present study, therefore, is an attempt to measure the communication credibility of some selected sources of information, commonly used in the underdeveloped areas

in regard to the knowledge about the improved farm technology. Also, keeping in view the relationship between some personal and social characteristics of the farmers, as age, education, land holding and social participation, which effect the level of information gain of the farmers, have been considered in this study.

1.1 Objectives of the Study

The following were the specific objectives of the study.

- 1 To determine the extent to which knowledge regarding the package of practices of major crops is being disseminated by selected sources of information in their adoption.
- 2 To assess the credibility of selected sources of information commonly used to disseminate farm information.
- 3 To determine the relationship between some personal characteristics of the farmers and the level of information gained.

1.2 Significance of the Study

The findings of the study will be helpful to understand the preferences of the farmers for particular information sources. The quickness and effectiveness in dissemination of farm information is also very important. Although there have been several studies on the use of information sources by farmers, only a few studies have highlighted the credibility of information source while ignoring the underdeveloped and backward areas. It was, therefore, considered important from the point of effective communication of information to farmers to investigate the credibility farmers give to the existing sources of information.

The present study aims at examining the relationship between some personal and social characteristics of the farmers and the credibility attributed to selected information sources. The term 'personal characteristics' means here the personal traits of an individual such as age, education, size of land holding and social participation, which effect the level of information gained by the farmer.

From the extension point of view, this study will help the extension specialists, scientists and extension workers along with content specialists and producers of the various agricultural programmes to be more effective in developing, adopting and adjusting the various means and methods in communication of agricultural technology to the farmers and hence will help to plan a better communication strategy for different categories of farmers.

1.3 Assumptions of the Study

This study is based on the following assumptions.

- 1 It is assumed that the differential credibility of various sources can be studied through appropriate research techniques.

- 2 It is assumed that the farmers attach differential credibility to the various sources of information.

1.4 Limitations of the Study

- 1 The study has the limitation of a student research project.
- 2 The study is limited to only underdeveloped areas; hence, generalizations deduced by the present investigation, have limited scope and are applicable to similar areas.
- 3 It is beyond the purview of the study to know the actual degree of exposure of an individual farmer to the various information sources, because, the responses in respect of meetings, visits and discussions with various sources or opinions, are based on and depend upon past experiences.
- 4 The study is based on the self-perception of the respondents and is, therefore, liable to suffer from the biases of the respondents.

1.5 Definitions/Concepts Used in the Study

The majority of the correlates included in the study were of qualitative nature and these were difficult to be measured directly. To overcome

this difficulty, three scales already available, were used as such or with a little modification, and two scales were developed specially for this study. The measures of different correlates used, have been operationalized and explained in the discussion that follows.

- Age
- Education
- Social participation
- Mass media exposure
- Utility
- Credibility
- Credibility of source

Operational Definitions

Age

It is the chronological age of the respondent on the date of interview, expressed in terms of approximate years in whole numbers.

Education

It is formal instruction received by the respondents in a school, college or any other institution.

Social Participation

"Social participation means voluntary sharing in person to person and group to group relations beyond the immediate household"(Hay, 1951).

Mass Media Exposure

It refers to the regularity with which the farmers read newspapers, farm magazine, listen to radio and see educational films.

Utility

It is the usefulness of agro-informations as felt by the rural farmers and expressed in terms of preferences and frequency of listening and reading of various agricultural programmes (Moulik 1965).

Credibility

It is the degree of trustworthiness as attached to various programmes by the respondents at a given time (Moulik 1965).

Credibility of Source

It is the degree of trustworthiness accorded to a source by its audience at a given time (Moulik 1965).

1.6 Sequence of Presentation

It starts with introduction which deals with the importance, objectives, limitations, scope and significance of the study. Second chapter deals with 'Review of Literature'. The 'Research Methodology' has been discussed in chapter III

which is followed by 'Findings and Discussion' in chapter IV. The concluding chapter relates with the 'Summary and Conclusions' of the study.

REVIEW OF LITERATURE

In this part of the research report, an attempt has been made to present the review of literature which has relevance to this study. The main findings and conclusions drawn from the pertinent studies, have been presented under the following heads:

2.1 Source Credibility

A. Personal Formal Sources and their Credibility

B. Personal Informal Sources and their Credibility

C. Mass Media and their Credibility

2.2 Source Credibility and Persuasion

2.3 Personal Characteristics and Source Credibility

2.4 Source Credibility

A variety of names are used to indicate credibility of various sources. Credibility is called as

CHAPTER II

REVIEW OF LITERATURE

In this part of the research report, an attempt has been made to present the review of literature which has relevance to this study. The main findings and conclusions drawn from the pertinent studies, have been presented under the following heads.

2.1 Source Credibility

- A. Personal Formal Sources and their credibility
- B. Personal Informal Sources and their Credibility
- C. Mass Media and their Credibility

2.2 Source Credibility and Persuasion

2.3 Personal Characteristics and Source Credibility

2.1 Source Credibility

A variety of names are used to indicate credibility by various authors. Aristotle called it

"Goodness", often called it sincerity, effectiveness, confidence, image, status, prestige, etc. Hovland, et. al. (1953) and Betting Haus (1968) termed this concept as 'credibility'. Source credibility is authenticity and trustworthiness accorded to the source by the receiver.

Hovland et al (1953) identified two components of credibility as "Trustworthiness" and "expertness".

Bethinghaus (1968) suggested three dimensions of source credibility viz. qualification, safety and dynamism.

Following are the generalizations based on the various research studies conducted in this field. For the sake of convenience and clarity, generalizations are fitted into three categories of sources as follows.

- A. Personal formal sources and their credibility
- B. Personal informal sources and their credibility
- C. Mass media and their credibility

A. Personal Formal Sources and their Credibility

Singh and Shankaria (1968) and Singh (1971) and Singh, N.P. and Prasad C. (1974) pointed out that in progressive village personal formal sources like

subject matter specialists (University/IARI) and in non-progressive village personal informal sources like progressive farmers, friends and relatives were accorded high credibility. Demonstrations were ranked higher in non-progressive villages. But in both the types of villages, mass media, particularly the printed media, were accorded under credibility than the personal sources.

Other studies like IIMC (1968), Singh (1968), Sube (1971), Chole and Rahudkar (1978), which were conducted irrespective of modernity of villages, had the following generalized order of source credibility.

(i) Personal formal source

VLWs and scientists	Highest credibility
Block level extension agency	Low credibility

(ii) Personal informal sources

Progressive farmers and friends	Highest credibility
---------------------------------	---------------------

(iii) Mass media

Radio	Highest credibility
Printed media	Low credibility
Newspapers	Lowest credibility

B. Personal Informal Sources and their Credibility

Credibility is the set of perceptions by the receiver. Characteristics of a source like age,

sex, or socio-economic status may affect the perceptions that the receiver has and thus such characteristics become relevant to the study of credibility.

Studies like that of Merton (1949) and Hovland et al (1953), give the following generalizations.

- (i) Personal characteristics of sources affect their credibility.
- (ii) Among the various personal characteristics like age, sex, education, position of leadership, social status, occupation and income level were identified so far, and they affect source credibility.

C. Mass Media and their Credibility

Elliot (1937) found from a study of radio programmes that those who are less educated, listened most, remembered better and, therefore, were best listeners. He further concluded that the listeners of radio with low education and low intelligence, remember better what they hear than do the more educated and more intelligent ones.

Massachusetts State Extension Evaluation Committee (1950) reported that the farmers with low education level were dependent more on radio as compared to those having high level of education.

Crick (1955) noticed that the less educated

and less intelligent listened more and remembered better what they heard on radio as compared to the more educated and intelligent.

Krishna (1969) stated that cultivators, who listened to farming programmes, were benefitted and were convinced about the improved practices. A positive association between the adoption and listening to the All India Radio programmes was shown to be significant.

Saini (1970) reported that non-cultivators with high level of education had better opinion, greater utility and more faith in radio broadcasts. The level of education of cultivators and non-cultivators was an important factor in using the radio broadcast and developing a faith in it. Radio was considered a very useful source of information at all stages, except the final stages of adoption process.

Schramme (1949) found that radio reached an audience, not as often reached by the other mass media, consisting of less cultured.

Wilkening (1956) reported that various information sources were used to obtain different types of information, specially the mass media (radio, press) was reported as source of "first information" about innovation.

Lind Strom (1958) reported that mass media was an influential source of information and found that all the farm households in the community had become aware of the new practices through the mass media. Those sources of information were used at the subsequent stages of adoption, in which people had confidence, namely, friends and relatives.

Lion Berger (1960) reported that the newspapers, farm journals, radio broadcast and friends were used as a source of information for the farm practices in the descending order of their use. Radio was found a supplier of information, primarily at the awareness and interest stages of adoption process. In a number of cases, it had legitimizing function which was important at the evaluation, trial and final adoption stages.

Beal and Rogers (1960) reported that mass media as a source of information was most important at the awareness stage, and informal sources like friends, village leaders and relatives were most important at the application stage.

Kaul (1964) reported that the radio set kept at community centre was listened to regularly by the farmers. Indeed, the Panchayat Radio was very

popular and the information received through radio broadcasts made great impact at various stages of adoption process.

Dhillon (1968) reported that out of six sources of information covered by the study, the Punjab Agricultural University periodicals ranked first which was followed by radio, friends, extension workers, neighbours and newspapers in descending order.

The studies by Rahudkar (1962), Singh and Pareek (1968), Mathur (1967), and Puri (1972) have clearly shown the dominance of interpersonal local sources like progressive farmers and friends, in communication of information pertaining to the adoption of agricultural technology.

The findings of Sinha (1966) and Puri (1972) show the significant role played by friends and family members at the different stages of decision making. These two studies have reported that other farmers, family members and extension workers play major role in initial stages while only family members are consulted at the subsequent stages of decision making. However, all the studies have shown very scanty mass media use. Hoffer (1942), Wilkening (1953) and Anderson (1953) have found similar trends in the

Western societies excepting that there is a frequent use of written and spoken media in decision making.

In a study conducted by Rogers (1962) in Bakarwala like, in Columbian villages, mentioned the prime importance of interpersonal channels at every stage of decision making.

2.2 Source Credibility and Persuasion

A few psychological studies conducted by researchers like Haiman (1949), Hovland and Weiss (1951), Jenis and King (1954) and studies conducted in the field of agriculture by Rogers (1958), Mathur et al. (1974), show a direct evidence of effect of source credibility on persuasive efficiency of the communication. Source perceived to be more credible was more persuasive. There is a direct effect of source credibility on persuasive efficiency of the communication. This generalization also stands there in the light of relation of source credibility and source use at evaluation stage. It was already concluded in the preceding section but personal sources are given more credibility. Many studies like that of Ryan and Gross (1943), Sharma (1966), Horul et al (1972), suggest that only personal sources are used at evaluation stage. This, therefore, indicates that more credible sources are more effective and help

the receiver to take decision about use/non-use of an innovation.

A good deal of research studies have tried to find out relative credibility of various sources of agricultural information. It seems to be a dominant trend in the credibility research to compare credibility pattern in progressive and non-progressive farmers.

Singh and Shankariah (1968) studied the credibility of information source as judged by the farmers and research workers with the help of paired comparison technique and found that while research workers rated formal personal sources, i.e. radio, bulletins, folders and informal sources in order of credibility, farmers have rated formal personal sources, informal personal sources and mass media sources in descending order of credibility scale.

2.3 Personal Characteristics and Source Credibility

Personal characteristics of source and receiver cannot be analysed in isolation, but they are closely in interaction while determining the credibility of a source. Bettinghaus (1968) pointed out that the influence the source possesses, depends upon relationship between the source and the receiver. There are relatively few fixed characteristics of any source that either

Ranking of information sources for their credibility

	Big farmers	Medium farmers	Small farmers
Most credible	1 Specialists 2 Jr. Agril. Officer 3 Govt. Farm 4 Farm journals 5 Radio 6 Agril. demonstration 7 Village Ext. Officer 8 Progressive farmers 9 Distt. Agril. Officer 10 Demonstrator plots 11 Relatives and friends 12 Folders 13 Newspapers 14 Neighbours	1 Agri. demonstrations 2 Jr. Agril. Officer 3 Village Ext. Officer 4 Neighbours 5 Progressive farmers 6 Relatives and friends 7 Radio 8 Demonstration plots 9 Specialists 10 Farm journals 11 Newspapers 12 Folders 13 Distt. Agril. Officer 14 Govt. farmers	1 Progressive farmers 2 Agril. Demonstrator 3 Village Agril. Officer 4 Jr. Agril. Officer 5 Demonstration plots 6 Neighbours 7 Relatives and friends 8 Radio 9 Newspapers 10 Specialists 11 Farm journals 12 Distt. Agril. Officer 13 Folders 14 Govt. farmers
Least credible	15 Block Development Officer 16 Panchayats, Co-operative officials, film and salesmen	15 Block Dev. Officer 16 Panchayats, Co-operative officials, film and salesmen	15 Block Development Officer 16 Panchayats, co-operative officials, film and salesmen

Singh, K.N. and Shankariah (1968)

increase or decrease its credibility and thus his influence or persuasive efficiency. He hypothesised that communicator may have significant influence or persuasion when he is seen as 'similar' to the receiver. Similarity between source and receiver may take any dimension. Attitudinal similarity, similarity of age, sex and education may also be important.

Any of the characteristics that have been looked at in detail may become important to the credibility and outcome of the interaction between source and receiver.

Baker (1955), Copp and others (1957), Rahudkar (1962), Rai (1964), Dhaliwal and Sohal (1964), Jha and Singh (1971) have reported an association between age, socio-economic status, educational level and use of sources of information.

CHAPTER III

RESEARCH METHODOLOGY

In this chapter, various methods and procedures used in this investigation are explicated.

3.1 Locale of the Study

This study has been conducted in the underdeveloped blocks of Ludhiana district. Priority to this district was given keeping in view the easy accessibility of the investigator to the respondents. The following criteria were used to identify the underdeveloped blocks.

- 1 Non-availability of much of transportation and educational facilities.
- 2 Wet area with acute soil problems
- 3 Crop hazards due to floods
- 4 Low socio-economic status of the people

3.2 Sampling

It was planned to conduct this study in the underdeveloped blocks of Ludhiana district. Accordingly,

Sidhwan Bet, Machhiwara and Mangat Blocks were selected for this study. There are 97, 202 and 194 villages in Sidhwan Bet, Machhiwara and Mangat Blocks, respectively.

(a) Selection of Villages

Selection of villages was done by random sampling. Random sampling is that sampling scheme in which there are equal chances of selection for each population unit.

Out of the three blocks, five villages from each block were selected at random. Blockwise list of the selected villages is given below.

<u>Name of block</u>	<u>Names of selected villages</u>
Sidhwan Bet	Paddain, Basian Bet, Majri, Khanjarwal, Sawadi
Mangat	Kakrala Khurd, Khirnia Rakali, Ulna, Mangat
Machhiwara	Seera, Mangali, Ravans, Kadiana, Menewal

(b) Selection of Respondents

Lists of farming families of all the 15 randomly selected villages were prepared. Again, from each village, 8 farmers (who were major decision makers in respect of their families), were selected at random. In this way, a list of 120 farmers was prepared who were the respondents for the study.

In spite of five regular visits, the investigator was unable to contact 20 farmers. Hence, the data had to be collected from 100 respondents.

3.3 Selection of Farm Information Sources

A list of possible information sources from which farmers get information on high yielding varieties of major crops in Ludhiana district, was prepared by consulting the available literature. Faculty members of the Department of Extension Education of the Punjab Agricultural University were also consulted for preparing the list of the farm information sources and they were also requested to check out those sources of information from the list, which are commonly used in the dissemination of agricultural informations to the farmers, in the underdeveloped areas. In this study, 12 information sources as stated below, were selected for the purpose of this study.

<u>S.No.</u>	<u>Information source</u>
1	Radio
2	Progressive farmers
3	Newspapers
4	Village Level Workers
5	Farm bulletins/literature

- 6 Demonstrations
- 7 Exhibitions
- 8 Kisan Mela/Diwas
- 9 PAU Scientists
- 10 Neighbours
- 11 Input Supplies Agencies
- 12 Friends

3.4 Selection of Independent Variables

Farmer as an individual, has his own personality and there is a felt need to understand the farmer's behaviour by putting him in the framework of various types of determinants (systems and sub-systems) in which he participates. Earlier studies, whether in India or abroad, have shown the influence of personal characteristics of farmers with regard to their extrovercy towards various sources of information which they consider important. So, the independent variables for the present study, were selected on the basis of past research studies and were as follows.

- 1 Age
- 2 Education
- 3 Social participation
- 4 Size of land holding
- 5 Extension contacts

4.5 Measurement of Independent Variables

1. Age

Age was defined as the age of the respondent on the date of interview rounded off to the nearest year. The distribution of the respondents into various age groups was done by cum $3/f$ method as under

<u>S.No.</u>	<u>Age group</u>
1	Up to 27 years
2	28 - 48 years
3	Above 48 years

2. Education

Education was the level of literacy of the respondents having a range from illiterate to educated above matric. Education was one of the items on the socio-economic status scale (rural) developed by Trivedi and Pareek (1964). The information about education was asked from the respondents on the following categories, for which relative weights as mentioned against each category were assigned.

<u>S.No.</u>	<u>Educational level</u>	<u>Weightage</u>
1	Illiterate	1
2	Ist to Vth standard	2
3	Vith standard to matric	3
4	Above matric	4

The distribution of respondents into ^{three} categories

was done by cum 3/f method as follows.

<u>Category</u>	<u>Score</u>
Low	1
Medium	2 to 3
High	4

3. Social Participation

According to Hay (1951) "Social participation" means sharing in person to person and group to group relations beyond the immediate household. The scoring procedure followed to measure social participation of the respondents is as under.

<u>Membership</u>	<u>Points</u>
No membership	0
Membership of one organization	1
Membership of two organizations	2
Office bearer of an organization	3

The distribution of farmers into different categories according to social participation was done on the basis of scores as suggested by the author of the scale.

<u>Category</u>	<u>Range of score</u>
Low	1
Medium	2
High	3 and above

4. Size of Holding

It referred to the number of acres the farmers operates. The farmers who were interviewed were distributed into three categories of size of holding worked out by cum. $3/\sqrt{f}$ method as follows.

<u>Category</u>	<u>Farm size</u>
Small	Up to 13 acres
Medium	14-40 acres
Large	Above 40 acres

5. Extension Contacts

The number of contacts made by the farmer during the year 1979 with the extension agencies to get farm information.

According to frequency of contacts with the different agro-information sources, arbitrary scores were allotted to each of the respondents as under.

<u>Frequency of contact</u>	<u>Score</u>
Meet often	3
Know by name	2
Know by face	1

3.6 Selection of Methods for Measuring Credibility of Selected Sources of Information

Through review of literature and consultation with faculty ^{first} three methods of measuring source credibility

were selected as follows.

- 1 Ranking method for measuring credibility
- 2 Rating method of measuring credibility
- 3 Method of most-least credibility index
- 4 Method of paired comparison

Scoring Procedures Followed

1. Ranking Method

In the ranking method, each respondent was given a list of the six sources and was asked to rank them from 1 to 6, that he thought most credible for getting information about improved methods of cultivation regarding high yielding varieties of major crops of the area, namely wheat and rice. Sources of 6,5,4,3,2, and 1 were assigned to those sources which got some rank. The total score so obtained by a source on account of all sources was averaged.

2. Rating Method

In the case of rating method, responses were recorded on a four-point scale for each information source. The points on the scale being excellent, good, fair and poor to whom weights of 4,3,2 and 1 were assigned respectively. In this way, the total score for each source was worked out.

3. Most-Least Credibility Index Method

In the case of most-least credibility index, each respondent was asked to indicate only the most and the least credible source out of 12 information sources. The relative credibility index was worked out with the following formula.

$$\text{Relative credibility index} = \frac{X}{Y} \times \frac{100}{N}$$

where

X = Number of persons who believed a source most credible

Y = Number of persons who believed a source least credible

N = Total number of persons in the sample

4. Method of Paired Comparison Technique :

According to Gilford (1958), in the method of Paired Comparison Technique, all stimuli to be evaluated on a psychological scale are typically presented to the observer in all possible pairs. His judgements are in two categories and guessing is required. The response of observer is ostensibly a comparative judgement. The same observer may judge all pairs a large number of times on different occasions. The results are computed by obtaining F, P and Z matrices.

3.7 Developing the Interview Schedule

The review of relevant literature brought out a wide variety of personal characteristics pertaining to adoption of agricultural technology and the credibility assigned to various sources of information. Questions of almost all types and nature, as were appropriate to the type of information required, were constructed and asked.

The interview schedule was divided into two major parts which focussed the personal characteristics of the farmers and the credibility assigned to the selected sources of information at various stages of adoption of agricultural technology.

3.8 Collection of Data

The data were collected personally at the

farm/house of the individual respondents with the help of a structured interview schedule.

3.9 Statistical Analysis

The statistical measures used in this study were arithmetic mean, range, standard deviation, zero-order correlation, test of significance and cum. 3/f method.

Measures of Variability

The following measures of variability were used to analyse the data

$$\text{Range} = X_{\text{max.}} - X_{\text{min.}}$$

$$\text{Standard deviation} = \sqrt{\frac{1}{n} \sum x_i^2 - \frac{(\sum x_i)^2}{n^2}}$$

Correlation

Coefficient of correlation (r) is the statistics which measures the relationship between the variables. The following formula was used for calculating the relationship between the credibility effectiveness of sources of information and the various independent variables

where

r = Coefficient of correlation between x and y

N = Number of observations

X = Independent variable being correlated

Y = Dependent variable being correlated

Test of Significance

The significance of r was tested with Fisher's 'r' table.

CHAPTER IV

FINDINGS AND DISCUSSION

The information gathered by employing available as well as self-constructed measuring instruments to study the communication credibility assigned to the selected sources of information, by the farmers, has been presented under the following main headings :

- I Extent to which various information sources are used at various stages of adoption of the package of practices of major crops :
 - A Information sources used at awareness stage
 - B Information sources used at trial stage
 - C Information sources used at adoption stage
- II Source credibility of selected sources of information

III Correlates of level of information gained and some personal characteristics of the farmers.

The findings in respect of the above are presented in the following pages :

4.1 Extent to which Selected Information Sources are Used at Various Stages of Adoption of the Package of Practices of Major Crops

A. Information Sources at Awareness Stage

For this, the farmers were asked to mention those sources from which they get information about the new agricultural technology out of twelve sources of information. Depending upon their preferences accorded, the sources mentioned by each farmer were scored by using rating method of measuring credibility. The scores so obtained are given in Table 1.

Table 1. Sources of information used at awareness stage

Source	Scores obtained	Rank
Kisan Mela	200	I
Progressive farmers	151	II
Radio	130	III

progressive farmers were also consulted at this stage, which got third rank.

C. Information Sources Used at Adoption Stage

For this, the farmers were asked to mention first two sources which they generally consult about the adoption of new agricultural technology. Depending upon their preferences accorded, the sources mentioned by each farmer were scored by using rating method of measuring credibility. The scores so obtained are given in Table 3.

Table 3. Information sources used at adoption stage

Source	Scores obtained	Rank
Progressive farmers	329	I
Farm literature	196	II
Newspaper	181	III

This is evident from Table 3 that most of the farmers consulted progressive farmers for the adoption of agricultural technology and thus, this source got first rank. Quite a large number of them went for farm literature and newspapers which got the second and third ranks respectively.

4.2 Source Credibility of Selected Sources of Information

To see the source credibility, the farmers were asked to mention the sources from which they got maximum and minimum information. The relative credibility index of different sources of information was worked out by using the Most-Least Index Method of Measuring Credibility. Relative Credibility Index, such obtained by various sources of information from which the farmers got maximum and minimum information, is shown in Table 4.

Table 4. Relative credibility index of sources of information by the most-least index method of measuring credibility

Most liked source	R.C.I.
Progressive farmers	27
Least liked source	R.C.I.
Neighbours	0.0625

Progressive farmers (RCI = 27), followed by radio (RCI = 25) and Kisan Mela (RCI = 17) are the most liked sources of agro-information in their order of preference, whereas neighbours (RCI = 0.0625), input supply agencies (RCI = 0.0625) and exhibitions (RCI = 0.099) are the least liked sources of information.

4.3 Correlates of Level of Information Gained and Some Personal Characteristics of the Farmers

As stated in chapter III, five personal characteristics viz. age, education, extension contacts, social participation and farm size were selected for the purpose of this study. To examine the consistency of the individual relationships between the dependent variables, zero-order correlation coefficients ('r' values) were calculated and tested for their statistical significance.

Table 5. Correlation coefficient between level of information and some personal characteristics of the farmers

Independent variable	'r' value
Age	0.141 ^{NS}
Social participation	0.295**
Educational level	0.531**
Extension contacts	0.813**
Farm size	0.018 ^{NS}

** Significant at 1% level

NS Non-significant

Discussion :

The major findings of this study with regard to use of selected sources of information in the adoption of agricultural technology, pertaining

to the major crops in the underdeveloped blocks of Ludhiana district, have been discussed as follows :

I. Extent to which Various Selected Information Sources are Used at Various Stages of Adoption of the Package of Practices for Major Crops

A. Information Sources Used at Awareness Stage

The sources of information used at the awareness stage of adoption came out to be Kisan Mela, progressive farmers and radio, respectively. This study is partially in agreement with the studies done by Rogers (1953); Beal and Rogers (1959); Rogers and Burdge (1961) and Rogers and Leuthold (1962), who found that, as awareness stage of adoption process depends considerably upon impersonal sources of information, therefore, adopters had to depend mainly upon the cosmopolite sources due to non-availability of personal sources of information. According to the present study, farmers lay emphasis on the progressive farmers, other than radio in order to get first information about improved agricultural technology which may be due to the cosmopolite nature of the progressive farmers and their interpersonal relationships between the farmers of the community. Progressive farmers may also be important in Indian situations because the area is thickly populated as compared to other countries of the world. Moreover,

most of the researches in this area have been done abroad, where size of land holdings is quite large and the farmers cannot visit each other quite frequently except on a few occasions.

Information Sources Used at Trial Stage

As far as the trial stage is concerned, the data revealed that the farmers used to visit those sources of information which were more or less easily available and could guide them well. They preferred VLWs, PAU scientists and the progressive farmers and the others sought information from the VLWs and the progressive farmers.

Information Sources Used at Adoption Stage

The sources of information used at the adoption stage of package of practices of major crops came out to be progressive farmers, farm literature and newspapers respectively. It was observed that the farmers with large size of land holdings liked farm literature and newspapers compared with farmers having medium and small size of operational holdings, who sought information from the progressive farmers, in the adoption of package of practices of major crops. The support for these findings came from Carter and William (1959); Rogers and Beal (1960); and Hruschka (1961). It may be due to the cosmopolite

outlook of the progressive farmers, that the other farmers came to consult them rather than getting information from other sources of information.

Source Credibility of the Selected Sources of Information

The findings of the present study indicate that the progressive farmers, radio and Kisan Mela are the most liked sources of farm information and can be termed as the major sources of information. But the neighbours, extension agents and exhibitions were the least liked sources and can be termed as minor sources of information (Table 4).

Neighbours are always ignored to get farm information. This may be due to the day-to-day jealousy. Then came the input supply agencies. Exhibitions were mostly held without proper pre-planning and without the involvement of village people, that is why the farmers did not like them much. Moreover, the displays normally are made just for the visiting dignitaries. Also, the various input supply agencies, engaged in displays normally do not possess good and up-to-date display materials and what is exhibited is not properly shown and explained to the farmers.

According to the present study, the most

credible information sources for the dissemination of agricultural informations, is progressive farmers, although, almost equal credibility has been assigned to the radio, depending upon the overall performance. People like progressive farmers because of their cosmopolite outlook. Radio is also preferred as it is in government sector and cannot disseminate wrong agricultural information. Radio got the second place because the timings for two of the radio programmes (morning and evening programmes), are not suitable to the farmers due to their engagement in the farm operations at these timings.

A few of the farmers liked Kisan Mela also and stressed it to be one of the important sources which help in dissemination of agricultural information. Kisan Mela/Divas, which got the third place in the present study is organized twice a year, by the Punjab Agricultural University, in the months of March and September respectively.

Through this study, progressive farmers have been proved to be the important disseminators of agricultural information, which may be due to the reason that the blocks under study are quite close to the Punjab Agricultural University, Ludhiana and the progressive farmers visited PAU scientists quite

frequently for getting agricultural information.

Correlates of Level of Information Gained and Some Personal Characteristics of the Farmers

It is observed that the source credibility with respect to farmers' level of getting information in respect of agricultural technology is significantly correlated with extension contacts, educational level and social participation, and have a positive correlation with all of them. The level of information gained by the farmers is correlated with extension contacts ($r = 0.813$) and is significant at 1% level. Educational level ($r = 0.531$) and social participation ($r = 0.295$) are also correlated and both are significant at 1 per cent level.

Relationship of farm size with level of information gained pertaining to agricultural technology was quite weak ($r = 0.018$) and was non-significant. Age also did not show any significant relationship ($r = 0.141$).

A. Age and Level of Information Gained

Age has not shown any significant relationship with the level of information gained among the farmers under investigation. The findings of this study are in agreement with John (1934 and 1943) who stated that

the age of the farmers was not a serious barrier to the adoption of new practices. This may be due to the reason that irrespective of age, the farmers are equally exposed to all sources of information. Similarly, Coleman (1951) Bohlen (1956); Corp (1957) and Rahudkar (1958) did not find any significant relationship between age and sources of information used in the adoption. However, Lionberger (1955); Copp et al (1958); Rao and Raheja (1959) and Sawney (1961) stated that there was a definite and negative association of age with adoption. Therefore, these findings remain inconclusive.

B. Education and Level of Information Gained

The findings of the present study bear out that education of the farmers had a significant and positive relationship with the extent of information gained for the adoption of agricultural technology and are supported by the findings of Hoffer (1942); Gross (1943); Bose (1961); Sawney (1961) and Dhaliwal (1963).

C. Extension Contacts and Level of Information Gained

As per the findings of the study, the extension contacts have a significant and positive relationship with the extent of adoption of farm practices among the farmers under investigation.

This is in agreement with the studies by Wilkening (1952), Lionberger and Coughenour (1957), Copp (1957) and 1958) and Dhaliwal (1963) who stated that contacts with formal and informal agencies are significantly related with the adoption of practices. Here, the results do not favour Grewal (1965) who stated that the extent of adoption is not related with the extension contacts.

D. Social Participation and Level of Information Gained

The association between sources of information used for the adoption of package of practices of major crops and participation in village organizations, has been found positive and significant. No doubt, the present study was conducted in the underdeveloped areas where there is non-availability of much of educational facilities, village people liked to participate in some social organizations and societies. This study is in agreement with the studies by Hoffer (1942); Gross (1949); Copp (1957 and 1958); Bose (1961) and Sawney (1961). They observed that social participation is significantly associated with the farm information sources in the adoption of agricultural practices. However, Copp (1956) noticed no relationship between social participation and adoption.

E. Farm Size and Level of Information Gained

According to the present study, farm size has a non-significant relationship with the extent of adoption of improved farm practices. The findings of this study are supported by Rao and Raheja (1959) who found that size of operational holding of the cultivator did not differ significantly in changing the attitude of the cultivators towards the improved farming practices. However, Copp (1928) Hoffer (1942), Vanden Ban (1957) and Dhaliwal (1963) found that farm size have significant relationship with the adoption of practices. Therefore, these findings remain inconclusive.

CHAPTER V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

The concept of Indian agriculture as a 'way of life' has undergone a profound change in the recent years, indeed, during the last decade, it has passed from phase of subsistence farming to a progressive and modern one. This change is a result of many factors - interrelated and interacting in which information communication has been playing an invisible, yet indispensable role. Modernization of India lies in the development of her millions of rural people whose chief means of livelihood is agriculture. Any amount of efforts made to develop these teeming millions is worthwhile. But the success of national programmes for agricultural transformation depends mainly upon the quick dissemination of farm innovations in an intelligent and compatible manner, among the farmers. There is a need for a credible, trustworthy and prestigious medium of communication which is effective not only in drawing attention and creating awareness,

but also in developing interest through well planned messages treated and presented in variety of ways in the adoption of agricultural technology.

Adoption is a continuous and time consuming process, and involves decision making at its various stages, viz., awareness, interest and adoption. The present study, therefore, was an attempt to measure the communication credibility of some selected farm information sources (considered as important) in the adoption of agricultural technology in the underdeveloped areas of Ludhiana District at the various stages of adoption of agricultural technology, with the following specific objectives.

- 1 To determine the extent to which knowledge regarding the package of practices of major crops is being disseminated by selected sources of information, in their adoption.
- 2 To assess the credibility of selected sources of information commonly used to disseminate farm information.
- 3 To determine the relationship between some personal characteristics of the farmers affecting the level of information gained.

It was planned to conduct this study in



the underdeveloped areas of Ludhiana District.

Accordingly, Sidhwan Bet, Machhiwara and Mangat blocks were selected for this study. Out of these blocks, 5 villages from each block were selected at random. Again, from each village, 8 farmers were selected at random. In all, 100 farmers were interviewed. A list of possible information sources from which the farmers usually get the information on high yielding varieties of major crops, was prepared with the help of AEO's, VLW's, and extension specialists of PAU. Postgraduate students also extended hands in the selection of information sources, commonly used in the dissemination of agro-information. In this way, 12 information sources were selected.

Earlier studies, whether in India or overseas, have shown the influence of personal characteristics of the farmers with regard to their extrovercy toward various sources of information, which they consider important. So, the independent variables for the present study were selected on the basis of past research studies. The independent variables selected for this study were age, education, farm size, social participation and extension contacts. Socio-economic Status Scale (Rural) developed by Trivedi and Pareek (1969) was used as an instrument

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for farm size, social participation and education. For measuring the independent variables, the distribution of respondents into various groups was done by cum. 3 \sqrt{F} method.

From a review of literature and faculty discussions, three methods of measuring source credibility were selected. They were ranking, rating and most-least credibility index method for measuring the credibility. Scoring procedures followed in these methods is discussed in chapter III (Research Methodology).

For the collection of data, interview schedule was prepared. Questions of almost all types and nature as were appropriate to the type of information required, were constructed and asked. The data were collected personally at the farm/house of the individual respondent.

The statistical measures used in this study were arithmetic mean, standard deviation, range, zero-order correlation, test of significance and cum 3 \sqrt{F} method. Percentages were also used for making simple comparisons. Few methods of measuring credibility, were also used.

Information Sources at Awareness Stage

For this, the farmers were asked to mention

the source from which they get first information about the agricultural technology. Depending upon the preferences accorded, Kisan Mela, progressive farming and radio got first, second and third places with scores of 200, 151 and 130 respectively.

Information Sources at Trial Stage

After becoming aware of the new innovations, the farmers were asked to mention the two information sources from which they get further information in respect of agricultural technology. Their preferences went to VLWs, PAU scientists and then to progressive farmers with 74, 72 and 42 scores respectively. The available data reveal that VLWs and PAU scientists are equally good at trial stage of adoption.

Information Sources at Adoption Stage

When the farmers have an attitude to adopt new innovations, they prefer to get information from that source which not only encourages and guides them, but also ensures them the success in adopting that innovation. Depending upon the willingness of the respondents, progressive farmers, farm literature and neighbours got 1, 2 and 3 place with scores of 329, 196 and 165 respectively.

Source Credibility

To see the source credibility the farmers were asked to mention the sources from which they get maximum and minimum information. The sources which the farmers liked most are progressive farmers, radio and Kisan Mela, and the least liked sources were extension agencies and exhibitions/ demonstrations in their level of importance and overall performance in the adoption of agricultural technology.

When asked to rank the various sources of information depending upon their overall performance, Kisan Mela, progressive farmers, radio, farm literature, newspaper and VLWs were ranked as 1, 2, 3, 4, 5 and 6 with scores of 88, 67, 51, 26, 14 and 10 respectively.

Correlates of Level of Information Gained and Personal Characteristics of the Farmers

As far as the personal characteristics of the farmers are concerned, in a computed zero-order correlation analysis, education, social participation and extension contacts were found to be significantly correlated with the communication behaviour of the farmers for receiving agro-information. Age and farm size did not show any relationship with communication behaviour of the farmers in the adoption of agricultural technology.

Implications of the Study

The findings of the study are helpful in planning the new agricultural communication strategy in the following ways :

Even among 12 sources, only six sources viz. Kisan Mela, progressive farmers, radio, farm literature, village level workers and PAU scientists are being extensively used. In case of others, exposure is limited.

This study has clearly shown the dominance of interpersonal local sources like progressive farmers and village level workers, in communication of information pertaining to major crops of the area, and in the process of its ultimate adoption.

According to the present findings, the farmers need to refer to some credible information sources during different stages of adoption even in the absence of change agent. Special guidance may be imparted to the opinion leaders of the village.

Training camps may be organized properly by involving the block staff as well as progressive farmers. Dictation of notes can be avoided but stress may be laid on more participatory methods, while giving some demonstrations or training.

This study strongly argues for the importance of interpersonal communication in the flow of agricultural information in an underdeveloped Indian village. The reason for this may be assigned not only to the lack of channels and media of communication, but also to the distinct advantages of interpersonal communication, particularly at the adoption stage, over other sources of information. Its importance may be explained in terms of two way exchange of ideas, influence on behaviour and greater accessibility and credibility.

While planning to bring about any desired change in the farming community in the underdeveloped areas, the village level workers should keep in mind the personal characteristics of the farmers viz. social participation, age and education in order that they are tuned accordingly to make the best use of information sources at different stages of adoption process. Moreover, he should provide adequate stimulus to the farmers to encourage meaningful interpretation which will be reflected finally in the quality of response.

Farmers with traits like social participation, education and extension contacts are exposed to larger number of sources. So, if they are to be reached only

few sources can be used. But, if farmers with other traits are to be informed, the mentioned six sources of information can serve the purpose.

The exposure of these farmers, whose communication behaviour is low, have to be increased by exposing them to those sources and those traits, to which they are less exposed.

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BIBLIOGRAPHY

- 1 Atwal, G.S., 1972. Evaluation of Farm Radio Programme from AIR Jullundur, M.Sc. thesis, PAU, Ludhiana.
- 2 Beal, G.M., 1960. The Diffusion Process, Ames, Iowa State University Press.
- 3 Beal, G.M., 1958. Information Sources in the Decision Making Process. The Research on Decision Making, Pullman; State College of Washington, pp 36-61.
- 4 Berlo, David, K., 1960. The Process of Communication, New York, Rinehart, Holt and Winston.
- 5 Bettinghaus, E.P., 1968. Persuasive Communication. Hott, Rinehart and Winston Inc. New York.
- 6 Bhardwaj, D.P., 1966. The Farm Broadcasting in Agricultural Extension. Brief Note, Ind. Jr. of Ext. Edu. I (4); 315-17.
- 7 Chapin, F.S., 1928. An Authentative Scale for Rating the House and Social Environment of Middle Class Families in the Urban Environment - A First Approximation to the Measurement of Socio-Economic Status, J. Edu. Psycho. 19 : 99-111.
- 8 Chole, R.R. and R. Ahudkar, N.B., 1978. Source Credibility Pattern Among Small and Big Farmers. Ind. J. of Ext. Educ. Vol. 14 (1 & 2) pp 50-53.
- 9 Copp, J.H., Sill, M.L., 1958. The Function of Information Sources in the Farm Practices Adoption Process. Rur. Soc. 23 : 146-57.

- 10 Deutschmann, P.J. and Orlando, F. Borda, 1972. Communication and Adoption Patterns in an Andean Village. SanJose Programs Interamerican de' Information Poplar, Mimeo. Report.
- 11 Deutschmann, S., 1965. Communication and Innovation in Indian Villages. Social Forces. 43(3) : 330-37.
- 12 Dhaliwal, A.S., 1963. A Study of Some Important Factors Affecting the Adoption of a Few Selected Agricultural Practices by the Cultivators of Ludhiana Community Development Block. Ph.D. thesis, COA, PAU.
- 13 Elliot, F.R., 1937. Memory for Trade Names Presented in Screen, Radio and T.V. Advertisements. J. Appl. Psych. pp 653-667.
- 14 English and English, 1961. A Comprehensive Dictionary of Psycho Analytical Terms. New York; Longmans, Green & Co.
- 15 Ewery, F.E., and Oeser, O.A. 1958. Information, Decision and Action. Carlton : Melbourne University Press.
- 16 Grewal, I.S., 1965. Differential Characteristics of Farmers of a Predominantly Refugee, A Native and Mixed Village, Affecting the Adoption of Improved Agricultural Practices in a Block in Ludhiana District of Punjab, M.Sc. thesis, COA, PAU.
- 17 Hay, D.C., 1951. Social Participation of Individuals in Four Rural Communities of North East; Rural Soc. 16 : 127-37.

- 18 Hovland, C.I. and Wein, M.L., 1951. Influence of Source Credibility on Communication Effectiveness. Pub. Opinion Quart. Vol. 15; pp 635-650.
- 19 Hovland, C.I., Janis, I.L. and Associates, 1953. Communication and Persuasion. York Univ. Press, London, p 22.
- 20 Haiman, F.S., 1949, The Effects of Ethos in Public Speaking Speech Monographs, Vol. 16, p 192.
- 21 Haque, M.M., Anwanal, K.A.M. Seajual Islam, 1972. Information Sources Used by the IARI Rice Growers of Thakurgaon Thana Cooperative Tubewells Project. Research in Agri. Ext. Edu., Deptt. of Agri. Extn. and Teachers Training, Bangla Desh Agri. University Mymon Singh.
- 22 I.I.M.C., 1968. Agric-Information Flow at the Village Level. Report of the Survey of Communication Sources in Adoption Process of HYVs of Crops, 1968. N. Delhi.
- 23 Jenis and King, 1954. The Influencing of Role Playing on Opinion Change. J. of Abnorm. Socio Psychology. Vol. 49 : 211.
- 24 Mathur, J.C. and Neurath, P., 1959. An Indian Experiment in Farm Radio Forums. Press, Film and Radio in the World Today. Paris, UNESCO.
- 25 Mathur, P.N., Singh, K.N. and Lokhande, M.R., 1974. Source Utilization and Rate of Speed of Information on HYVs of Wheat in Farming Community. Ind. J. of Ext. Edu. Vol. 10 (1 & 2), pp 23-29.

- 26 Meyton, R.K., 1949. "Patterns of Influence" , A Study of Interpersonal Influence and that of Communication Behaviour in a Local Community, in P.F. Lazarfield. F.N. Stampton Ed. Communication Research New York, Harper pp 180-219.

- 27 Moulik, T.K., 1965. A Study of the Predictive Values of Some Factors of Adoption of Nitrogenous Fertilizers and the Influence of Source of Information on Adoption Behaviour. Ph.D. thesis, New Delhi, IARI.

- 28 Nagoke, J.S., 1964. Relative Effectiveness of Extension Methods on the Adoption of Improved Agricultural Practices in Selected N.E.S. Blocks.

- 29 Nefziger, R.O. and White, D.M., 1966. Introduction to the Mass Communication Research (2nd Edi.), Baton Rouge, Louisiana State University Press.

- 30 Parshad, R., 1966. A Study of Some Sources of Information in the Adoption Process of Some Selected Farm Practices. M.Sc. thesis, PAU, Ludhiana.

- 31 Raheja, P.C., 1956. Making Farmers Fertilizer Minded. Ind. Farm. 6 (3) 65-67.

- 32 Rai, H.N., 1967. Diffusion of Information and Farmers' Response in Relation to Improved Farm Practices. Proceedings of Research Foundation. Vol. 8 & 9 : 116-18.

- 33 Rajguru, G.S. and Satapathy, C., 1971. Effectiveness of Sources of Information in the Adoption Process of H.Y.Vs. by the Farmers of Puri District of Orissa. Ind. Jr. Ext. Edu., Vol. 7 : 72-75.

- 34 Ramachandran, P.K., Singh, N. and Chattopadhyaya, A Utilization of Credibility of the Sources of Information at Various Stages of Adoption of Farm Innovations. Ind. J. of Ext. Edu., Vol. XV; Nos. 3,4. Dec.
- 35 Rogers, E.M., 1958. Opinion leaders in Communication of Agriculture Technology. Paper presented at American Sociological Society Meeting, p 238.
- 36 Rogers, E.M. and Wicky, L. Mayen, 1965. Communication Sources for 2-4-D Weed Spray Among Columbian Peasants. Rural Sociology 30, pp 213-219.
- 37 Ryan, B. and Gross, N., 1943. The Hybrid Seed Corn Study of Diffusion of Innovation. The Press of Glueco, London, p 32.
- 38 Ryan, B. and Gross, N., 1950. Acceptance and Diffusion of Hybrid Corn Seed in the Iowa Communities. Iowa Sta. Coll. Agri. Expt. Study. Res. Bull. 372.
- 39 Saini, G.S., 1970. Impact of the Agricultural Broadcasts from AIR Jullundur on Rural Listeners. M.Sc. thesis, PAU, Ludhiana.
- 40 Sandhu, A.S., 1973. Relative Efficiency of Four Methods of Measuring Credibility of Farm Information Sources. Ind. Jr. Ext. Edu., Vol. 9 : 71-74.
- 41 Seliz et al, 1963. Research Methods in Social Relations. USA, Rinehart and Winston inc. p 466.
- 42 Sharma, D.K., 1966. Role of Information Sources and Communication Channels in Adoption of Improved Agricultural Practices. Ind. Jr. of Ext. Edu. 2 : 143-148.

- 43 Sharma, D.K., 1966. Role of Information Sources and Communication Channels in Adoption of Improved Agricultural Practices. Ind. J. Ext. Edu. 2 : 143-148.
- 44 Singh, K.N. and Sandhu, A.S., 1970. Characteristics, Listening Behaviour and Programme Preferences of the Radio Listening Farmers in Punjab; Ph.D. thesis, IARI, New Delhi.
- 45 Singh, K.N. and Shankaria, Ch., 1968. Measuring the Information Sources Credibility with Period Comparison Technique. Ind. J. of Ext. Edu. Vol. 2 (1 & 2).
- 46 Singh, Malook, 1973. Utility of Farm Broadcasts from AIR Jullundur to the Block Staff of Punjab (India). M.Sc. thesis, PAU, Ludhiana.
- 47 Singh, N.P. and Parsad C., 1974. Communication Behaviour and Source Credibility Perception of Young Farmers. Ind. J. of Ext. Edu. Vol. 10 (1 & 2) pp 53-58.
- 48 Singh, S.N., 1964. A Scale to Measure Value Orientation of Farmers. Unpublished paper.
- 49 Singh, S.V., 1971. Farm Information Source Credibility in Relation to Their Rational and Adoption Behaviour. Ind. J. of Ext. Edu. Vol. 1 & 2. pp 29-33.
- 50 Singh, Y.P. and Pareek, U., 1966. Sources of Communication at Different Stages of Adoption. Ind. J. Soc. Work, 2.
- 51 Sinha, P.R.R., 1966. A Study of Farmers' Decision Making Process with Respect to Use of Artificial Fertilizer and Vegetable Cultivation. Ph.D. thesis, IARI, New Delhi-12.

- 52 Sinha, P.R.R., and Parshad, R., 1966. Sources of Information as Related to Adoption Processes of Some Improved Farm Practices. Ind. Jr. Ext. Edu. Vol. 2 (1-2) : 86-91.
- 53 Supe, S.V., 1971. Farm Information Source Credibility in Relation to their Rational and Adoption Behaviour. Ind. Jr. of Ext. Edu. Vol. 7 (1 & 2) pp 29-33.
- 54 Supe, S.V., 1973. Need for Agricultural Communication. Agr. Communication, March, 1973.
- 55 Trivedi, G., 1963. Measurement of Analysis of Socio-Economic Status of Rural Families. Ph.D. thesis, IARI, New Delhi-12.
- 56 Trivedi, G. and Pareek, U., 1964. Manual of the Socio-Economic Status Scale (Rural). Delhi, Mansayan.
- 57 Wilkening, E.A., 1950. Sources of Information for Improved Agricultural Practices. Rur. Soc. 15 : 119-30.
- 58 Wilson, M.C., 1930. Extension Methods and their Relative Effectiveness. USDA Tech. Bull.98.

CORRIGENDUM

- Beal, G.M. and Rogers, E.M. (1960). The adoption of two farm practices in a Central Iowa Community. Ames; Iowa Agri. and House Econ. Expt.Sta. Spl. Rep. 26.
- Crile, L. 1955. Some Findings from Radio Research U.S.Fed. Ext. Sem., 543, Washington, p. 87.
- Dhillon, J.S. 1968. Impact of the popular periodicals of PAU on the dissemination of improved practices to the farmers of Pb. State; M-Sc. Thesis, Pb.Agril. Univ.
- Hoffer, C.R. 1942. Acceptance of approved farming practices among farmers of Dutch Descent. Michigan Agri. Exp. Sta. Sp. Bull. 316.
- Kaul, S.N. 1964. Role of Socio-Economic factors in the adoption of Agri Practices in Kulu-Valley. Unpublished manuscript, Pb.Agril.Univ.LDH.
- Krishna, P.V. 1969. Adoption of Hybrid Maize in Karimnagar A case study of improved practices, Agril. Situation in India. Vol. 26, No.1, p. 16.
- Lionberger, H.F. 1960. A summarization of research on the diffusion of new ideas in Adoption of New Ideas and Practices. Ames, Iowa State University Press.
- Massachusetts State Extension Evaluation Committee. 1950. Summary of 30 Radio Studies cited in Extension Service Circular No. 503, USDA, 1955: 62.
- Prasad, C. 1974. Communication Behavioural source credibility perception of Young Farmers. Ind. J. Ext.Edu. 10(1&2): 53-58.
- Puri, S. 1972. Decision making pattern with respect to farm related and family planning decisions. Ind.J.Ext.Edu. 8:61-68.
- Rai, H.N. 1967. Diffusion of information and farmers' response in relation to an improved farm practices. Proceedings of Research Foundation. Vol.8 &9. 116-18.
- Rabudkav, W.B. 1958. Impact of fertilizer extension programme on the minds of the farmers and their reaction to different extension methods. Ind.Jr.Agril..3(2):119-36.
- Schramm, W. 1954. The process and effects of mass communication. Illinois, University of Illinois.

APPENDIX

Interview Schedule

Bio-data

Village _____

Block _____

1. Name _____ 2. Age _____

2. Family type (single/joint) _____

3. Educational level

a. Illiterate _____

b. Up to primary _____

c. Up to matric _____

d. Matric and above _____

4. Land holdings (acres)

a. Owned _____

b. Leased in _____

c. Leased out _____

d. Total _____

5. Social participation

Name of organisation

Position

Member Office bearer

a.

b.

c.

d.

6. Extension contacts

Contd...

Extension personnel

Do you know
by

Have you ever
met? If yes,
how many times
during the last
year

Face Name

a. Village Level Worker

	1	2	3	4
b. Agriculture Extension Officer				
c. Block Development Officer				
d. Chief Agriculture Officer				
e. Punjab Agricultural University Scientists				
f. Any other				

Please mark (✓) on the information sources from which you get the first information

Radio	Progressive	Farmers	Farm	Literature	Newspaper	VLMs	Demonstration/ exhibitions	Kisan Mela/ Diwas	PAU	Scientists	Neighbours	Extension	Agencies	Friends
-------	-------------	---------	------	------------	-----------	------	-------------------------------	----------------------	-----	------------	------------	-----------	----------	---------

Wheat

- Improved variety KSM13
- Seed treatment
- Use of fertilizer
- Weed control

Rice

- Improved variety PR 103
- Green manuring
- Seed treatment
- Weed control

Maize

- Improved variety Agati 76
- Seed treatment
- Weed control
- Protection from birds

To get further information, which source did you like the most ?

<u>Name of practice</u>	<u>Information source consulted</u>
1.	
2.	
3.	
4.	

Which practice did you really follow ?

<u>Name of practice</u>	<u>Area under that practice</u>	<u>Total area under that crop</u>
1.		
2.		
3.		
4.		

Please rank information sources like farm literature, radio, progressive farmers, newspaper, VLWs, Kisan Mela/Divas, PAU Scientists, Extension Agencies, Friends etc. depending upon their usefulness.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Please tick (✓) the following sources of information depending upon the level of information they provide:

Source	Level of information			
	Very much	Much	Fair	Not at all
1. Radio				
2. Progressive farmer				
3. Kisan Mela/Diwas				
4. PAU Scientists				
5. Farm Literature				
6. Extension Agencies				
7. Friends				
8. Neighbours				

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