COMMUNICATION PATTERN OF AGRICULTURAL EXTENSION PERSONNEL

A THESIS
SUBMITTED TO THE
GUJARAT AGRICULTURAL UNIVERSITY
IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE AWARD OF THE DEGREE

Master of Science
( AGRICULTURE )

IN
EXTENSION EDUCATION

BY
Purushottam Lal Sharma
B. Sc. ( Agri. )

DEPARTMENT OF EXTENSION EDUCATION
B. A. COLLEGE OF AGRICULTURE
GUJARAT AGRICULTURAL UNIVERSITY
ANAND CAMPUS, ANAND.

1993

Registration No. 4-2657-90
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TO
MY FATHER
ABSTRACT
ABSTRACT

COMMUNICATION PATTERN OF AGRICULTURAL EXTENSION PERSONNEL

Name of the student : PURUSHOTTAM LAL SHARMA
Name of the Major Advis. DR. H.L.PATEL

B.A. College of Agriculture
Gujarat Agricultural University
Anand Campus, Anand

INTRODUCTION

The success of agricultural development programme in developing countries depends upon its extension functionaries. In the present era of technology explosion, a steady flow of agricultural knowledge leads to the gap between what is generated by the researchers and what is practised by the users, which is required to be bridged. A rapid transfer of technology from research scientists to the farmers largely depends upon the communication techniques used by extension personnel. The extension personnel play a pivotal role to educate, train and to persuade the farmers to adopt new ideas and skills. Therefore, the agricultural extension personnel play major role in bringing transformation in agriculture and people associated with it. The present investigation was an attempt to find out the factors which either accelerate or retard the communication pattern (information input, processing and output) of extension personnel.
OBJECTIVES OF THE STUDY

(1) To study the personal, and socio-psychological characteristics of extension personnel.

(2) To determine the source credibility perception and credibility variation of sources.

(3) To study the information input, processing and output pattern of extension personnel.

(4) To establish association between communication pattern and extension personnel's antecedent factors.

(5) To study the difference between communication pattern of AEOs and VLWs.

RESEARCH METHODOLOGY

The present study was carried out in purposively selected Kheda district of Gujarat state. The Agriculture Extension Officers (AEOs) and Village Level Workers (VLWs) were the extension personnel constitute the sample of this study. The random sampling was done for the selection of respondents. The data from respondents were collected through well structured questionnaire. However, personal contacts with the respondents were also made to get objective information. Nine independent variables were selected on the basis of the past researches, discussion with agricultural extension experts, Major Professor and personal experience.
One hundred and Forty VLWs and 25 AEOs were selected as extension personnel. The total extension personnel as the sample for the study were 165. The information pertaining to variables were obtained through relevant questions developed for the purpose.

Personal and psychological variables were studied and presented in term of frequencies and percentages. Some variables viz., job commitment, job activity preference, information input and information processing pattern were also studied by assigning rank order on the basis of mean choice scores. Hence, scoring method was used wherever necessary. For testing the relationship between communication pattern and antecedent variables zero order correlation coefficient was used and for testing the difference between communication pattern of AEOs and VLWs Fisher's 't' test was used.

The data collected through questionnaire were tabulated, organised, analysed and presented in a way that it may give proper presentation and answers to the specific objectives of the study.

MAJOR FINDINGS

(1) Majority (67.88 per cent) of extension personnel belonged to the middle age group and 81.82 per cent of extension personnel had their qualification as matric with diploma in agriculture.
(2) Majority (81.82 per cent) of the extension personnel had medium level of training and 39.40 per cent revealed that deputation on training was exclusively the desire of senior officers. Whereas, 72.72 per cent of agricultural extension personnel revealed that training was very useful.

(3) Majority (95.15 per cent) of the extension personnel expressed that fortnightly training should be continued.

(4) Majority (73.94 per cent) of extension personnel had medium level of service experience.

(5) Majority of the extension personnel had joint (68.48 per cent), rural (93.33 per cent) and farming (92.12 per cent) family background.

(6) Majority (74.54 per cent) of extension personnel had medium level infrastructural facilities for communication.

(7) Majority (73.94 per cent) of extension personnel had medium level of job satisfaction.

(8) Field visit ranked first among eight job activities performed by extension personnel. Whereas, job activity organising exhibition performed by least number of respondents.

(9) Majority (73.94 per cent) of extension personnel had much level of job commitment.
Farm and home visit was the job activity ranked first among all 10 job activities preferred by agricultural extension personnel whereas, job activity preparation of message card ranked last.

Assistant Director of Agriculture and Deputy Director of Agriculture were the most credible source of information as perceived by the extension personnel.

Books/package of practices booklet ranked first among all 16 sources of information utilized by agricultural extension personnel and majority (76.97 per cent) of extension personnel fell into medium level of information input category.

Considering economic and local feasibility of innovation, study the useful information carefully and take note in diary and translation of innovation into local dialects were the main procedures adopted by the extension personnel for information processing pattern.

Majority (76.97 per cent) of extension personnel were in medium level of information processing pattern category.

Majority (83.64 per cent) of extension personnel had medium level of information output pattern.
(16) Extension personnel-Researchers Communication (EP-RC) was found to be of medium level with 85.45 per cent of the respondents.

(17) The Extension Personnel-Farmers' Communication (EP-FC) was found to be of medium level with 74.55 per cent respondents.

(18) Extension Personnel-Farmers Contact Span (EP-FCS) was found to be of medium level with 65.45 per cent of respondents.

(19) It was revealed that out of nine antecedent variables of extension personnel only one variable i.e. job commitment could establish significant relationship with the information input pattern of extension personnel.

(20) It was found that job satisfaction and job commitment were found significantly correlated with information processing pattern of extension personnel.

(21) It was revealed that variables family background, infrastructural facilities for communication, job satisfaction and job commitment were found positively correlated whereas variable age shown negatively significant relationship with the information output pattern of agricultural extension personnel.

(22) It was found that there was no difference between communication pattern mean scores of AEOs and VLWs.
CERTIFICATE

This is to certify that the thesis entitled "COMMUNICATION PATTERN OF AGRICULTURAL EXTENSION PERSONNEL" submitted by Shri Purushottam Lal Sharma in partial fulfilment of the requirements for the award of the degree of Master of Science (Agriculture) in Extension Education of the Gujarat Agricultural University is a record of bonafide research work carried out by him under my personal guidance and supervision and the thesis has not previously formed the basis for the award of any degree, diploma or other similar title.

ANAND.

FEBRUARY 27, 1993

(H. L. PATEL)
Major Advisor
ACKNOWLEDGEMENT

This memorable occasion provides me an unique privilege to express my sincere and profound gratitude to Dr. H.L. Patel, Principal, Extension Education Institute, G.A.U., Anand Campus, Anand. His valuable counsel and untiring guidance have formed the very foundation for this study. I confess that it has been a privilege for me to work under his kind control throughout the course of study and in preparation of this manuscript.

I am highly indebted to Dr. N.M. Patel, Professor, Department of Agricultural Statistics, Dr. L.R. Verma, Associate Professor (Horticulture), Prof. V.D. Suryavanshi, Associate Extension Educationist, for their valuable suggestions and critical comments at various stages of this research study as members of my advisory committee.

I am highly thankful to Director of Agriculture, Govt. of Himachal Pradesh and Directorate of Extension (Training), Govt. of India for deputing me to pursue higher studies.

My sincere thanks are also due to Dr. K.F. Patel, Professor and Head, Extension Education, B.A.C.A., Anand, Dr. B.N. Patel, Dr. M.R. Patel (Horticulture), Sh. C.S. Patel and other members of Extension Education Institute, Anand for their help accorded to me during my study.

I would like to acknowledge my heartful thanks to
Dr. Chanchal Singh Patyal, Principal, N.H. Patel Education College, Anand and his family members, Mr. C.P. Malik, Mr. Ashwani Rathore, Mr. B.S. Nandiwal, Mr. J.K. Patel, Mr. Jagdishwara K., Mr. M.K. Khushu, MS Girbani, Mr. V.G. Manihar, Mr. S.S. Gamit, Mr. S.R. Shukla, Mr. Bipin Thakker and Mr. J.D. Patel and all friends for their help, well wishes and moral support.

I am very much thankful to extension staff of District Agriculture Officer, Nadiad, Dist. Kheda of Gujarat state for their full help and providing necessary information for the investigation.

On this memorable day I remember with heavy heart my departed father, who passed away during the course of my study. His remembrance always inspired me to move towards right path.

I am deeply indebted to my beloved mother, father-in-law, family members and relatives whose love and affection are the source of inspiration throughout the period of this research study.

My thanks to Shri A.C. Dave for tireless efforts in typing this thesis with enthusiasm and for timely submission.

Last but not the least, I express my deepest appreciation and gratitude to my wife Veena Sharma, son Manvender and daughter Sparya for their moral support, patience and sacrifice of their own happiness.

ANAND.
FEBRUARY, 1993
(P.L. SHARMA)
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INTRODUCTION
CHAPTER - I

INTRODUCTION

The development of a country like India from a conservative, traditional society to modern one is certainly being expedited by the use of different communication techniques which cover millions of people spread over the entire country. Development is a complex process that includes social, economical and political awareness. Such awareness is promoted by the communication techniques in an unprecedented manner and with unmatched speed.

Communication in agriculture is a more complex process as:

"The new ideas and information that are basic to development programmes come as disturbance to the traditional production methods and goals, to the old attitudes and values in the villages and to the conservatism of traditional leaders. They are also hard to concept because they became from a distance and are often hard to understand because of new skills and scientific attitudes that are involved..." (Singh et al., 1968).

It therefore, requires a skillful communicator sending a useful message, through proper channel, effectively treated to an appropriate audience that respond as desired.
Communication of innovations is of transcendent importance in bringing about change in human behaviour. Usually some external stimulus, perceived by an individual, provides impetus for behaviour alteration.

Communication process involves four distinct elements - communicator, message, channel and receiver. The success or failure of communication, therefore, depends upon the manipulation of these elements in communication process.

Since the inception of National Extension Services in 1953, efforts are being made to accelerate the flow of farm information to the farmers for bringing about modernization in Indian agriculture. It is not gainsaying that modernizing agriculture preconditions close and concerted interrelationships among its three distinct components i.e. researcher, extension personnel and farmers as an absolute must. The Agricultural Extension Agency acts as linkage between researchers and farmers who present the two distinct social systems, each having its own norms, values, languages, communication pattern and the like.

Communication has been a most preferred area of investigation in the discipline of extension education in India and abroad. Jhemthani and Singh (1985) reported that out of 900 theses of extension education in India during next six years 1972-78, 16 per cent were related to
communication. During the period of 1979-84, there has been a spurt in the researches in different aspects of communication and diffusion of technology. But still most studies were confined to the channels and media of communication and inter-personal communication.

However, of late, there has been a thinking to examine the communication pattern in a system's perspective, because effectiveness of the communication as a whole depends not only on any single element but all the elements which interact with one another. Similarly, the analysis of communication transactions between the different elements needs a system approach. Rogers and Svenning (1969) seemed to be the pioneer, who emphasised the necessity of system analysis to study the communication patterns. Jain (1970) examined the communication patterns in system's perspective. Since then, some studies (Akhouri, 1973; Shete, 1974; Sanoria, 1974; Ambastha, 1974; Singh, 1988) have been made to examine the communication pattern in system's perspective. These studies covered the field of agriculture and dairy farming.

On an average 70.00 per cent of the working hours of human beings are spent in communication (Allen, 1982). Research studies, however, show that upto 50.00 per cent of the information transmitted is interpreted incorrectly (Mitchell, 1982). In extension work about 47.00 per cent of
the time of extension personnel is being spent directly or indirectly communicating with farmers (Potter et al., 1974). This study seems to have been conducted in an advanced country possibly in Australia. Since information sharing in developing countries mainly take place via interpersonal channels, the percentage of time devoted by grassroots level extension personnel would be much higher than this estimate. And if the 50.00 per cent death or distortion of message occurs, then the 40 developing countries where T & V is introduced, have been paying every year a significant portion of their organizational budget without any return.

With the effective communication the present rate of agricultural production could be doubled. "The studies indicate that even with the present level of technologies for dry land agriculture, production can be raised by 50.00 per cent to 200.00 per cent. But it requires good extension efforts for promoting precision in farming and farm management" (Prasad & Singh, 1991).

1.1 STATEMENT OF THE PROBLEM

In order to understand the communication patterns (information input, information processing and information output of farm technology) of extension personnel there is need to understand communication process as a whole because of the fact that scientific farm information is not reaching
the potential users as rapidly as it is anticipated. As a result, there exists a wide gap between information generation and its utilization by the users. In Indian conditions, as much as 35.00 per cent of farm information loss has been found to take place in the transit between the extension personnel and the farmers (Ramesh Babu & Sinha, 1979). Therefore, it becomes highly relevant to find out the intra-system and inter-system communication pattern.

Intra-system communication means how the extension personnel communicate with themselves. The intra-system communication patterns within the research and extension system poses two problems. The first problem relates to communication between individuals of same level and second relates to communication with individuals of different levels within the system. Here it is desirable to know how much do they communicate with their colleagues? What are the effects of such communication? What is the relationship between peer communication and information input, and output?

The inter-system communication pattern includes communication of researchers with extension personnel and farmers, that of extension personnel with researcher and farmers and that of farmers with researchers and extension personnel. The inter-system communication pattern poses still another problem. The researchers, extension personnel and farmers have to keep close contact with one
another. In this connection one should know as to what extent researchers communicate with extension personnel and farmers? To what extent extension personnel communicate with researchers and the farmers? To what extent extension personnel communicate with the extension personnel and researchers? What methods do they use to communicate with each other? In view of above questions to be answered an empirical study on communication pattern of Agricultural Extension Personnel is considered worth.

1.2 OBJECTIVES OF THE STUDY

It is beyond the scope of any single study to provide solution to all the problems enumerated above. However, the present study "Communication Pattern of Agricultural Extension Personnel" was undertaken to find solution to these problems in systems perspective with the following specific objectives.

(1) To study the personal, socio-psychological characteristics of extension personnel.

(2) To determine the source credibility perception and credibility variation of sources.

(3) To study the information input, processing and output patterns of extension personnel.
To establish association between communication pattern and extension personnels' antecedent factors.

To study the difference between communication pattern of AEOs and VLWs.

1.3 SCOPE OF THE STUDY

The present study is an attempt to investigate empirically the communication patterns concerning information input, information processing and information output systems in relation to agricultural practices for the welfare and development of farmers in systems perspective.

The study would reveal intra and inter-communication patterns among them. More specifically, it would indicate the various sources of information used by the researchers and extension workers in acquiring the required information and communicating these to the users. Similarly, the study would also point out the differential use of sources by extension personnel for seeking and disseminating information. Its knowledge would help the extension personnel in selecting right type of source of information for information acquisition and its proper transmission.

An insight of the interaction of members of a system among themselves, and also with the members of the
other systems, would also greatly help on designing a strategy to strengthen linkages among them. Moreover, knowledge of communication span would also be of greater value in this regard.

The correlation analysis of communication pattern with extension personnel's antecedent factors, viz., education, age, job-commitment, would also enormously help in identification of factors responsible either to accelerate or retard the communication pattern. Suitable steps, thus, can be taken to inculcate in extension personnel the desirable values by organising appropriate training programmes. Some of them may be considered at the time of recruitment of persons alone.

It is expected that the study may be of much practical significance in developing a proper communication strategy of agricultural information.

1.4 LIMITATION OF THE STUDY

The study has been undertaken as a student research project and hence it has limitations of resources, time and money. Due to this reason, the study has been confined to Kheda district of Gujarat state with a small sample of extension personnel. It would have been of wider applicability had the similar studies been conducted in other locations as well.
The findings of the study are based on the ability of the respondents to recall and the opinions expressed by them. Hence, the objectivity of the study is limited to their ability to recall and also their honesty in furnishing required information.

1.5 FORMULATION OF HYPOTHESES

(1) There is no association between the information input pattern and antecedent variables like age, education, training, experience, family background, infrastructure facilities for communication, job satisfaction, job commitment and job activity preference.

(2) There is no association between information processing pattern and antecedent variables of extension personnel.

(3) There is no association between the information output pattern and antecedent variables of extension personnel.

(4) There is no difference between communication pattern of AEOs and VLWs.

1.6 WORKING TERMS AND DEFINITIONS

The various terms used in this study need to be defined so as to clarify the concepts and the particular
contexts in which they have been used in the present study and are given below.

1.6.1 Extension Personnel:

This term refers to the personnel who are engaged in extension activities. In Agriculture department, the officers and officials working on the post of Director of Agriculture to the village level workers are termed as extension personnel. To make a study of all these functionaries is beyond the scope of this study. So in this study only the Agriculture Extension Officers (AEOs) and the Village Level Workers (VLWs) are taken as Extension Personnel.

1.6.2 Communication Pattern:

The term communication pattern operationalised as the communication behaviour of an individual, dyad or a social system and exhibit some form of regularity. The systematic communication behaviour of an individual includes input, processing and output of farm information.

1.6.3 Information Input Pattern:

It refers to all the activities performed by an individual for acquisition of scientific and technical information related to agriculture technology.

1.6.4 Information Processing Pattern:

It refers to the activities performed by an
individual for evaluation, storage, preservation and transformation of scientific and technical information related to agricultural technology.

1.6.5 Information Output Pattern:

It is the amount of information transmitted by an extension personnel through various channels in performing one's role and work. It is defined as the activities performed by an extension personnel for dissemination of scientific farm information to the clients.

1.6.6 Antecedent Variables:

The socio-psychological variable, which precede other variables in order of time and which theoretically are expected to lead to or be followed by certain other variables. These variables may be situational and personal in nature (Rogers, 1962).

Some selected situational and personal factors influence the communication pattern of the Extension Personnel. The antecedent variables taken for this study were Age, Education, Training, Experience, Family background, Infrastructural facilities for communication, Job satisfaction, Job commitment and Job activity preference.
1.6.7 **Job Satisfaction**:

It refers to the extent of satisfaction an individual draws from his present job.

The term "Job Satisfaction", of Extension Personnel in this study can be defined by the operational definition given by Katzell (1964), "Job satisfaction" is the verbal expression of an incumbent's evaluation of his job, in which he rates his job on a work continuum of 'like-dislike' or 'satisfied-dissatisfied'.

1.6.8 **Job Commitment**:

It refers to the degree to which an extension personnel is committed to perform a given job. This was measured in terms of time an individual was devoting in jobs assigned to him.

1.6.9 **Job Activity Preference**:

It refers to the comparative degree of liking for a particular job out of a number of indicated jobs.

1.6.10 **Extension Personnel-Researcher Communication (EP-RC)**:

Extension personnel have to communicate with the researchers for acquiring relevant scientific information and to transmit farmer's problems to the researchers.

In this study, EP-RC refers to the degree and
pattern of communication between Extension Personnel and Researchers.

1.6.11 **Extension Personnel-Farmer Communication (EP-FC)**

Extension personnel communicate with farmers for disseminating farm information and to understand their farming need and problem. This is called as EP-FC.

1.6.12 **Extension Personnel-Farmer Contact Span (EP-FCS)**

It refers to the degree to which extension personnel contact the farmers to communicate the farm information.
REVIEW
OF
LITERATURE
CHAPTER - II

REVIEW OF LITERATURE

This chapter is mainly devoted to review some of the recent investigations in relation to the variables taken up for this study.

There are not enough studies directly concerning the present study. However, a brief account of the past work done having a direct or indirect bearing on this study has been presented in this section under the following sub-heads which help to formulate the present study in proper context.

2.1 Personal, socio-psychological characteristics of extension personnel.

2.2 Source credibility perception and credibility variation of sources.

2.3 Information input, processing and output pattern of extension personnel.

2.4 Association between the communication pattern (information input, processing and output pattern) and extension personnel's antecedent factors.

2.1 PERSONAL, SOCIO-PSYCHOLOGICAL CHARACTERISTICS OF EXTENSION PERSONNEL

2.1.1 Age:

Bora (1981) reported that in Gujarat majority (72.94 per cent) of the SMSs belonged to middle age (36 to 50 yrs.)
Singh (1988) revealed that majority of extension personnel working in the Hissar District of Haryana state belonged to the age group of 28 to 45 years.

Sharma (1991) found that majority (70.53 per cent) of VLWs working under T & V in Nadiad sub-division of Kheda district of Gujarat state were in the age group of 31 to 50 years, followed by young age (23.15 per cent) and old age (6.32 per cent) respectively.

Popat (1991) revealed that majority (74.02 per cent) of the SMSs belonged to above 45 years of age group, followed by middle age (22.08 per cent) and young age (3.9 per cent) respectively.

2.1.2 Education:

Dave (1981) reported that great majority ((88.00 per cent) of SMSs were educated up to B.Sc. (Agri.), Whereas one-tenth (10.67 per cent) and a few (1.33 per cent) of them were agricultural Diploma holders and M.Sc. (Agri.), respectively.

Singh (1988) revealed that more than half of extension personnel were graduates in agriculture whereas only few respondents (2.00 per cent) were post graduate and others (46.00 per cent) were matriculate with diploma in Agriculture.
Sharma (1991) found that a good majority (83.16 per cent) of VLMs were agriculture diploma holders, followed by B.Sc.(Agri.) and matriculate, 10.32 per cent and 6.32 per cent respectively.

Popat (1991) reported that majority (80.52 per cent) of the SMSs were graduate in agriculture. And 10.39 per cent of them were agricultural diploma holders. Whereas, 9.09 per cent were having post graduate degree in agriculture.

2.1.3 **Training**: 

Sanders (1966) opined that extension workers are adults. They are not children, and should not be trained in the ways children are trained.

Dave (1981) reported that 56.00 per cent of SMSs were trained, while 44.00 per cent of them were untrained except the monthly staff training.

Singh (1988) found that majority (67.00 per cent) of the extension personnel were having medium level of training, followed by low level (23.00 per cent) and high level (10.00 per cent) respectively.

Sharma (1991) revealed that majority of the VLM (69.47 per cent) had no experience of previous training. He further reported that majority (60.00 per cent) of respondents opined that training was useful to them at
medium level.

Popat (1991) found that majority (38.96 per cent) of SMSs were having less training followed by more training (35.07 per cent) and untrained (25.97 per cent) respectively.

2.1.4 Experience:

Patel (1978) found that VLWs had an average experience of 14 years whereas the AEOs had an average experience of 19.66 years.

Patel (1983) from Saurashtra region of Gujarat concluded that majority (61.67 per cent) of the AEOs had length of service above 15 years.

Singh (1988) found that majority of extension personnel were of low to medium level of job experience.

Sharma (1991) revealed that majority (82.00 per cent) of VLWs had medium level (2 to 10 years) of experience followed by 10.53 per cent high (more than 10 years) and 7.37 per cent low (up to one year) level of working experience.

Popat (1991) found that majority (75.32 per cent) of SMSS had medium level of experience followed by low (20.78 per cent) and high (3.90 per cent) level of working experience respectively.
2.1.5 Family background:

Dave (1981) found that the most of the SMSs (80.00 per cent) had rural background. Bora (1981), and Sakaria (1988) also reported the similar findings.

Singh (1988) concluded that majority (91.00 per cent) of extension personnel belonged to rural areas. 76.00 per cent belonged to joint families and 94.00 per cent belonged to farming families.

Singhroha (1990) found that great majority (93.64 per cent) of the Agricultural Development Officers belonged to farm families.

Sharma (1991) revealed that majority (90.53 per cent) of the VLWs came from the rural families whereas only 9.47 per cent were from urban families. The percentage of personnel belonged to farming and business families were 97.89 per cent and 2.11 per cent respectively.

Popat (1991) reported that majority (77.92 per cent) of the SMSs were having rural background with farming as parental occupation while 11.68 per cent of them were having urban background with farming as their parental occupation and equal number (5.20 per cent) were having rural background with non-farming and urban background with non-farming occupation categories, respectively.
2.1.6 Infrastructural facilities for communication:

Talukdar (1984) observed that one-third of the ADOs felt that the facilities were available in plenty but nearly the same number of them felt facilities were not available properly.

Singh (1988) reported that extension personnel were having medium level of infrastructural facilities.

Popat (1991) concluded that majority (67.54 per cent) of SMSs had medium level of facility.

2.1.7 Job satisfaction:

Jalihal et al. (1975) observed that 74.00 per cent of gram sevaks were satisfied with the time they spent on educational activities, while remaining 26.00 per cent were not satisfied.

Sandhu and Singh (1977) conducted the study consisting a sample of 110 Agriculture Extension Officers working at the block level in the state department of Agriculture Punjab, revealed that 27.27 per cent respondents expressed low satisfaction on their job, 23.73 per cent reported high satisfaction, while moderate level of satisfaction was expressed by 48.94 per cent of the respondents.

Reddy and Rao (1983) revealed that majority of VEOs were dissatisfied with their jobs.
Siddaramaiah and Gowda (1987) found that only 48.33 per cent of the extension guides belonged to the high job satisfaction group.

Singh (1988) revealed that 73.00 per cent of extension personnel were in the medium level of job satisfaction whereas 16.00 per cent and 11.00 per cent were in low and high level of job satisfaction respectively.

Popat (1991) expressed that majority (63.64 per cent) of SMS's had exhibited medium level of job satisfaction.

2.1.8 Job Commitment:

Singh (1988) revealed that majority (55.00 per cent) of extension personnel were of much level of job commitment followed by less (30.00 per cent) and almost (15.00 per cent) level of job commitment.

2.1.9 Job Activity preference:

Khara (1967) stated that extension workers expressed their preference for farm and home visits, group meetings and demonstration as important channels to communicate farm information to the needy farmers.

Gupta (1980) revealed that village level workers had top preference for field trips followed by use of 'transistor sets' for transferring agricultural technology.
to the farmers. Field trips bring real life situation and can be organised locally, by the VLWs. Least preferred choice was for the use of pamphlets, circular letters and folders. It was noticed that pamphlets, exhibits, secured only 4th and 5th position.

2.2 SOURCE CREDIBILITY PERCEPTION AND CREDIBILITY VARIATION

Singh and Prasad (1974) reported that most of the sources got similar rank in order to their utilization and credibility rank.

Sanoria and Singh (1976) found that Agricultural Scientists, superior extension personnel, outside organizations and extension publications were the most utilitarian sources of communication to the extension personnel in general. Extension personnel, meetings, seminars, agricultural scientists were most credible sources of information and used by all levels of extension personnel.

Kalamegam and Menon (1977) revealed that in progressive village, the VLWs were given the maximum credibility. Neighbour and friends, relative and newspapers were given the lowest credibility.

Patel (1978) reported that village level workers were perceived as the source of highest credibility followed by radio.
Singh (1988) reported that Agricultural scientists and superior extension workers as personal contact source were perceived the most credible by the extension personnel. The third and fourth position were occupied by field days and method demonstration respectively. Television and educational films were perceived the least credible sources of information.

Singh and Prasad (1990) found that demonstration and meetings with extension personnel of department of agriculture were the most credible sources of information used by the farmers, a very little role was played by locality sources.

Antwal et al. (1991) revealed that demonstration was found most important medium. The order of effectiveness was as demonstration, filmshow, group discussion, slide show, flash cards, lectures, folders and posters.

2.3 INFORMATION INPUT, PROCESSING AND OUTPUT PATTERN OF EXTENSION PERSONNEL

2.3.1 Information Input Pattern:

Akhouri (1973) found that most used sources of information for acquisition of knowledge were extension publications, visit to experimental plots and discussion with scientists thereon. The least used sources and channels were professional affiliations, farm radio broadcasts,
professional meetings and research publications.

Sanoria (1974) expressed that the most commonly used sources and channels by all categories of extension personnel were: Agricultural Universities, Research stations, Extension Publications, Meetings and Expert consultations. The moderately used extension channels were Farm Radio Broadcasts, Package of practices booklets and least used sources were research journals, Trainings, Professional affiliations and national demonstrations.

Byra Reddy (1976) found that package of practices booklet, leaflets and folders put out by the University were the most important sources of information for village level workers followed by subject matter specialists, AEOs and radio.

Siddaramaiah et al. (1976) found that more than half of Gram Sevaks belonged to 'high' category of mass media use with reference to extension literature, farm broadcasts, newspaper articles and posters, while approximately two-third of the respondents belonged to low category of mass media use in respect of exhibition and films.

Sridhar (1977) revealed that package of practices booklet, radio and departmental publications emerged to be the most important sources of information for the extension personnel.
Patel (1978) revealed that most commonly used sources and channels for information input by extension personnel were farm journals, visit to research stations, extension publications and the scientists, whereas, least used channels were research journals and kisan mela/ exhibition.

Chidanandappa (1985) found that the most important mass media used by extension personnel were package practices booklet, extension folders, radio, posters and newspapers. Sources such as wall newspapers, agriculture films were used by few respondents.

Ambastha (1986) revealed that if an individual feels responsibility to get information and also have enough facilities to communicate with peers and researchers, would have more amount of information. The same findings were reported by Sanoria and Singh (1976) and Shete (1978).

Singh (1988) revealed that majority (59.00 per cent) of extension personnel were having medium level of information input pattern followed by low (25.00 per cent) and high (16.00 per cent), respectively.

2.3.2 Information Processing Pattern:

Akhouri (1973) reported that majority of the extension personnel evaluated the research information in
the light of their past experience or assessed it for its local feasibility or they discussed with their colleagues, progressive farmers and the specialists regarding its feasibility. It is further concluded that extension personnel used "memorizing" and "making notes in a common note book" and majority of extension personnel transformed the research information into lecture notes.

Similar findings were reported in diffusion and adoption studies made by Rogers (1962), Singh & Pareek (1965) and Jha & Singh (1965). They stated that farmers discussed the information with their neighbours and extension personnel.

Sanoria and Singh (1976) found that all the sub-system extension personnel of M.P. were commonly using discussion with colleagues, progressive farmers, higher ups in the organization and subject matter specialists, trying the information on the demonstration farms, comparing with their past experiences for evaluating the farm information. Similar findings were reported by Lionberger and Chang (1970).

It is further found that "memorizing" and "maintaining note book and files" were the techniques of preserving information. Frequently converting the information into local language, preparation of film strips were the other
methods used by the extension personnel for transforming the information.

Byra Reddy (1976) stated that the village level workers evaluated the information by discussing with Agricultural Extension Officers and other specialists. They also weigh the information in the light of past experience, and also discuss with colleagues or progressive farmers. Use of "classified notebooks" and "memorizing" were the methods of information storage. They convert the information into lecture form, charts, and other visuals to suit their audience and situations.

Sridhar (1977) found extension personnel were judging the information against its local feasibility discussion with colleagues or local progressive farmers, economic and technological feasibility and weighing the information in the light of their past experiences to evaluate the new information related to agriculture. Accepting the information unreservedly was the procedure followed by few extension personnel. "Making notes in a common note book", "memorizing", "preserving the printed literature" were the most important methods of preserving the information for future use. "Preparing lecture notes in a popular language", "preparing charts, graphs and other visuals" were the important information transformation
procedures followed by extension personnel.

Chidanandappa (1985) revealed that preparing lecture in popular language and preparing charts, posters and other visual aids were the most important information transformation procedures used by majority of the extension personnel.

Ambastha (1986) revealed that the commonly used methods of evaluation by the extension personnel were discussion with higher ups, progressive farmers, judging in the light of local socio-economic and agroclimatic situation, discussion with fellow workers, assessing technical feasibility, weighing in the light of past experience and cross checking against past recommendations.

Making note in common note book, and keeping in the memory were the most commonly used methods of preserving information expressed by the 87.85 per cent and 67.29 per cent of extension personnel respectively. It is further reported that 87.00 per cent of the village level extension personnel used only the lecture note as a method of transformation of agricultural informations.

Singh (1988) found that the information processing pattern of extension personnel was low to medium level.
2.3.3 Information Output Pattern:

Patel (1967) revealed that farm and home visit was the most commonly used channel by majority of the village level workers. He further reported that individual and group contacts were basic channels while mass media and other supporting channels were used throughout to change the behaviour of the farmers by the extension personnel.

Bhaskaran (1970) observed that most commonly used communication channel by the village level workers were farm and home visits, demonstrations, group contacts and local leaders. Reddy and Patel (1973) also reported similar findings in respect of agricultural extension officers of Gujarat state.

Akhouri (1973) observed that extension personnel used office calls, farm and home visits, telephone calls, general meetings training programmes, advisory letters and demonstrations in that order as the most-communication channel to disseminate the agricultural information to the farmers.

Veerabhadrailah et al. (1975) reported that Gram-sevaks used to a greater extent farm and home visits and office calls among individual contact methods, whereas method demonstration, result demonstration and discussion
meetings among group contact methods to impart the agricultural information to the farmers.

Byra Reddy & Singh (1977) in a study showed that only four communication channels were used by more than 50.00 per cent of the village level workers, namely farm and home visits, group meetings, method demonstrations and farmers training camps. The remaining channels like exhibitions, tours, campaigns, film shows, crop competitions, field days, field visits and posters were used by less than 50.00 per cent of the village level workers.

Sanoria (1977) revealed that farm and home visits, office calls, farmers training, extension training, extension publications, radio talks, film shows and newspaper releases used by all categories of extension personnel. Demonstrations were used only by block and village level workers. Farm and home visits were made by village level workers followed by Agricultural Extension Officers and Joint Directors of Agriculture.

Sridhar (1977) in his study on communication pattern of extension personnel observed that farm and home visits, leaflets, office calls and group meetings were the important methods used by extension personnel to communicate the technology.

Ambastha and Singh (1979) reported that the village
level extension personnel had used farm and home visits, demonstrations and general meetings to a large extent in communicating the farm technology.

Singh (1988) found that majority (86.00 per cent) of the extension personnel had low to medium level of information output pattern.

2.3.4 Extension Personnel-Researchers Communication (EP-RC):

Ambastha (1974) reported that majority of extension personnel communicated through research prints, news letters, kisan mela and radio broadcasts and very small percentage of extension personnel communicated through group contact methods viz. workshops, trainings and some time through seminars. The similar results were obtained by Sanoria (1974) and Shete (1978).

Singh (1988) revealed that medium to low level of Extension personnel-researchers communication (EP-RC) was observed in the Hissar District of Haryana state.

2.3.5 Extension Personnel-Farmers Communication (EP-FC):

Ambastha (1974) observed that extension personnel communicate with farmers through personal contact methods, group contact methods and mass contact methods. These findings were confirmed by Sanoria (1974) and Babu (1985) but are contradictory to the findings of Gupta (1980).
Patel (1978) reported that there was significant association of input, processing and output pattern of extension personnel, as well as their intra-system communication. It can be concluded that with more intra-personnel communication of extension personnel, more communication with farmers can be ensured. Similar findings were reported by Akhouri (1973) and Shete (1974).

Singh (1988) revealed that majority (47.00 per cent) of the extension personnel had medium level of communication with farmers (EP-FC) followed by low (38.00 per cent) and high (15.00 per cent) level of Extension Personnel-Farmers Communication (EP-FC).

2.4 ASSOCIATION BETWEEN COMMUNICATION PATTERN AND ANTECEDENT FACTORS OF EXTENSION PERSONNEL

The antecedent variables like age, education, training, experience, family background, infrastructural facilities for communication, job satisfaction, job commitment and job activity preference affect the communication pattern of extension personnel. The relationship studied by the various research workers is reviewed as under.

2.4.1 Information Input Pattern:

2.4.1.1 Association between age and information input pattern of extension personnel:

Patel and Leagans (1968) reported that VIWs in
the age group 26 to 35 years were more effective than other categories of age group.

Nikhade and Kitey (1984) found significant association between age of VLWs and their performance. Kherde & Sahay (1972) and Sharma et al. (1988) reported the similar findings.

Malik et al. (1990) reported that there is no significant relationship between the age and information input pattern of the extension personnel.

2.4.1.2 Association between the education and information input pattern:

Pelze & Andrew (1966) reported that there is positive correlation between the age and communication input pattern of extension workers.

Shetty and Murthy (1971) observed that education of VLWs was not a determining factor for their role performance.

Kusumkara (1981) found that there was a significant relationship between education and knowledge level of respondents, higher the education level among AEO, higher knowledge level in respect of communication behaviour of extension personnel.

Ambastha (1986) revealed that education and
information input pattern of extension personnel are positively correlated.

Malik et al. (1990) reported that information input pattern of extension personnel and their education levels are not correlated.

2.4.1.3 Association between the training and information input pattern:

Pelze and Andrew (1966) reported that there is no relationship between the training and information input pattern of the extension personnel.

Singh (1967) reported that gain in knowledge about improved seed, chemical fertilizers, improved implements, improved methods of fruit and vegetables cultivation, soil conservation and plant protection as a result of training was found to be statistically significant.

Ambastha (1986) revealed that training and communication input pattern of extension personnel were positively correlated.

Malik et al. (1990) reported that training and information input pattern of extension personnel could not establish significant relationship.

2.4.1.4 Association between the experience and information input pattern:

Pelze and Andrew (1966) reported the significant
and positive correlation of service experience and information input pattern of extension personnel.

Kusumkara (1981) found that lesser the experience, higher the level of understanding among the extension personnel.

Venkateshappa (1983) revealed that total experience of extension personnel was found to have no significant relationship with communication behaviour.

Ambastha (1986) revealed that service experience and information input pattern of extension personnel are positively correlated with each other.

Malik et al. (1990) found no association between the service experience and information input pattern of extension personnel.

2.4.1.5 Association between the family background and information input pattern of extension personnel:

Sengupta (1963) revealed that the VLMs with rural background were better to perform the job than those who were with urban background. This finding is in line with the findings of Salvi & Dudhani (1967), Patel & Leagans (1968), and Bhimjiani (1978).

Siddaramaiah and Gowda (1987) observed that rural
background of extension guides had a highly significant relationship with job performance.

Malik et al. (1990) reported that there is no significant relationship between the family background and information input pattern of extension personnel.

2.4.1.6 Association between the infrastructural facilities for communication and information input pattern of extension personnel:

Reddy & Jayaramaiah (1988) reported that work facility had non-significant relationship with job effectiveness of VEDOs.

Malik et al. (1990) found non-significant relationship between the infrastructural facilities for communication and information input pattern of extension personnel. Whereas Ambastha (1974), Sanoria & Singh (1976) and Shete (1978) reported that if an individual have enough facilities to communicate with peers and researchers, he would have more information amount.

2.4.1.7 Association between the job satisfaction and information input pattern of extension personnel:

Pelze & Andrew (1966) reported that job satisfaction and the information input pattern of extension personnel were significantly correlated with each other.
Patel & Leagans (1968) found positive association between the job satisfaction and the information input pattern of extension personnel.

Talukdar (1984) reported that there is positive association between the job satisfaction and information input pattern of extension workers.

Ambastha (1986) revealed that job satisfaction was positively correlated with the information input pattern of extension personnel.

Malik et al. (1990) reported that there is no association between the job satisfaction and information input pattern of extension personnel.

2.4.1.8 Association between job commitment and information input pattern of extension personnel:

Pelze & Andrew (1966) reported the significant and positive correlation between the job commitment and information input pattern of extension personnel.

Ambastha (1986) revealed that there was significantly negative relationship between the job commitment and information input pattern of the extension personnel.

Malik et al. (1990) found that the job commitment and information input pattern of extension personnel could not establish significant relationship with one another.

2.4.1.9 Association between job activity preference and information input pattern of extension personnel:

Pelze & Andrew (1966) reported that there is no
significant relationship between the job activity preference and information input pattern of extension personnel.

Ambastha (1986) revealed that there is no relationship between the activity preference and information input pattern of extension personnel.

Malik et al. (1990) reported that job activity preference of extension personnel exhibited negatively significant correlation with the information input pattern.

2.4.2 Association between information processing pattern and antecedent factors of extension personnel:

The evaluation, storage/preservation and transformation of scientific and technical information related to agricultural technology is definitely affected by the antecedent variables (age, education, training, experience, family background, infrastructural facilities for communication, job satisfaction, job commitment and job activity preference) of the extension personnel. The findings of earlier researchers in relation to information processing pattern of extension personnel are reviewed as under:

2.4.2.1 Association between age and information processing pattern of extension personnel:

Dhillon & Sandhu (1977) revealed that age showed negative trend with the information processing pattern of extension personnel. Higher the age lower the information processing pattern. Dube (1962), Sengupta (1963) and Talukdar (1984) also reported the same trend.

Patel (1978) reported that age and information
processing pattern of extension personnel are found to be significantly correlated to each other.

Malik et al. (1990) found that there was no association between the age and information processing pattern of extension personnel.

2.4.2.2 Association between the education and information processing pattern of extension personnel:

Pelze & Andrew (1966) revealed that there was significant relationship between the education and information processing pattern of extension personnel.

Patel (1978) observed that education was found to be not associated with the information processing pattern of the extension personnel.

Talukdar (1984) found that education exhibited positive trend with the information processing pattern of the extension personnel. The same result was reported by Salvi & Dudhani (1967).

Ambastha (1986) concluded that education was significantly associated with the information processing pattern of extension personnel.

Malik et al. (1990) showed that education had non-significant relationship with information processing pattern of extension personnel.

2.4.2.3 Association between training and information processing pattern of extension personnel:

Pelze & Andrew (1966) revealed that there was no
association between training and information processing pattern of extension personnel.

Patel & Leagans (1968) found that training had positive but non-significant relationship with the information processing pattern of extension personnel. Similar finding was reported by Salvi & Duhani (1967).

Ambastha (1986) observed that training was significantly correlated with the information processing pattern of extension workers.

Malik et al. (1990) observed that training was found to have non-significant relationship with information processing pattern of extension personnel.

2.4.2.4 Association between experience and information processing pattern of extension personnel:

Pelze & Andrew (1966) revealed that experience had significant correlation with the information processing pattern.

Patel (1978) reported that experience was significantly correlated with the information processing pattern of the extension personnel.

Ambastha (1986) found that service experience was significantly correlated with the information processing pattern of the extension personnel.

Malik et al. (1990) reported that experience exhibited negative but non-significant relationship with
information processing pattern of extension personnel.

2.4.2.5 Association between family background and information processing pattern of extension personnel:

Kherde & Sahay (1972) proved that the number of children was negatively related to the role of village level workers.

Patel & Leagans (1968) reported that VILWs from rural background were more effective in their job performance than those from urban background.

Malik et al. (1990) revealed that family background was not significantly correlated with the information processing pattern of extension personnel.

2.4.2.6 Association between infrastructural facilities for communication and information processing pattern of extension personnel:

Sanoria & Singh (1976) revealed that extension personnel who feel responsible and have more facilities for communication would do more of information processing. It is also quite possible that the extension personnel having more input would do more processing than others. Similar findings were reported by Ambastha (1974) and Shete (1978).

Malik et al. (1990) reported the non-significant
association between the infrastructural facilities for communication and information processing pattern of extension personnel.

2.4.2.7 Association between job satisfaction and information processing pattern of extension personnel:

Pelze & Andrew (1966) reported that non-significant association was found between the job satisfaction and information processing pattern of extension workers.

Patel (1978) revealed that job satisfaction of extension personnel could not establish significant correlation with the information processing pattern of extension personnel.

Ambastha (1986) found that job satisfaction of extension personnel was significantly correlated with their information processing pattern.

Malik et al. (1990) concluded that job satisfaction was found to have non-significant relationship with information processing pattern of extension personnel. Similar findings were reported by Kotle (1972) and Talukdar (1984).

2.4.2.8 Association between job commitment and information processing pattern of extension personnel:

Pelze & Andrew (1966) revealed that job commitment
and information processing pattern was significantly correlated.

Patel (1978) found that job commitment of extension personnel was significantly but negatively correlated with the information processing pattern.

Ambastha (1986) concluded that job commitment had negative and significant correlation with information processing pattern of extension personnel.

Malik et al. (1990) reported that job commitment was found to be negatively non-significant relationship with information processing pattern of extension personnel.

Pelze & Andrew (1966) found that job activity preference was not significantly correlated with the information processing pattern.

Patel (1978) revealed that job activity preference of extension personnel was not having significant relationship with their information processing pattern.

Malik et al. (1990) reported that job activity preference had non-significant relationship with information processing pattern of extension personnel.
2.4.3 Association between information output pattern and antecedent factors of extension personnel:

The information output pattern of extension personnel influenced by the various personal socio-psychological variables. The effect of these variables studied by different research workers reviewed as under:

2.4.3.1 Association between age and information output pattern of extension personnel:

Patel (1978) observed that age of extension personnel was significantly correlated with their information output pattern.

Talukdar (1984) found non-significant correlation between age and productivity of Agricultural Development Officers.

Jhansi Rani (1985) reported that there was no significant relationship between age and productivity of agricultural scientists.

Malik et al. (1990) revealed that age and information output pattern of extension personnel was significantly correlated.

Reddy & Jayaramaiah (1990) observed that age was found to have non-significant correlation with the productivity of VEOs.
2.4.3.2 **Association between education and output pattern of extension personnel**: -

Pelze and Andrew (1966) reported positive and significant relationship between education and information output pattern.

Kherde & Sahay (1972) revealed that education had negative relationship with role performance of VIWs.

Patel (1978) reported that the education of extension personnel was significantly correlated with their information output pattern.

Talukdar (1984) found that there was significant association between education and productivity of ADOs.

Ambastha (1986) revealed that there was significant relationship between education and information output pattern of extension personnel.

Malik et al. (1990) reported that education and output pattern of extension personnel was negatively correlated.

2.4.3.3 **Association between training and information output pattern of extension personnel**: -

Pelze & Andrew (1966) reported that training was found to be non-significant with the information output pattern.
Patel (1978) observed that inservice training of extension personnel was negatively correlated with their information output pattern.

Ambastha (1986) revealed that training was significantly correlated with information output pattern of extension personnel.

Malik et al. (1990) found significant association between training and information output pattern of extension personnel.

2.4.3.4 Association between experience and information output pattern of extension personnel:

Pelze & Andrew (1966) reported that service experience and information output was significantly correlated.

Patel (1978) found that service experience of extension personnel was significantly correlated with their information output pattern.

Talukdar (1984) reported that there was no significant association between experience and productivity of ADOs. Similar results were also found by Jhansi Rani (1985) and Reddy & Jayaramaiah (1990).

Nikhade and Kitey (1984) revealed that there was significant association between experience of VLWs and
their job performance.

Ambastha (1986) found that service experience was significantly correlated with information output pattern of extension personnel.

Malik et al. (1990) concluded that service experience of extension personnel was significantly correlated with information output pattern of extension personnel.

2.4.3.5 Association between family background and information output pattern of extension personnel:

Talukdar (1984) revealed that there was no significant difference between the rural urban background and productivity of ADOs.

Malik et al. (1990) found that family background was not significantly related to information output pattern of the extension personnel.

2.4.3.6 Association between the infrastructural facilities for communication and information output pattern of extension personnel:

Talukdar (1984) reported that availability of general facilities was significantly correlated with the productivity of ADOs.

Malik et al. (1990) revealed that infrastructural facilities for communication was negatively significant
relationship with information output pattern of extension personnel.

Popat (1991) concluded that facility index of SMSs had positive and highly significant relationship with their level of productivity.

2.4.3.7 Association between job satisfaction and information output pattern of extension personnel:

Pelze & Andrew (1966) reported that job satisfaction and information output pattern were not significantly correlated.

Ambastha and Singh (1978) reported that extension personnel with higher job satisfaction tended to communicate more with farmers than others.

Patel (1978) in his study on "Communication pattern between source, linkage and Consumers of Farm Information in Gujarat" revealed that job satisfaction of extension personnel was significantly correlated with their information output pattern.

Babu & Sinha (1985) found that more satisfied extension personnel tended to communicate more with the farmers with comparison to dissatisfied extension workers. This finding was in line with the finding of Talukdar (1984).

Ambastha (1986) revealed that job satisfaction was
positively and significantly correlated with information output pattern of extension personnel.

Malik et al. (1990) concluded that job satisfaction was found to have negatively significant relationship with information output pattern of extension personnel.

2.4.3.8 Association between job commitment and information output pattern of extension personnel :-

Pelze & Andrew (1966) found that job commitment was positively correlated with information output pattern.

Ambastha & Singh (1978) reported that extension personnel with high job commitment to extension work communicate more with the farmers in comparison to those who had less job commitment.

Patel (1978) revealed that there was negative but significant correlation between the job commitment and information output pattern of extension personnel.

Ambastha (1986) found negatively significant relationship between job commitment and information output pattern of extension personnel.

Malik et al. (1990) reported that job commitment and information output pattern of extension personnel had positively significant relationship.
2.4.3.9 Association between job activity preference and information output pattern of extension personnel:

Pelze & Andrew (1966) reported that there was no association between job preference and information input pattern.

Patel (1978) revealed that job preference of extension personnel was not significantly correlated with the information output pattern.

Ambastha (1986) reported that job activity preference and information output pattern of extension personnel were not associated significantly.

Malik et al. (1990) found no significant association between job activity preference and information output pattern of extension personnel.

CONCEPTUAL MODEL OF THE STUDY

Keeping in view the objectives of the study, the hypotheses proposed and the review of literature cited above, conceptual model of the study developed is illustrated in Figure 1.

Gujarat state Department of Agriculture (T & V) has different type of extension personnel working at various levels. From Director of Agriculture at state level, down to village level workers at grass root level, are linked in
such a way that each one of them works with common objectives. Moreover, the system envisages frequent interactions among them through training sessions and visit to contact farmers at village level.

Among the various functionaries in T & V system, Agricultural Extension Officers and Village Level Workers are the key communicators. They are expected to receive the latest research recommendations from university through subject matter specialists and communicate the same message to contact growers during their visits. These two categories of extension personnel were treated as the respondents of this investigation. The communication pattern of extension personnel was measured with the help of teacher made scale developed for this purpose.

Nine independent variables representing personal, socio-psychological variables which were presumed to have some influence on communication pattern were placed at left side of the conceptual model and their relationship were indicated with the help of arrows. This model was hopefully conceived to give an objective assessment of the communication pattern of extension personnel.
METHODOLOGY
CHAPTER - III

METHODOLOGY

The present chapter deals with the research design techniques and construction of tools for data collection, selection of respondents as well as clarifies, methods used for measuring the dependent and independent variables. Hence, this chapter takes care of the scientific procedures adopted for the present investigation to draw rational, logical and meaningful inferences. The methodology is described under the following heads.

3.1 Identification of the problem.
3.2 Area and population of the study.
3.3 Tool of the study.
3.4 Pre-testing of the schedule.
3.5 Collection of data.
3.6 Statistical framework for the analysis of data.

3.1 IDENTIFICATION OF THE PROBLEM

The idea of the present research problem was thoroughly discussed with the Major Advisor. It was thought that the problem is worth investigating, as the earlier studies conducted on this problem are old and it is thought that scenario of the Department of Agriculture has been changed due to the introduction of Training and Visit programme.
Fig. 2. Map of Kheda District Showing Agricultural Sub-Divisions
The investigator during the tenure of his service had the privilege of working as Assistant Development Officer (Agriculture) in the Department of Agriculture which helped him to identify the need for such a study with broader perspective.

3.2 AREA AND POPULATION OF THE STUDY

Gujarat is one of the agriculturally advanced state of the country and Kheda district has its important place among all districts of the state. Hence, the present study was conducted in Kheda district of Gujarat state. Kheda district is situated on southern boundary of Sabarkantha and Ahmedabad district of Gujarat state. The southern boundary of the district is surrounded by Vadodara district of Gujarat state. East boundary of this district is surrounded by Panchmahal district, and on its West is the Ahmedabad district of this state. Kheda district has five Agriculture sub-divisions namely Kapadvanj, Nadiad, Khabhakt, Borsad and Anand. The whole district is included in the study as shown in Figure 2.

There are several categories of Extension personnel but being the M.Sc. research project handled by a single researcher, it was not possible to include all categories of extension personnel as respondents for the study.
Accordingly, only two categories namely, Agriculture Extension Officers (AEOs) and Village Level Workers (VLWs) having contact with farm people, were taken up to form the respondents for this study.

At first, a list of all AEOs and VLWs working in the district was obtained from the office of District Agriculture Officer, Kheda District Panchayat Nadiad. Being their large number sampling method was preferred. Nearly half numbers of AEOs and one-third numbers of VLWs were selected from each sub-division. Thus 25 AEOs and 140 VLWs were selected randomly. Hence, the total sample of respondents drawn was 165. The details are given in Table-1.

### TABLE 1: SUB-DIVISIONWISE SELECTION OF RESPONDENTS

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Sub-division</th>
<th>Post Sanctioned</th>
<th>Post Vacant</th>
<th>Post Existing</th>
<th>No. of respondent selected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>AEO</td>
<td>VLW</td>
<td>AEO</td>
<td>VLW</td>
</tr>
<tr>
<td>1.</td>
<td>Kapadvanj</td>
<td>13</td>
<td>96</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>2.</td>
<td>Nadiad</td>
<td>14</td>
<td>104</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>3.</td>
<td>Khambhat</td>
<td>10</td>
<td>72</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>4.</td>
<td>Borsad</td>
<td>16</td>
<td>120</td>
<td>4</td>
<td>23</td>
</tr>
<tr>
<td>5.</td>
<td>Anand</td>
<td>14</td>
<td>106</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>67</td>
<td>498</td>
<td>18</td>
<td>63</td>
</tr>
</tbody>
</table>

3.3 TOOL OF THE STUDY

In view of the homogeneous and educated respondents,
the use of questionnaire was considered the best for getting the appropriate information from the respondents. Keeping in view the objectives of the study, the questionnaire developed by Joginder Singh (1988), the M.Sc. student at Haryana Agriculture University, Hisar was kept as the base tool, questions were posed in simple language and the Gujarati version was prepared to distribute to the respondents for their easy understanding. The investigator also secured technical guidance from the literature available, teaching staff of Extension Education Institute at Anand to make necessary modifications and Gujarati translation.

3.4 PRE-TESTING OF THE SCHEDULE

The pre-testing of the questionnaire was carried out with 15 extension personnel of Anand sub-division of Kheda district of Gujarat state. At the time of pre-testing the questionnaire, the objectives and significance of the study were explained to the respondents. Taking into consideration, the result of the pre-testing, no change was required to make in the questionnaire and was used for final data collection.

3.5 COLLECTION OF DATA

The questionnaire for this study was used for collecting information by personal contacts from 165
extension personnel of Kheda district in the month of December, 1992 at the fortnightly trainings on 4.12.92, 5.12.92, 11.12.92, 18.12.92 and 19.12.92 and some respondents were contacted on their respective head quarters. Out of 13 AEOs circle of Kapadvanj sub-division, 7 headquarter were vacant. So only 3 AEOs could be contacted. Due rapport with the respondents was developed to gain their confidence. After introduction, aims and objectives of the study and significance of their co-operation was explained to them. The investigator ensured them to keep the information secret and to use for academic purpose only. Thus, after establishing proper rapport and in congenial atmosphere the investigator handed over the questionnaire to the respondents. The respondents were given proper time and later on the questionnaire was collected personally. Hence, 165 respondents were comprised for the analysis of the data.

3.6 STATISTICAL FRAME WORK AND ANALYSIS OF THE DATA

All the responses recorded in the schedule were transferred to the master table and the frequency were marked wherever necessary, the number of such percentage were given to the various frequencies items. The data were tabulated, organised, analysed and presented in a way that it may give proper representation and answers to the
specific objectives of the study.

The following statistical tools were used for interpreting the data:

1. Percentage: The simple comparison was made on the basis of percentage.

2. Mean score: This was obtained by total score divided by the number of respondents.

3. Standard deviation: This was obtained by square root of the average of the squared deviation from mean.

4. Coefficient of correlation: This was used to test the association between independent and dependent variables.

Variables and their measurement:

Experience and research evidences show that antecedent factor of extension personnel play a significant role in increasing their communication pattern. Though, numerous factors influence the communication pattern of extension personnel but a few, which seemed to have influence on the communication pattern were taken up for this study. These are also known as socio-psychological characteristics of extension personnel and these were treated as independent variables and communication pattern was taken as dependent variable. The measurement techniques of independent and dependent variables have been given as under.
3.6.1 Personal, socio-psychological characteristics:

3.6.1.1 Age:

The data regarding age of the respondents were collected and divided into three age group.

(1) Young age group - upto 30 years
(2) Middle age group - 31 to 50 years
(3) Old age group - above 50 years

One score was given to every year of age completed for obtaining relationship with communication pattern.

3.6.1.2 Education:

Education refers to the highest level of formal education successfully completed by an extension personnel. The respondents' education score was computed by assigning number 1, 2 and 3 for those having acquired the below matric with diploma in agriculture, Matric with diploma in Agriculture and Graduate in Agriculture, respectively.

3.6.1.3 Training:

The respondents were asked to furnish the information about the types of training they have undergone along with the duration of training and numbers of trainings they have attended. Score of 1 for each training was assigned. The usefulness of these trainings was rated on
three point continuum scale and score 3, 2 and 1 were allotted for very useful, somewhat useful and not useful response categories, respectively. Again, the liking of the respondents was asked in terms of continuation and discontinuation of training and the score given were 1 and 0, respectively.

A question regarding the basis adopted by the organisation for deputing extension personnel for training was asked. The responses obtained indicated proper and improper criteria adopted by the organisation for deputing extension personnel for training programmes. The deputation of respondents for inservice training made on the basis of specialisation (proper criterion) was assigned a score of 2 and improper criterion (purely random, a set procedure does not exist, deputation on training exclusively the discretion of senior officers etc.,) adopted were given a score of 1.

The score obtained by respondent in respect of all these questions were added up in order to arrive at his total score. Likewise, the total scores of all the respondents were calculated. The training score was divided into low, medium and high categories by using mean + S.D. method of classification. The fractional figures were rounded up to the nearest whole number.
3.6.1.4 **Experience** :-

It refers to the number of years of experience rendered in Govt. job. One score was given to every year of service. The score was divided into low, medium and high level of experience with the help of mean ± S.D.

3.6.1.5 **Family background** :-

Rural urban background refers to the respondent’s place of birth and the area of his early childhood. It also include the type of family like joint family and nuclear family. Fathers' occupation refers to categories as farming or non-farming family. The score was given as under to calculate the relationship results.

1. Farming family - 2 score
2. Non-farming family - 1 score
3. Urban family - 1 score
4. Rural family - 2 score
5. Joint family - 2 score
6. Nuclear family - 1 score

3.6.1.6 **Infrastructural facilities for communication** :-

The facilities for typing, cyclostyled, availability of projected aids like slide projector, 16mm movie projector, film strips, demonstration equipments, television,
facilities for preparation and use of poster, charts, flash cards, flannel graph etc. with the personnel's work organisation for quick and effective communication of useful messages by the researchers and extension personnel to the clientele were considered. The availability and non-availability of facilities with the organisation were assigned the score 1 and 0 respectively.

The score of the respondents were computed in accordance with scoring pattern. The respondents' infrastructural facilities for communication scores, so obtained, were grouped into low, medium and high categories by employing mean $\pm$ S.D.

3.6.1.7 Job satisfaction :-

The rationale was translated into the scoring pattern in the use of ladder for measurement of satisfaction or dissatisfaction with different objects. As per this pattern, the top position of the ladder was labelled as indicating maximum satisfaction and was scored as + 5. The score reduced by 1 for every step downward, thus + 1 represent the minimum satisfaction level and zero represented a 'neutral' or neither satisfied nor dissatisfied feelings. On the negative side, a score of 1 or the step just below the middle one in the ladder indicated minimum
dissatisfaction. The numerical value increased by 1 for every step. Further down the ladder till the bottom of the ladder having the score -5 indicating maximum dissatisfaction reached. The reason behind scoring the satisfaction range as +1 to +5 and dissatisfaction range as -1 to -5 was that satisfaction is commonly conceived of as a positive attitude and dissatisfaction as a negative attitude. Similarly zero, indicated an absence of any positive or negative quantity, thus logically representing a neither satisfied nor dissatisfied feelings.

After the collection of data, the scoring system was however, suitably modified so as to eliminate negative figures. The scale contain 20 statements out of which nine were positive and 11 were negative. The response were measured on five point continuum as strongly agree, agree, undecided, disagree and strongly disagree. The scoring pattern adopted was 5, 4, 3, 2, 1 for the above responses continuum for positive statements and 1, 2, 3, 4, 5 for the same response continuum for negative statements. The minimum and maximum possible score a respondent could get ranged from 20 to 100.

The scores obtained by a respondent in respect of each statement were added to arrive at his total job satisfaction score. The job satisfaction scores, so obtained,
were categorised into low, medium and high categories by using mean + S.D. method.

3.6.1.8 Job commitment:

This was measured on the basis of time utilized by a respondent on different extension activities namely, field visits, technical guidance to farmers, office work, conducting demonstration/field trials, organising field days, organising exhibitions, arranging farmers trainings etc. The extent of time utilized in the performance of these activities was measured by using scale having four response categories – Much, Moderate, Less, Not at all and the scores given were 3, 2, 1 and 0 respectively.

Individual score, so obtained, by a respondent in respect of items of the scale were added up in order to arrive at the total score. Similarly the score of all respondents were calculated. The job commitment scores were categorised into very much, much and less by using the means + S.D. method of computing.

All the activities related to job commitment were taken into consideration and choice score was obtained. On the basis of that choice score, rank order was also given from higher score to lower score.
Job activity preference is, in fact, closely related with one's liking. If the extension personnel encouraged to carry out the jobs according to their liking, the output/efficiency shall be much greater.

In this study to measure job-activity preference, the extension personnel were asked for inter job ranking. The response given by respondents were then converted into score by assigning of 3, 2, 1 for highly preferred, preferred and less preferred respectively. Total score was calculated, and on the basis of that rank order was given from higher score to lower score.

3.6.2 Source credibility perception and credibility variation of sources:

This term was operationalised as a set of perception by the receiver and refers to the source or communicator's importance in a communication situation. This importance is perceived by the receiver considering the trustworthiness and expertness of the source. Therefore, the respondents were asked to give their perception of credibility of information sources in term of most credible, credible and least credible. Keeping in view the trustworthiness and expertness of the sources and score assigned were 3, 2 and 1 respectively. Accordingly, the source-
credibility perception scores of individual respondent were calculated. The rank order to the sources for perception were decided strictly in accordance with the total choice score obtained and mean score which was obtained by dividing the total choice score by the number of respondents.

3.6.3 Communication pattern (information input, processing and output pattern):

3.6.3.1 Information Input Pattern:

To measure the quantum of information input pattern, respondents were exposed to a question to elicit from them information concerning the sources used and their frequency of use. The frequency of use run through always, some times and never, and the score assigned were 2, 1 and 0, respectively. The score in respect of respondents were computed on the basis of adopted scoring pattern.

The respondents' obtained scores were divided into low, medium and high categories by using mean ± S.D. method of classification. The rank order was also given to individual source by obtaining the total choice score as discussed earlier.

3.6.3.2 Information Processing Pattern:

It deals with the evaluation of received information
(analysis, synthesis or designing), storage/preservation of information (noting, indexing, categorising) and transformation.

The respondents were exposed to questions to elicit information from them regarding the extent of evaluation, storage/preservation and transformation of received information different components of information processing. The extent runs through always, sometimes, and never with scores of 2, 1 and 0 respectively. The score obtained, by the respondents in respect of each question and part of were added up to arrive at his total score. The respondent's score, so obtained, were grouped into low, medium and high categories by following mean ± S.D. method of classification. The rank order for the various procedures of evaluation, processing and transformation were given by calculating the total choice score separately.

3.6.3.3 Information Output Pattern:

It is the amount of information transmitted by the extension personnel through various channels in performing one's role and work.

Information output, in fact, involved several questions of different nature. The questions include number and frequency of visits paid by extension personnel to the
clients for the purpose of communicating agricultural information. Each visit was assigned one mark and frequency of visits were allotted 3, 2 and 1 mark for once in a week, once in a fortnight and once in a month, respectively. The question about wall writing on the public places were asked and one mark was assigned to every one writing. The frequency of writing were allotted 4, 3, 2 and 1 mark for fortnightly, monthly, quarterly and half yearly, respectively.

Question regarding arrangement of field days, conducting trainings, arranging demonstrations and preparation of farm literature, distribution of leaflets/handouts containing farm information were asked. One score was given to each arranged field days, demonstrations, trainings, type of demonstration and circulated leaflets/handouts, respectively. Based upon the aforementioned scoring pattern, the scores of the respondent in respect of each question were added to obtain his total information output score. The obtained scores were then divided into low, medium and high groups employing mean ± S.D. method of classification.

3.6.3.4 Extension Personnel-Researchers' Communication (EP-RC):-

It covers the method/media utilized by which the members of extension system communicated with the research
system for acquiring information and delivering farmers' problem about farming. The method/media they actually used viz., personal contacts, personal letters, meetings, office letters, farm literature, kisan mela, trainings, farm visit, group discussion etc. and with what frequency most frequently, frequently, rarely and never, and the scores allotted were 3, 2, 1, and 0 respectively. Accordingly, the total score of each respondent was computed and the score of the respondents, so obtained, were grouped into low, medium and high categories by using mean ± S.D. statistical method of classification.

3.6.3.5 Extension Personnel-Farmers' Communication (EP-FC):

The extension personnel communicate farm information to the members of clientele system by using the various communication sources which source and with what frequency the extension personnel used was rated through four frequency response categories - most frequently, frequently, rarely and never and the scores assigned were 3, 2, 1 and 0 respectively. The responses for used sources were added up to arrive at respondent's total score. The score, thus, obtained were divided into low, medium and high categories by following mean ± S.D. method of classification.

3.6.3.6 Extension Personnel-Farmers' Contacts Span (EP-FCS):

The frequency of contacts made by the extension
personnel to contact different types of farmers were grouped into various categories on the basis of duration of contacts. The different categories were - less than one month, one month to three months, three months to six months, more than six months and never. and the scores allotted were 4, 3, 2, 1 and 0 respectively. Accordingly, the score obtained by the respondents for contacting different groups of farmers were added up to arrive at his total score. The total score of the respondents were classified into low, medium and high categories by using mean + S.D.

3.6.3.7 Analysis of data:-

The system analysis approach was adopted for this study, assuming that all the component of system under study were structurally static at the time of investigation and their communication function were going on. Various components of the system were continuously interacting within and outside, thereby affecting the input, processing and output pattern of each system.

To study the relationship between communication pattern and antecedent and communication variable, zero order correlation analysis was performed and coefficient values were tested at five percent levels of significance.
3.6.3.7.1: Coefficient of Correlation:

The Pearson's coefficient of correlation was used to test the relationship between independent and dependent variables. The formula used was as under:

\[ r = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}} \]

Where,
- \( N \) = Number of observations being correlated.
- \( \sum XY \) = Sum of products of \( X \) and \( Y \)
- \( X \) & \( Y \) = Variables being correlated.
- \( \sum X \) = Summation of overall cell entries of the first variable.
- \( \sum Y \) = Summation of overall cell entries of the second variable.
- \( \sum X^2 \) = Sum of all squared values of each cell of first variable.
- \( \sum Y^2 \) = Sum of all squared values of each cell of second variable.

3.6.3.7.2: t-test:

To study the difference between communication pattern of AEOs and VLWs 't' test was applied to the value of their respective mean scores. The formula used for calculating Fisher's 't' for unequal groups is as under:

\[ t = \frac{\bar{X} - \bar{Y}}{\sqrt{\sigma^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}} \]
Where, \( t \) = Fisher's \( t \)-value
\( \bar{X} \) = Average of the group \( X \)
\( \bar{Y} \) = Average of the group \( Y \)
\( \sigma^2 \) = Pooled variance
\( n_1 \) = Numbers of observation in group \( X \)
\( n_2 \) = Numbers of observation in Group \( Y \)
RESULTS AND DISCUSSION
The data for the present investigation were collected through questionnaire in the light of the objectives of the study. The same were classified, tabulated, analysed, presented and interpreted in a systematic way as per specific purpose of the study. The discussion has also been taken up along with results and therefore, no separate chapter on discussion has been included. The facts and findings of the study have been grouped under following heads and discussed in succeeding pages.

4.1 Personal, socio-psychological characteristics of extension personnel.

4.2 Source credibility perception and credibility variation of sources.

4.3 Information input, processing and output pattern of extension personnel.

4.4 Association between communication pattern and extension personnel's antecedent factors.

4.5 Difference between communication pattern of AEOs & VLWs.
objectives of the study. The data collected on all these characteristics through questionnaire were tabulated, analysed, presented in the following tables and interpreted through frequencies and percentages.

4.1.1 Age:

The respondents were asked to indicate their age in completed years. The respondents were grouped into three categories viz., (i) young age (up to 30 years), (ii) middle age (31 to 50 years) and (iii) old age (above 50 years). The data collected from the respondents about their age are presented in Table-2.

| TABLE 2: DISTRIBUTION OF EXTENSION PERSONNEL ACCORDING TO THEIR AGE |
|-----------------|-----------------|----------------|
| Age Group       | Number | Per cent |
| Young age group (up to 30 years) | 29 | 17.58 |
| Middle age group (31 to 50 years) | 112 | 67.88 |
| Old age group (above 50 years) | 24 | 14.54 |
| Total | 165 | 100.00 |

The data presented in Table-2, reveal that majority (67.88 per cent) of the extension personnel were found to be in the middle age group followed by young age group (17.58 per cent) and old age group (14.54 per cent).

The data presented in Table-2 indicate that
majority (more than 80.00 per cent) of the extension personnel belong to young and middle age group.

This finding is similar to the findings of Bora (1981) and Sharma (1991).

4.1.2 Education:

The respondents were classified into three groups i.e. (i) Below Matric, (ii) Matriculate with diploma in Agriculture and (iii) B.Sc. Agriculture. The data regarding educational qualification are presented in Table-3.

TABLE 3: DISTRIBUTION OF EXTENSION PERSONNEL ACCORDING TO THEIR LEVEL OF EDUCATION N=165

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below Matric</td>
<td>2</td>
<td>1.21</td>
</tr>
<tr>
<td>Matric with diploma in Agriculture</td>
<td>135</td>
<td>81.82</td>
</tr>
<tr>
<td>B.Sc. Agriculture</td>
<td>28</td>
<td>16.97</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>165</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

The data presented in Table-3, revealed that 81.82 per cent of the extension personnel had their qualification as matric with diploma in agriculture, 16.97 per cent were B.Sc. Agriculture and only 1.21 per cent were below matric.

It indicated that a good majority of the extension
personnel were either agriculture diploma holder, or graduate in agriculture, means well qualified personnel were placed in extension services in order to give their best to the farming community.

This finding is similar to the finding of Sharma (1981)

4.1.3 Training:

The respondents were asked about the training they have received. The respondents were grouped into three categories viz., (i) Low (upto 3 scores), (ii) Medium (scores 4 to 9), and (iii) high (above 9). The data collected from the respondents about their levels of training are presented in Table-4.

**TABLE 4: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR LEVEL OF TRAINING**

<table>
<thead>
<tr>
<th>Training</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low training (score up to 3)</td>
<td>7</td>
<td>4.24</td>
</tr>
<tr>
<td>Medium training (score 4 to 9)</td>
<td>135</td>
<td>81.82</td>
</tr>
<tr>
<td>High training (score above 9)</td>
<td>23</td>
<td>13.94</td>
</tr>
<tr>
<td>Total</td>
<td>165</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Mean = 6.82  
S.D. = 3.15

The data presented in Table-4, reveal that majority (81.82 per cent) of the extension personnel had medium training experience whereas, 13.94 per cent had high
training experience and 4.24 per cent had low level of training experience. The results indicated that majority (more than 85.00 per cent) of respondents belong to low to medium level of training experience.

The respondents were also asked to furnish their views about the criteria of deputing extension personnel on training. Table-5 gives detail of the data collected from the respondents regarding the criteria fixed for deputing on training.

**TABLE 5 : DISTRIBUTION OF THE EXTENSION PERSONNEL REGARDING DEPUTATION OF THEM ON TRAINING**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure random</td>
<td>27</td>
<td>16.36</td>
</tr>
<tr>
<td>As per specialization</td>
<td>43</td>
<td>26.06</td>
</tr>
<tr>
<td>A set procedure does not exist</td>
<td>30</td>
<td>18.18</td>
</tr>
<tr>
<td>Deputation is exclusively the desire of senior officers</td>
<td>65</td>
<td>39.40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>165</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Data presented in Table-5, reveal that maximum (39.40 per cent) numbers of the respondents expressed that 'deputation exclusively the desire of senior officers', followed by 'as per specialization' (26.06 per cent), 'a set procedure does not exist' (18.18 per cent), and 16.36 per cent reported that deputation on training was purely random.
It means that majority of the respondents were deputed on training other than the criteria of "As per specialization", which is not desirable. It is alarming to note that the respondents were not given the chance of attending almost all the training programme organised for the purpose of providing them latest technical know how in the field of agriculture in general and specialisation in particular. It is therefore, concluded that the respondents should be given opportunities to attend more and more training programmes concerning their fields of specialisation so as to make them able to learn recent advances necessary to communication pattern (input, processing and output).

The opinions of the respondents were also taken on usefulness of the fortnightly trainings they had received in past.

The extension personnel were asked to give their considered opinion on the usefulness of fortnightly trainings they had received in the past years. The respondents were classified into three groups on the basis of their opinions i.e. (i) very useful, (ii) useful and (iii) not useful.

The data collected from the respondents are presented in Table-6.
TABLE 6: DISTRIBUTION OF EXTENSION PERSONNEL ACCORDING TO THEIR OPINION ABOUT FORTNIGHTLY TRAINING

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very useful</td>
<td>120</td>
<td>72.72</td>
</tr>
<tr>
<td>Useful</td>
<td>45</td>
<td>27.28</td>
</tr>
<tr>
<td>Not useful</td>
<td>--</td>
<td>---</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>165</td>
<td>100.00</td>
</tr>
</tbody>
</table>

The data presented in Table 6, found that majority (72.72 per cent) of the extension personnel were of the opinion that fortnightly trainings was very useful, and 27.28 per cent were of the opinion that it was useful. It was interesting to note that none of the respondent opined that fortnightly training was not useful.

It is therefore, concluded from the above table that almost all respondents were of the opinion that fortnightly training was either very useful or useful to them. It is a very healthy symptom for information input pattern. When the information input pattern will be high it would definitely and positively affect the information processing pattern and information output pattern of the extension personnel.

The respondents were asked to give their views regarding the continuation and discontinuation of the
fortnightly training. The extension personnel were classified into two groups on the basis of their views, (i) should be continued (ii) should not be continued. The data collected from the respondents are presented in Table-7.

**TABLE 7 : DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR VIEWS REGARDING FORTNIGHTLY TRAINING  

<table>
<thead>
<tr>
<th>Views</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Should be continued</td>
<td>157</td>
<td>95.15</td>
</tr>
<tr>
<td>Should not be continued</td>
<td>8</td>
<td>4.85</td>
</tr>
<tr>
<td>Total</td>
<td>165</td>
<td>100.00</td>
</tr>
</tbody>
</table>

The data presented in Table-7, found that a good majority (95.15 per cent) of the extension personnel were of the views that fortnightly training should be continued. Only very few respondents (4.85 per cent) were of the views that fortnightly training should not be continued.

It can be inferred that majority (95.15 per cent) of the extension personnel desired for the continuation of fortnightly training which is again a healthy indication for a healthy information input pattern.

4.1.4 **Experience** :

The respondents were asked to indicate their total service experience in completed years. The respondents were grouped into three categories i.e. (1) low (upto 4 years),
(ii) medium (5 to 21 years), and (iii) high (above 21 years).

The data collected from respondents about their total service experience are presented in Table-8.

**TABLE 8: DISTRIBUTION OF EXTENSION PERSONNEL ACCORDING TO THEIR TOTAL EXPERIENCE**

<table>
<thead>
<tr>
<th>Total experience</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (upto 4 years)</td>
<td>15</td>
<td>9.09</td>
</tr>
<tr>
<td>Medium (5 to 21 years)</td>
<td>122</td>
<td>73.94</td>
</tr>
<tr>
<td>High (above 21 years)</td>
<td>28</td>
<td>16.97</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>165</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Mean = 13.00  
S.D. = 8.32

The data presented in Table-8, indicate that the majority (73.94 per cent) of extension personnel had medium level of total experience followed by high service experience (16.97 per cent) and low service experience (9.09 per cent).

This finding is in line with the findings of Patel (1983) and Sharma (1991).

**4.1.5 Family background:**

The extension personnel were asked to furnish the information regarding their family background. The respondents were grouped according to their type of family, rural/urban background and family occupation. The data...
collected from the respondents about their family background are presented in Table-9.

**TABLE 9 : DISTRIBUTION OF EXTENSION PERSONNEL ACCORDING TO THEIR FAMILY BACKGROUND**

<table>
<thead>
<tr>
<th>Family background</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear family</td>
<td>52</td>
<td>31.52</td>
</tr>
<tr>
<td>Joint family</td>
<td>113</td>
<td>68.48</td>
</tr>
<tr>
<td>Rural family</td>
<td>154</td>
<td>93.33</td>
</tr>
<tr>
<td>Urban family</td>
<td>11</td>
<td>6.67</td>
</tr>
<tr>
<td>Farming family</td>
<td>152</td>
<td>92.12</td>
</tr>
<tr>
<td>Non-farming family</td>
<td>13</td>
<td>7.88</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>165</td>
<td>100.00</td>
</tr>
</tbody>
</table>

The data presented in Table-9 reveal that as high as 68.48 per cent of the extension personnel belonged to joint families. Ninetythree point thirtythree per cent and 92.12 per cent belonged to rural and farming families respectively. This is quite healthy symptom that personnel responsible for agricultural work belonged to rural farming families who are supposed to be biased to the promotion of scientific agriculture among cultivators for their betterment.

This finding is in line with the findings of Singh (1988), Singhroha (1990) and Sharma (1991).
4.1.6 **Infrastructural facilities for communication**

The extension personnel were asked to express their views regarding the infrastructural facilities available with the organisation for communication. The respondents were grouped into three categories, viz., (i) low (upto 15 scores), (ii) medium (16 to 23 scores) and (iii) high (above 23 scores). The data collected from the extension personnel regarding the availability of infrastructural facilities for communication are presented in Table-10.

**TABLE 10 : DISTRIBUTION OF RESPONDENTS ACCORDING TO THE AVAILABILITY OF INFRASTRUCTURAL FACILITIES FOR COMMUNICATION**

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (upto 15 score)</td>
<td>21</td>
<td>12.73</td>
</tr>
<tr>
<td>Medium (16 to 23 score)</td>
<td>123</td>
<td>74.54</td>
</tr>
<tr>
<td>High (above 23 score)</td>
<td>21</td>
<td>12.73</td>
</tr>
</tbody>
</table>

Total 165 100.00

Mean = 19.46  S.D. = 3.97

It is clear from the Table-10 that majority (74.54 per cent) of the respondents possessed infrastructural facilities for medium level and equal number of the respondents i.e. 12.73 per cent each possessed facilities of low and high levels, respectively.
It can be concluded that majority (74.54 per cent) of extension personnel had medium level of infrastructural facilities.

This finding is in the confirmity with the finding of Singh (1988).

4.1.7 Job satisfaction:

The respondents were asked to indicate their extent of job satisfaction. The respondents were grouped into three categories viz., (i) low level of job satisfaction, (ii) medium level of job satisfaction, (iii) high level of job satisfaction. The data collected from the extension personnel about their extent of job satisfaction are presented in Table-11.

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (upto 64 scores)</td>
<td>24</td>
<td>14.55</td>
</tr>
<tr>
<td>Medium (65 to 86 scores)</td>
<td>122</td>
<td>73.94</td>
</tr>
<tr>
<td>High (above 86 scores)</td>
<td>19</td>
<td>11.51</td>
</tr>
<tr>
<td>Total</td>
<td>165</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Mean = 74.90  S.D. = 11.07

The data presented in Table-11, revealed that majority (73.94 per cent) of the respondents were found
to have medium level of job satisfaction followed by 14.55 per cent of the respondents who acquired low level of job satisfaction. Only 11.51 per cent of the respondents were found to have high level of job satisfaction.

The moderate job satisfaction among majority of the respondents seems to be an indication of a forward step in positive direction as it can lead to high job satisfaction if the organisation's work environment is made congenial.

It can be concluded that majority (73.94 per cent) of extension personnel had exhibited medium level of job satisfaction.

This finding is in line with the findings of Perumal and Rai (1978), Singh (1988) and Popat (1991).

4.1.8 **Job commitment**

The respondents were asked to indicate the extent of time they had utilized on various activities performed by them. The respondents were grouped into four categories viz., (i) Much, (ii) Moderate, (iii) Less and (iv) Not at all, on the basis of time they had spent in performing various activities. The data collected from the respondents about the time utilization in respect of various activities are presented in Table-12 and rank order was given on the basis of total score and mean score.
## TABLE 12: ACTIVITIES PERFORMED BY EXTENSION PERSONNEL TO COMMUNICATE FARM INFORMATION

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Activities</th>
<th>Total Score</th>
<th>Mean Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Field visit</td>
<td>482</td>
<td>2.92</td>
<td>I</td>
</tr>
<tr>
<td>2</td>
<td>Technical guidance to farmers</td>
<td>457</td>
<td>2.77</td>
<td>III</td>
</tr>
<tr>
<td>3</td>
<td>Technical guidance to contact farmers only</td>
<td>475</td>
<td>2.87</td>
<td>II</td>
</tr>
<tr>
<td>4</td>
<td>Office work</td>
<td>374</td>
<td>2.26</td>
<td>VII</td>
</tr>
<tr>
<td>5</td>
<td>Demonstration/field trials</td>
<td>433</td>
<td>2.62</td>
<td>IV</td>
</tr>
<tr>
<td>6</td>
<td>Organising field days</td>
<td>402</td>
<td>2.43</td>
<td>VI</td>
</tr>
<tr>
<td>7</td>
<td>Organising Exhibitions</td>
<td>356</td>
<td>2.15</td>
<td>VIII</td>
</tr>
<tr>
<td>8</td>
<td>Organising farmer's training</td>
<td>426</td>
<td>2.58</td>
<td>V</td>
</tr>
</tbody>
</table>

The data in Table-12 revealed that the job activity "Field visit" got rank I. This was followed by "Technical guidance to contact farmers only" (rank II), Technical guidance to farmers (rank III), demonstration/field trials (rank IV), organising farmers training (rank V), organising field days (rank VI), office work (rank VII) and organising exhibitions (rank VIII).

It is evident from the Table-12, that activity "Field visit" stood first, in respect of time utilized by the extension personnel. The probable reason for this might be that extension personnel under study were AEOs and
They had a fixed curriculum of field and home visits under Training and Visit programme. Due to fact most of the time utilized by them in conducting farm visits. Hence, time utilization was highest under this activity with comparison to all other activities performed by them.

The activity 'technical guidance to contact farmers', got second position among all the eight job activities. The reason for this might be that extension personnel had to visit contact farmers regularly according to their fixed visit schedule under T & V, to provide them technical guidance. Hence, they utilized their most of time in providing technical guidance to contact farmers and the second position of this activity is justified. The third position occupied by the job activity, "Technical guidance to farmers". The extension personnel provide technical guidance to their contact farmers regularly during their field visit, but the importance of fellow farmers could not be over-looked. Extension personnel utilize their rest of the time in providing technical guidance to general category farmers either by making personal contacts or through contact farmers. Hence, time utilization under this activity is justified.

Demonstration/field trials, organising farmers
training and organising field days ranked fourth, fifth and sixth, respectively. The reason behind may be that these were the seasonal activities. Demonstration/field trials could be organised in limited numbers, over a limited time. The farmers training could be organised in a slack period, more over it required comparatively more time. Similarly field days could not be organised every time and time involvement under these activities was less with comparison to other activities.

The activity "office work" ranked seventh, which might be due to the fact that under T & V programme only one day per week is provided for doing office work. Hence, amount of time devoted for this activity was very small with comparison to other job activities.

The extension personnel spent least time on "organising exhibition", and ranked last. This may be because the extension personnel under study were the village level functionaries. Installation of exhibition require lot of funds and infrastructural facilities which is beyond the competency of AEOs and VLWs. The working organization may be lacking of this type of facilities and to organise exhibition in every AEOs and VLWs circle is not a easy thing. They may not get the opportunity of organising exhibition. Hence, the time utilization under this activity was naturally ranked to last.
The extension personnel were also grouped into three categories according to the levels of their job commitment i.e. (i) less job commitment, (ii) much job commitment and (iii) very much job commitment. The data are presented in Table-13.

**TABLE 13 : DISTRIBUTION OF EXTENSION PERSONNEL ACCORDING TO THEIR LEVEL OF JOB COMMITMENT**

<table>
<thead>
<tr>
<th>Level of commitment</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less (upto 17 scores)</td>
<td>30</td>
<td>18.18</td>
</tr>
<tr>
<td>Much (scores 18 to 24)</td>
<td>122</td>
<td>73.94</td>
</tr>
<tr>
<td>Very much (scores above 24)</td>
<td>13</td>
<td>7.88</td>
</tr>
<tr>
<td>Total</td>
<td>165</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Mean = 20.89  
S.D. = 3.60

The data presented in Table-13 show that about three out of four extension personnel (73.94 per cent) were much committed to their job whereas 18.18 per cent of the respondents expressed less commitment to the job followed by those respondents who were very much committed to their job (7.88 per cent).

This gives an indication that respondents in majority utilize their maximum time for discharging their assigned roles which is again a healthy sign of progress in an organization.
A cursory look at the data concerning infrastructural facilities for communication, job satisfaction and job commitment hinted that there seems to be a close link among all the three because no availability of required infrastructural facilities for communication lead to low to medium job satisfaction which further led to less to much job commitment.

4.1.9 Job activity preference:

The extension personnel were asked for inter job ranking. They were asked to mention their preference under three categories, (i) Mostly preferred, (ii) Preferred, and (iii) Least preferred. Data collected from the extension personnel regarding their job activity preference are presented in Table-14.

The data presented in Table-14, reveal that job activity “Farm and home visit” got rank I. This was followed by “Laying out of demonstration” (Rank II), “Conducting training” (rank III), "Providing technical guidance to farmers" (rank IV), "Doing office work" (Rank V), "Conducting meeting with farmers" (rank VI), "Conducting meeting with officials" (rank VII), "Management of inputs" (rank VIII), "Exhibitions" (rank IX) and "Preparation of message cards" (rank X).
### TABLE 14: EXTENSION PERSONNEL ACCORDING TO THEIR JOB PREFERENCE RANK

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Source of information</th>
<th>Mostly preferred</th>
<th>Preferred</th>
<th>Least preferred</th>
<th>Total choice score</th>
<th>Mean score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conducting Training</td>
<td>73</td>
<td>42</td>
<td>50</td>
<td>353</td>
<td>2.13</td>
<td>III</td>
</tr>
<tr>
<td>2</td>
<td>Farm and home visit</td>
<td>96</td>
<td>47</td>
<td>22</td>
<td>404</td>
<td>2.44</td>
<td>I</td>
</tr>
<tr>
<td>3</td>
<td>Laying out of demonstration</td>
<td>66</td>
<td>70</td>
<td>29</td>
<td>367</td>
<td>2.22</td>
<td>II</td>
</tr>
<tr>
<td>4</td>
<td>Providing technical guidance to farmers</td>
<td>71</td>
<td>44</td>
<td>50</td>
<td>351</td>
<td>2.12</td>
<td>IV</td>
</tr>
<tr>
<td>5</td>
<td>Doing office work</td>
<td>44</td>
<td>73</td>
<td>48</td>
<td>326</td>
<td>1.97</td>
<td>V</td>
</tr>
<tr>
<td>6</td>
<td>Conducting meeting with farmers</td>
<td>42</td>
<td>71</td>
<td>52</td>
<td>320</td>
<td>1.93</td>
<td>VI</td>
</tr>
<tr>
<td>7</td>
<td>Preparation of message cards</td>
<td>30</td>
<td>71</td>
<td>64</td>
<td>296</td>
<td>1.79</td>
<td>X</td>
</tr>
<tr>
<td>8</td>
<td>Conducting meeting with officials</td>
<td>44</td>
<td>65</td>
<td>56</td>
<td>318</td>
<td>1.92</td>
<td>VII</td>
</tr>
<tr>
<td>9</td>
<td>Management of inputs</td>
<td>33</td>
<td>82</td>
<td>50</td>
<td>313</td>
<td>1.89</td>
<td>VIII</td>
</tr>
<tr>
<td>10</td>
<td>Exhibitions</td>
<td>39</td>
<td>61</td>
<td>65</td>
<td>304</td>
<td>1.84</td>
<td>IX</td>
</tr>
</tbody>
</table>

The job activity "Farm and home visit" preferred by most of the respondents and stood first in ranking order. The probable reason may be that farm and home visit is the method which provides opportunity for face to face contact and feedback resulting in some action. Hence, to get the quick and definite results, farm and home visit method of communication preferred by most of the respondents and ranked first in order of their preference.
The activity "Laying out of demonstration" ranked second. The probable reason may be that the worth of improved practices could be proved by organising demonstration. A successful demonstration make the people to have faith on extension personnel and extension activities.

Conducting training ranked third in the order of job activity preference by the extension personnel. The probable reason may be that the trainings make the trainee well conversent with the latest techniques of scientific crop production and farm/home management. It reduces the gap between what is to be known and what they actually know. Training to the lower staff is also important to clear the theoretical and technical concepts. It also increases the efficiency of the trained.

Providing technical guidance to farmers, doing office work, conducting meeting with farmers, conducting meeting with officials and management of inputs, ranked fourth, fifth, sixth, seventh and eighth, respectively, in order of job activity preference given by the extension personnel.

Exhibitions received next to last rank in job activity preference. It might be because of all extension personnel of sample study, do not having the appropriate facilities for the installation of exhibitions. Moreover, it is a team
work and require lot of funds and resources. Hence, it is preferred by the few number of respondents who might be working nearer to Taluka head quarters.

Preparation of message card preferred by the least number of respondents. The probable reason might be that under T & V this particular job is mainly related to subject matter specialists. Secondly, the typing and cyclostyle facilities are available only at sub-division level.

A cursory look at the data concerning job commitment and job activity preference hinted that there seems to be a close link among both variables. The job activities ranked most and least in job commitment, falls somewhat in similar order under job activity preference which is a very healthy sign of progress in any organisation.

4.2 SOURCE CREDIBILITY PERCEPTION AND CREDIBILITY VARIATION OF SOURCES

4.2.1 Differential source credibility perception and variation of extension personnel

The extension personnel were asked to indicate their perception of information sources in the column most credible, credible and least credible. The computation of source-credibility scores of respondents was done strictly in accordance with the methodological steps described in the chapter of methodology. The total choice score and mean score of an individual respondent was computed. Accordingly, the total choice score (TCS) of all the
respondents were calculated, and on the basis of total choice scores mean scores for all the respondents were calculated. The rank order to the resources were decided on the basis of mean scores - higher the score, higher the rank order and lower the score, lower the rank order. The data collected from respondents about their perception of source-credibility and source variation are presented in Table-15.

Table-15, indicate that in all, twenty one sources of information were included in this investigation for their credibility perception by extension personnel. Out of these, nine were related to personal, six each to group and mass contact source of information.

A cursory look at the mean choice score and rank order of different sources of information clearly revealed that Assistant Director of Agriculture and Deputy Director of Agriculture ranked first and second respectively. The probable reason may be that these both categories of extension functionaries use to guide the extension personnel under study directly. The doubt raised by the AEOs and VLWs are cleared by Assistant Director of Agriculture in the fortnightly training programme. Hence, Assistant Director of Agriculture and Deputy Director of Agriculture are the source of highest credibility with comparison to other
These findings are in line with the findings of Singh (1988) and Sanoria & Singh (1976).

**TABLE 15: DIFFERENTIAL SOURCE CREDIBILITY PERCEPTION OF EXTENSION PERSONNEL**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Sources</th>
<th>Most credible</th>
<th>Credible</th>
<th>Least credible</th>
<th>Total score</th>
<th>Mean score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>PERSONAL CONTACT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Family members</td>
<td>72</td>
<td>66</td>
<td>27</td>
<td>375</td>
<td>2.27</td>
<td>XIII</td>
</tr>
<tr>
<td>2.</td>
<td>Relative and friends</td>
<td>35</td>
<td>98</td>
<td>32</td>
<td>333</td>
<td>2.01</td>
<td>XVII</td>
</tr>
<tr>
<td>3.</td>
<td>Neighbourers</td>
<td>35</td>
<td>70</td>
<td>60</td>
<td>305</td>
<td>1.84</td>
<td>XVII</td>
</tr>
<tr>
<td>4.</td>
<td>Agricultural Scientists</td>
<td>125</td>
<td>31</td>
<td>9</td>
<td>446</td>
<td>2.70</td>
<td>IV</td>
</tr>
<tr>
<td>5.</td>
<td>Assistant Director of Agriculture</td>
<td>134</td>
<td>29</td>
<td>2</td>
<td>462</td>
<td>2.80</td>
<td>I</td>
</tr>
<tr>
<td>6.</td>
<td>Dy. Director of Agri.</td>
<td>126</td>
<td>35</td>
<td>4</td>
<td>452</td>
<td>3.73</td>
<td>II</td>
</tr>
<tr>
<td>7.</td>
<td>Jt. Director of Agri.</td>
<td>113</td>
<td>41</td>
<td>11</td>
<td>432</td>
<td>2.61</td>
<td>VI</td>
</tr>
<tr>
<td>8.</td>
<td>Local leaders</td>
<td>26</td>
<td>71</td>
<td>68</td>
<td>288</td>
<td>1.74</td>
<td>XIX</td>
</tr>
<tr>
<td>9.</td>
<td>Private dealers</td>
<td>16</td>
<td>62</td>
<td>87</td>
<td>259</td>
<td>1.56</td>
<td>XX</td>
</tr>
<tr>
<td></td>
<td><strong>GROUP CONTACT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Meetings</td>
<td>89</td>
<td>73</td>
<td>3</td>
<td>416</td>
<td>2.52</td>
<td>VIII</td>
</tr>
<tr>
<td>2.</td>
<td>Result demonstration</td>
<td>121</td>
<td>41</td>
<td>3</td>
<td>448</td>
<td>2.71</td>
<td>III</td>
</tr>
<tr>
<td>3.</td>
<td>Method demonstration</td>
<td>119</td>
<td>43</td>
<td>33</td>
<td>446</td>
<td>2.70</td>
<td>IV</td>
</tr>
<tr>
<td>4.</td>
<td>Training</td>
<td>106</td>
<td>58</td>
<td>1</td>
<td>435</td>
<td>2.63</td>
<td>V</td>
</tr>
<tr>
<td>5.</td>
<td>Discussion</td>
<td>722</td>
<td>81</td>
<td>12</td>
<td>390</td>
<td>2.36</td>
<td>X</td>
</tr>
<tr>
<td>6.</td>
<td>Field days</td>
<td>63</td>
<td>88</td>
<td>14</td>
<td>379</td>
<td>2.29</td>
<td>XII</td>
</tr>
<tr>
<td></td>
<td><strong>MASS CONTACT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Exhibition</td>
<td>95</td>
<td>69</td>
<td>1</td>
<td>424</td>
<td>2.56</td>
<td>VII</td>
</tr>
<tr>
<td>2.</td>
<td>Radio</td>
<td>69</td>
<td>80</td>
<td>16</td>
<td>383</td>
<td>2.32</td>
<td>XI</td>
</tr>
<tr>
<td>3.</td>
<td>Television</td>
<td>79</td>
<td>73</td>
<td>13</td>
<td>396</td>
<td>2.40</td>
<td>IX</td>
</tr>
<tr>
<td>4.</td>
<td>Educational films</td>
<td>63</td>
<td>81</td>
<td>21</td>
<td>372</td>
<td>2.25</td>
<td>XIV</td>
</tr>
<tr>
<td>5.</td>
<td>News papers</td>
<td>52</td>
<td>93</td>
<td>20</td>
<td>362</td>
<td>2.19</td>
<td>XVI</td>
</tr>
<tr>
<td>6.</td>
<td>Magazines</td>
<td>54</td>
<td>93</td>
<td>18</td>
<td>366</td>
<td>2.21</td>
<td>XV</td>
</tr>
</tbody>
</table>
The source "Result demonstration" ranked third in the source credibility perception of extension personnel. The reason may be that a successful result demonstration create faith among the farmers about the extension programme and extension personnel. Hence, result demonstration is the source of high credibility.

This finding is in line with the findings of Singh & Prasad (1990).

The "Agriculture Scientist" ranked fourth. The reason might be that scientist findout answer to the technical problems which could not be solved by higher level of extension personnel. Hence, they are of high credibility.

The Table-15 further revealed that superior extension workers and agricultural scientists belonged to the personal contact category of information sources. This seems to be highly logical because past researches of Ramchandran et al. (1979) and Malik (1988) advocated for their high intensity of influence in matters of understanding messages and conviction leading to acceptance of innovations. Therefore, the findings of this investigation also established contentions similar to past researchers.

Demonstration comes next to superior extension
personnel. This source belonged to group contact category of sources of information. This finding is again in line with the already established contentions by several researchers (Brunner and Yang, 1949; Vishnoi & Bose, 1961; Radhukar, 1958; Rao, 1965 and Maalouf, 1965). Moreover, this is again logical because the group contact sources of information are considered next to personal contact sources as per the intensity of influence.

Neighbourers, local leaders and private dealers were perceived to be least credible by the extension personnel. The reason might be that neighbourers are thought suspicious in nature, they may feel jealousy, whereas it is thought that local leader may manipulate the message and private dealers may hide the facts. Hence, they are perceived least credible. This finding is in line with the finding of Kalamegam and Menon (1977).

4.3 INFORMATION INPUT, PROCESSING AND OUTPUT PATTERN OF AGRICULTURAL EXTENSION PERSONNEL

4.3.1 Information Input Pattern:

The respondents were asked to indicate which sources of information they had utilized for obtaining agricultural information along with the intensity of use i.e. always, sometime and never. The computation of source utilization scores of respondents was done. The
Total choice score and mean score of individual respondent was computed. Accordingly the total choice score and mean scores were obtained. The rank order to the sources were decided on the basis of mean scores - higher the score, higher the rank order and lower the score, lower the rank order. The data collected from the respondents about the sources/ channel they had utilized for obtaining farm information are presented in Table-16.

Table-16 indicate that Books/package of practices booklet got the first rank among all 16 sources of information utilized by the extension personnel, followed by fortnightly trainings/group discussion, senior extension personnel, news letters, farm visit, other trainings, popular magazines, telecasts, radio broadcasts, leaflets/pamphlets, handouts, extension journals, professional meetings, workshop/seminar, kisan mela, personal visit to researchers and personal correspondence with researchers respectively.

Books/package of practices booklet stood first among all the sources utilized by the extension personnel, the probable reason might be that books provide detailed...
### TABLE 16: SOURCE OF INFORMATION UTILIZED BY THE EXTENSION PERSONNEL

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Source</th>
<th>Frequency of use</th>
<th>Total score</th>
<th>Mean score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Always</td>
<td>Some time</td>
<td>Never</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Professional meetings</td>
<td>43</td>
<td>115</td>
<td>7</td>
<td>201</td>
</tr>
<tr>
<td>2.</td>
<td>Books/package of practices booklet</td>
<td>137</td>
<td>26</td>
<td>2</td>
<td>300</td>
</tr>
<tr>
<td>3.</td>
<td>Popular magazine</td>
<td>88</td>
<td>73</td>
<td>4</td>
<td>249</td>
</tr>
<tr>
<td>4.</td>
<td>News letters</td>
<td>118</td>
<td>43</td>
<td>4</td>
<td>279</td>
</tr>
<tr>
<td>5.</td>
<td>Extension journals</td>
<td>60</td>
<td>82</td>
<td>23</td>
<td>202</td>
</tr>
<tr>
<td>6.</td>
<td>Leaflets/pamphlets/handouts</td>
<td>66</td>
<td>90</td>
<td>9</td>
<td>222</td>
</tr>
<tr>
<td>7.</td>
<td>Senior Extension personnel</td>
<td>116</td>
<td>49</td>
<td>0</td>
<td>281</td>
</tr>
<tr>
<td>8.</td>
<td>Kisan Mela</td>
<td>21</td>
<td>121</td>
<td>23</td>
<td>163</td>
</tr>
<tr>
<td>9.</td>
<td>Farm visit</td>
<td>115</td>
<td>48</td>
<td>2</td>
<td>278</td>
</tr>
<tr>
<td>10.</td>
<td>Fortnightly training/group discussion</td>
<td>130</td>
<td>35</td>
<td>0</td>
<td>295</td>
</tr>
<tr>
<td>11.</td>
<td>Other trainings</td>
<td>111</td>
<td>54</td>
<td>0</td>
<td>276</td>
</tr>
<tr>
<td>12.</td>
<td>Workshop/seminar</td>
<td>41</td>
<td>111</td>
<td>10</td>
<td>193</td>
</tr>
<tr>
<td>13.</td>
<td>Radio broadcasts</td>
<td>91</td>
<td>53</td>
<td>21</td>
<td>235</td>
</tr>
<tr>
<td>14.</td>
<td>Telecasts</td>
<td>93</td>
<td>51</td>
<td>21</td>
<td>237</td>
</tr>
<tr>
<td>15.</td>
<td>Personal visit to researchers</td>
<td>25</td>
<td>92</td>
<td>48</td>
<td>142</td>
</tr>
<tr>
<td>16.</td>
<td>Personal correspondence with researchers</td>
<td>23</td>
<td>72</td>
<td>70</td>
<td>118</td>
</tr>
</tbody>
</table>
information to the readers and package of practices are the booklets designed by the agricultural scientists in a way that they provide full and practical information to the users. The another reason may be that books can be consulted at any time on any particular topic, moreover they are handy to keep. Hence, this media are utilized by the majority of the extension personnel to obtain the farm informations. This finding is in line with the findings of Byra Reddy (1976) and Sridhar (1977).

Fortnightly training/group discussion stood second. The reason may be that fortnightly trainings are given by the subject matter specialists, trained particularly for this job and most of the doubts of extension personnel are cleared in the fortnightly trainings. The problems are discussed in group discussions during fortnightly training. The extension personnel obtain lot of information during these fortnightly trainings and group discussion. Hence, its second place is justified.

The senior extension personnel ranked third as a source of information. Senior extension personnel provide guidance and latest information to their subordinates during their visit or during fortnightly training programmes. Hence, their position as a source of information could not be ignored.
Kisan melas, personal visit to researchers and personal correspondence with researchers were the sources of information utilized by very less number of respondents. The reason may be that kisan melas are not organised very frequently and extension personnel could not get the opportunity to utilize this source of information. The extension personnel under study were the AEOs and VLWs, they might be feeling hesitation to visit researchers personally or even write to the researchers directly. Secondly, they might have been ensured by the subject matter specialist during fortnightly trainings to discuss with the research scientist about the problem if they had any, and might be replied in the next meeting. So, they did not feel necessity to visit research scientist or to write to the research scientist even. VLWs and AEOs had a strict schedule of visits and there is no provision for personal visit to the research scientists. Hence, these sources were utilized by very few numbers of respondents.

The extension personnel were also categorised according to extent of source utilization in to three categories i.e. low, medium and high. The data are presented in Table-17.

The data presented in Table-17 reveal that majority of AEO (80.00 per cent) fell into medium level of information
TABLE 17: EXTENT OF SOURCE UTILIZATION BY BOTH CATEGORIES OF EXTENSION PERSONNEL FOR OBTAINING FARM INFORMATION

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Level of source utilization</th>
<th>AEO (N=25)</th>
<th>VLW (N=140)</th>
<th>Total (N=165)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Low</td>
<td>4</td>
<td>18</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(16)</td>
<td>(12.87)</td>
<td>(13.33)</td>
<td></td>
</tr>
<tr>
<td>2. Medium</td>
<td>20</td>
<td>107</td>
<td>127</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(80)</td>
<td>(76.42)</td>
<td>(76.97)</td>
<td></td>
</tr>
<tr>
<td>3. High</td>
<td>1</td>
<td>15</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4)</td>
<td>(10.71)</td>
<td>(9.70)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>140</td>
<td>165</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(100)</td>
<td>(100)</td>
<td>(100.00)</td>
<td></td>
</tr>
</tbody>
</table>

Mean = 22.50  S.D. = 4.65

Figures in parenthesis indicate percentage.

input category followed by low (16.00 per cent) and high level (4.00 per cent) respectively. Similarly majority of VLWs (76.42 per cent) were in medium category followed by low and high level of information input respectively. The trend of both categories was more over similar. In general, majority (76.97 per cent) of respondents fell into medium level of information input level followed by low (13.33 per cent) and high (9.70 per cent) respectively. This reveal that the respondents mainly consult the literature circulated to them in fortnightly trainings meaning thereby that they are more localite in their approach for obtaining information regarding farm informations. It is indicated that extension personnel had low to medium level of information
input pattern. This means they mainly depended on officially circulated farm literature for obtaining information. The extension personnel instead of adhering themselves to the localite sources of information should also consult sources of information outside organization composite sources.

4.3.2 Information Processing Pattern:

In the present study the information processing pattern of extension personnel was studied in terms of information evaluation, information storage and information transformation pattern.

4.3.2.1 Information evaluation pattern:

The respondents were asked to indicate the procedures they adopted for the evaluation of information they had obtained from the various sources along with the frequency of consideration i.e. always, some time and never.

The data obtained from the respondents are presented in Table-18.

Table-18 shows that majority of the respondents considered the economic and local feasibility of innovation as main characteristics of evaluation and ranked first, followed by the procedures viz., weigh in the light of past experience, suitability of the message to local situations,
compatibility of message with other information, complexity of message, accepted unreservedly and divisibility of message as per convenience.

TABLE 18: EVALUATION OF FARM INFORMATION BY THE EXTENSION PERSONNEL

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Characteristics of evaluation</th>
<th>Frequency of consideration</th>
<th>Total score</th>
<th>Mean score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Always</td>
<td>Some</td>
<td>Never</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Accepted unreservedly</td>
<td>57</td>
<td>83</td>
<td>25</td>
<td>197</td>
</tr>
<tr>
<td>2.</td>
<td>Weigh in the light of past experience</td>
<td>101</td>
<td>59</td>
<td>5</td>
<td>261</td>
</tr>
<tr>
<td>3.</td>
<td>Consider its economic and local feasibility</td>
<td>114</td>
<td>47</td>
<td>4</td>
<td>275</td>
</tr>
<tr>
<td>4.</td>
<td>Suitability of message to local situation</td>
<td>93</td>
<td>69</td>
<td>3</td>
<td>255</td>
</tr>
<tr>
<td>5.</td>
<td>Complexity of the message</td>
<td>63</td>
<td>88</td>
<td>14</td>
<td>214</td>
</tr>
<tr>
<td>6.</td>
<td>Compatibility of message with other informations</td>
<td>84</td>
<td>63</td>
<td>18</td>
<td>231</td>
</tr>
<tr>
<td>7.</td>
<td>Divisibility of message as per convenience</td>
<td>35</td>
<td>85</td>
<td>45</td>
<td>155</td>
</tr>
</tbody>
</table>

The characteristics of evaluation, "consider its economic and local feasibility" ranked first. The probable reason may be that if the information had its economic importance and local feasibility then it will be adopted by the farmers very easily. Hence, the extension personnel gave first preference to the economic and local feasibility
of the innovation. This finding is similar to the findings of Sridhar (1977) and Ambastha (1986).

The characteristics of innovation evaluation, "weigh in the light of past experience", ranked second. The reason may be that the extension personnel were working with the farmers continuously and if their past experience shows that the innovation is not worth use they will not adopt that innovation. Past experiences are considered the base for future action. Therefore, this procedure was used by majority of the extension personnel. This study is in line with the findings of Akhouri (1973), Sanoria & Singh (1976), Byra Reddy (1976) and Sridhar (1977).

Accepted unreservedly and divisibility of the message as per convenience considered of least importance by the extension personnel. The probable reason may be that, if the message is accepted unreservedly, without considering its another characteristics the results may be unfruitful, and there will be the loss of time and money. The divisibility of the message may liquidate its importance. So, these characteristics of information evaluation were considered of least importance by the extension personnel. This finding is in conformity with the findings of Sridhar (1977).

4.3.2.2 Information Preservation Pattern:

The extension personnel were asked to indicate
the procedures they adopted for the preservation of the information. The data collected from the respondents are presented in Table-19.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Procedure</th>
<th>Frequency of use</th>
<th>Total score</th>
<th>Mean score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Always</td>
<td>Some time</td>
<td>Never</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Go through it at a glance</td>
<td>122</td>
<td>29</td>
<td>14</td>
<td>273</td>
</tr>
<tr>
<td>2</td>
<td>Study the useful information carefully</td>
<td>155</td>
<td>10</td>
<td>--</td>
<td>320</td>
</tr>
<tr>
<td>3</td>
<td>Take note in diary</td>
<td>146</td>
<td>18</td>
<td>1</td>
<td>310</td>
</tr>
<tr>
<td>4</td>
<td>Preserve the information in personal custody</td>
<td>133</td>
<td>29</td>
<td>3</td>
<td>295</td>
</tr>
<tr>
<td>5</td>
<td>Maintain subject matter file</td>
<td>127</td>
<td>28</td>
<td>10</td>
<td>282</td>
</tr>
</tbody>
</table>

The data presented in Table-19, reveal that the procedure "study the information carefully" scored maximum and ranked first followed by - take note in diary, preservation of information in personal custody, maintain subject matter file and go through it at a glance.

The procedure "study the useful information carefully" stood first. The reason may be that if the information is studied carefully then the important point of the information could be kept in memory and if the information
seemed to be valuable then other procedures for its storage could be taken into consideration. Hence, the study of useful information carefully is very important and its first rank is justified.

"Take note in diary" was the another procedure of information preservation and ranked second. Every information could not be kept in memory. Therefore, the taking of note in diary become necessary. So that the information could be memorized by consulting the diary. This finding is in line with the findings of Akhouri (1973), Byra Reddy (1976), Sanoria & Singh (1976) and Ambastha (1986).

The procedure "go through it at a glance" ranked least. The probable reason might be that by going through at a glance, the importance of information could not be judged minutely. Hence, this procedure was adopted by comparatively less numbers of respondents.

4.3.2.3 Information Transformation pattern :-

For the communication of knowledge to the farmers the processed knowledge has to be converted into a form which can easily be understood by the farmers for acceptance. The extension personnel were asked to indicate the procedures of information transformation, they had adopted along with the frequency of use. The data collected from the respondents are presented in Table-20.
Table 20 reveals that "translate into local dialects" was the procedure ranked first for the information transformation and followed by use of chart and graphs, use of posters, use of cyclostyle material, use of leaflet and handouts, and use of slide and transparency etc. respectively.

Table 20, reveals that "translate into local dialects" was the procedure got highest rank among all the six procedure discussed for information transformation. The probable reason might be that some time high sounding and more technical words are used by the scientist which are beyond the intelectual competence of an ordinary man. Majority of the Indian farmers are illiterate. To make them
well conversent with the latest farm technology it become necessary that the information should be conveyed to them in their local languages. Therefore, procedure of "translate the technical information into local dialects" stood first. This finding is in line with the findings of Sanoria & Singh (1976), Sridhar (1977) and Chidanandappa (1985).

Use of chart and graph got second position. Extension personnel convert the farm informations into the visual form of chart and graphs so that it could be easily understood by the majority of farmers. This finding is in line with the findings of Byra Reddy (1976), Sridhar (1977) and Chidanandappa (1985).

Use of slides and transparencies ranked least. The probable reason might be that this type of facility may not be available with every AEO and VLM circle. Hence, they had used this procedure in very less frequency to transfer the agricultural information to farmers.

The extension personnel were also divided into three levels i.e. low, medium and high, according to their information processing pattern. The data are presented in Table-21.

Table-21 shows that the majority (64.00 per cent) of AEOs fell in medium level of information processing
pattern, followed by high level (24.00 per cent) and low level (12.00 per cent) respectively. Whereas in VILWs majority (79.28 per cent) were in medium level followed by high and low levels with 12.86 per cent and 7.86 per cent of respondents respectively.

**TABLE 21: DISTRIBUTION OF EXTENSION PERSONNEL ACCORDING TO THEIR LEVEL OF INFORMATION PROCESSING PATTERN**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Levels of information processing pattern</th>
<th>AEO N=25</th>
<th>VILW N=140</th>
<th>Total N=165</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Low</td>
<td>3 (12)</td>
<td>11 (7.86)</td>
<td>14 (8.48)</td>
</tr>
<tr>
<td>2.</td>
<td>Medium</td>
<td>16 (64)</td>
<td>111 (79.28)</td>
<td>127 (76.97)</td>
</tr>
<tr>
<td>3.</td>
<td>High</td>
<td>6 (24)</td>
<td>18 (12.86)</td>
<td>24 (14.55)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>25 (100)</td>
<td>140 (100)</td>
<td>165 (100)</td>
</tr>
</tbody>
</table>

Mean = 28.05  
S.D. = 4.40  
Figure in parenthesis indicate percentage.

In general majority of extension personnel (76.97 per cent) fell into medium level of information processing pattern. Whereas 14.55 per cent and 8.48 per cent were in high and low levels respectively. This shows that general trend of information processing pattern of extension personnel is more over similar to their individual trends. Information processing pattern is directly related to information input pattern. This is because of the fact that processing is done on the basis of obtained information.
in relation to users conditions.

It can be concluded from Table-21, that in category wise as well as in general, information processing pattern of extension personnel was of medium level. This finding is similar to the finding of Singh (1988).

4.3.3 Information output pattern:

The respondents were asked to indicate the procedures and techniques they had used for the dissemination of processed informations. Respondents were classified into three groups viz. (i) Low, (ii) Medium and (iii) High, according to their levels of information output pattern. The data collected from them about their information output pattern are presented in Table-22.

**TABLE 22 : DISTRIBUTION OF EXTENSION PERSONNEL ACCORDING TO THEIR INFORMATION OUTPUT PATTERN**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Levels</th>
<th>AEO N=25</th>
<th>VLW N=140</th>
<th>Total N=165</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Low</td>
<td>2 (8)</td>
<td>13 (9.29)</td>
<td>15 (9.09)</td>
</tr>
<tr>
<td>2.</td>
<td>Medium</td>
<td>21 (84)</td>
<td>117 (83.57)</td>
<td>138 (83.64)</td>
</tr>
<tr>
<td>3.</td>
<td>High</td>
<td>2 (8)</td>
<td>10 (7.14)</td>
<td>12 (7.27)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>25 (100)</td>
<td>140 (100)</td>
<td>165 (100)</td>
</tr>
</tbody>
</table>

Mean = 229.60  
S.D. = 24.90  
Figure in parenthesis indicate percentage.
The data presented in Table-22, reveal that majority of the AEOs (84.00 per cent) were in medium level of information output pattern. Followed by equal number (8.00 per cent) of low and high levels. Whereas in VLWs majority (83.57 per cent) were in medium level followed by low (9.29 per cent) and high (7.14 per cent) of respondents respectively. The Table revealed that both categories were having medium level of information output pattern.

In general, majority (83.64 per cent) of the respondents were in medium level of information output pattern followed by low and high levels with 9.09 per cent and 7.27 per cent respectively.

This made clear that medium level of information input and information processing patterns lead to low to medium information output pattern. This is logical enough because information output pattern is definitely linked with information obtained and processed by an extension personnel. Information output pattern shall remain low, if an extension personnel has got low level of farm information.

4.3.4 Inter-system communication:

4.3.4.1 Extension Personnel-Researchers’ Communication (EP-RC):

The degree to which the members of extension system
communicated with the research system for acquiring information and delivering farmers problem about farming were studied under this heading. The respondents were asked to indicate the methods along with frequency they had used in receiving agricultural information from the researchers and for the feed back for obtaining further solution of the problems. The data collected from the respondents are tabulated in Table-23.

**TABLE 23 : DISTRIBUTION OF RESPONDENTS ACCORDING TO EXTENSION PERSONNEL-RESEARCHERS COMMUNICATION (EP-RC) N=165**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Communication</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Low (upto score 10)</td>
<td>16</td>
<td>9.70</td>
</tr>
<tr>
<td>2.</td>
<td>Medium (from score 11 to 19)</td>
<td>141</td>
<td>85.45</td>
</tr>
<tr>
<td>3.</td>
<td>High (above 19 score)</td>
<td>8</td>
<td>4.85</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>165</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Mean = 15.12  
S.D. = 4.39  

Data tabulated in Table-23 reveal that majority (85.45 per cent) of them placed in medium level of communication between extension personnel and researchers. 9.70 per cent were in low level and 4.85 per cent of high level of extension personnel-researchers communication. Extension personnel-researcher communication is highly essential because the farmers depend heavily on researchers in matter of receiving information. This indicates that there exist a medium link between extension personnel and
researchers. This is not a so healthy sign as it may hamper the quick transfer of newly evolved farm technology to the users because the extension personnel themselves may be deprived of the latest technical know-how owing to their weak to medium links with the researchers.

4.3.4.2 Extension Personnel-Farmers' Communication (EP-FC):

The extension personnel used several media/methods for transferring agricultural technology to the farmers. The respondents were asked to indicate the media/methods they had used along with the frequency of use, to transfer the agriculture technology to the farmers. The data collected from the respondents are presented in Table-24.

**TABLE 24 : DISTRIBUTION OF RESPONDENTS ACCORDING TO EXTENSION PERSONNEL-FARMERS' COMMUNICATION**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Low (score upto 10)</td>
<td>22</td>
<td>13.33</td>
</tr>
<tr>
<td>2.</td>
<td>Medium (score 11 to 17)</td>
<td>123</td>
<td>74.55</td>
</tr>
<tr>
<td>3.</td>
<td>High (score above 17)</td>
<td>20</td>
<td>12.12</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>165</td>
<td>100.00</td>
</tr>
</tbody>
</table>

**Mean = 13.55**  
**S.D. = 3.22**

The data presented in Table-24, reveal that majority (74.55 per cent) of extension personnel belonged to medium EP-FC category, followed by low (13.33 per cent) and high (12.12 per cent) EP-FC categories, respectively.
Further probing of data indicated that the communication of more than 88.00 per cent extension personnel with the farmers was found to be of low to medium level. Only 12.12 per cent of extension personnel were in high category which is not a quite healthy situation for the growth of extension work. The extension personnel need to have dynamic, live and close links with the farmers for dissemination of useful information to them and also make them able to understand and use new farm technology but the medium to low communication between these two categories as evident from the data may not be that much helpful in achieving the desired extension work. This finding is in line with the finding of Singh (1988).

4.3.4.3 Extension Personnel-Farmers Contact Span (EP-FCS):

The extension personnel were asked to indicate to whom they had contacted in the village and with what frequency, to communicate the farm information. The data collected from them are presented in Table-25.

TABLE 25 : DISTRIBUTION OF RESPONDENTS ACCORDING TO EXTENSION PERSONNEL-FARMERS CONTACT SPAN (EP-FCS)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Contact span</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Low (score upto 18)</td>
<td>31</td>
<td>18.79</td>
</tr>
<tr>
<td>2.</td>
<td>Medium (score 19 to 24)</td>
<td>108</td>
<td>65.45</td>
</tr>
<tr>
<td>3.</td>
<td>High (above 24)</td>
<td>26</td>
<td>15.76</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>165</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Mean = 21.28  
S.D. = 2.93
The data presented in Table-25, reveal that majority (65.45 per cent) of extension personnel were in medium level of contact span with the farmers, followed by the low (18.79 per cent) and high (15.76 per cent) contact span respectively. However, more than 84.00 per cent of extension personnel have contacted farmers low to moderately in the matter of dissemination of farm information, convincing them for use and so on. But only 15.76 per cent of extension personnel had high level of contact span. It was found that they had contacted only contact farmers category, whereas contact with opinion leaders and panchayat members was of very low level. This is also not desirable for the overall development of farmers community. This suggests that they had utilized much of their time for activities other than their extension work and their emphasis on farmers meetings were not found upto the desirable level. Under such a situation one can not think of extension work of high quality. This finding is in line with the findings of Singh (1988).

4.4 ASSOCIATION OF EXTENSION PERSONNEL'S ANTECEDENT VARIABLES WITH THEIR COMMUNICATION PATTERN

It is thought that antecedent variables like age, education, training experience, family background, infrastructural facilities for communication, job satisfaction, job commitment and job activity preference affect the
communication pattern of extension personnel. The effect of these antecedent variables on information input pattern, information processing pattern and information output pattern was analysed differently by using zero order correlation. The results of zero order correlation have been presented under subsequent heads as under:

4.4.1 **Correlation coefficient between information input pattern and antecedent variables of agricultural extension personnel**: 

The association of nine antecedent factors was studied with information input pattern of the extension personnel. The results are presented in Table-26.

**TABLE 26: ZERO ORDER CORRELATION COEFFICIENT BETWEEN INFORMATION INPUT PATTERN AND ANTECEDENT VARIABLES OF AGRICULTURAL EXTENSION PERSONNEL**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Antecedent variables</th>
<th>Correlation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age</td>
<td>0.08053</td>
</tr>
<tr>
<td>2.</td>
<td>Education</td>
<td>0.01685</td>
</tr>
<tr>
<td>3.</td>
<td>Training</td>
<td>0.10468</td>
</tr>
<tr>
<td>4.</td>
<td>Experience</td>
<td>-0.05890</td>
</tr>
<tr>
<td>5.</td>
<td>Family background</td>
<td>0.00620</td>
</tr>
<tr>
<td>6.</td>
<td>Infrastructural facilities for communication</td>
<td>0.08661</td>
</tr>
<tr>
<td>7.</td>
<td>Job satisfaction</td>
<td>0.09513</td>
</tr>
<tr>
<td>8.</td>
<td>Job commitment</td>
<td>0.24410*</td>
</tr>
<tr>
<td>9.</td>
<td>Job activity preference</td>
<td>-0.05282</td>
</tr>
</tbody>
</table>

* = Significant at 0.05 level of probability.
4.4.1.1 Association between age and information input pattern of extension personnel:

The data in Table-26 were used to test the null hypothesis that there will be no relationship between age and information output pattern of extension personnel.

The calculated correlation coefficient value of \( r = 0.08053 \) was non-significant at 0.05 level. Hence, the null hypothesis was accepted.

It can be concluded that age of extension personnel had non-significant relationship with their information input pattern.

This finding was in conformance with that of Patel (1978) and Malik et al. (1990).

4.4.1.2 Association between education and information input pattern:

The data in Table-26 were used to test the null hypothesis that there will be no relationship between education and information input pattern of extension personnel.

The calculated correlation coefficient value of \( r = 0.06185 \) was non-significant at 0.05 level. Hence, null hypothesis was accepted.

It can be concluded that education had
non-significant relationship with information input pattern of extension personnel.

This finding was in agreement with the findings of Shetty and Murthy (1971) and Malik et al. (1990).

4.4.1.3 Association between training and information input pattern:

The data presented in Table-26 reveal that the calculated correlation coefficient value of 'r' was 0.10468 which was not significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between the training and information input pattern of extension personnel was accepted.

It can be concluded that training had non-significant relationship with information input pattern of extension personnel.

This might be due to the fact that extension personnel are getting same type of training under T & V programme and very less trainings, other than the fortnightly trainings, had been attended by the extension personnel of this study.

This finding was in agreement with those of Pelze & Andrew (1966) and Malik et al. (1990).
4.4.1.4 **Association between experience and information input pattern:**

The data presented in Table-26 reveal that the calculated correlation coefficient value of $r = -0.05890$ was non-significant at 0.05 level of probability. As the calculated value of $r$ was less than the table value of $r$. Hence, null hypothesis that there is no association between experience and information input pattern of extension personnel was accepted.

It can be concluded that experience had non-significant relationship with the information input pattern of extension personnel.

Experience is showing the negative trend. It means higher the experience lower the information input pattern. The probable reason may be because of the fact that higher experienced extension personnel considered themselves to have adequate information and might have not thought of obtaining additional information.

This finding was in agreement with those of Venkateshappa (1983) and Malik et al. (1990).

4.4.1.5 **Association between family background and information input pattern:**

The data presented in Table-26 reveal that calculated correlation coefficient value of $r = 0.00620$ was less
than the table value of \( r \) at 0.05 level of probability. It means the relationship was non-significant. Hence, the null hypothesis that there will be no relationship between family background and information input pattern of extension personnel was accepted.

It can be concluded that family background had non-significant relationship with information input pattern of extension personnel.

This finding was in line with that of Malik et al. (1990) but contradictory to the findings of Sengupta (1963), Salvi & Dudhani (1967), Patel & Leagans (1968), Siddaramaiah & Gowda (1987). They reported highly significant relationship with job performance.

4.4.1.6 Association between infrastructural facilities for communication and information input pattern:

The data presented in Table-26 reveal that calculated correlation coefficient value of \( r = 0.08661 \) was less than the critical value at 0.05 level of probability which indicate non-significant association between infrastructural facilities and information input pattern of extension personnel. Hence, the null hypothesis that there is no association between infrastructural facilities for communication and information input pattern of extension personnel was accepted.
It can be concluded that infrastructural facilities for communication had positive but non-significant relationship with information input pattern of extension personnel.

This finding was in agreement with the findings of Reddy & Jayaramaiah (1988) and Malik et al. (1990).

4.4.1.7 Association between job satisfaction and information input pattern

The table-26 shows that calculated correlation coefficient value of \( r = 0.09513 \) at 0.05 level of probability was less than the critical value which indicated non-significant relationship between job satisfaction and information input pattern of extension personnel. Hence, the null hypothesis that there is no association between job satisfaction and information input pattern of extension personnel was accepted.

It can be concluded that the job satisfaction had non-significant relationship with the information input pattern of extension personnel.

The positive trend of job-satisfaction is a healthy symptom. The personnel who are fully satisfied with their job might be interesting in getting additional information for dissemination among users.
This finding was in line with those of Perumal & Rai (1978) and Murthy & Somasundram (1989).

4.4.1.8 **Association between job commitment and information input pattern of extension personnel:**

The data presented in Table-26 reveal that calculated correlation coefficient value of $r = 0.24410$ was significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between job commitment and information input pattern of extension personnel was rejected.

It can be concluded that job commitment had positive and significant relationship with information input pattern of extension personnel. This means that the extension personnel who were highly committed to their job had high information input and obtained more information for dissemination to the farmers and vice versa.

This finding was in agreement with the finding of Pelze & Andrew (1966) whereas, Patel (1978) reported the negatively significant relationship of job commitment with information input pattern of extension personnel.

4.4.1.9 **Association between job activity preference and information input pattern of extension personnel:**

Data presented in Table-26 reveal that calculated
correlation coefficient value of $r = -0.05282$ was non-significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between job activity preference and information input pattern of extension personnel was accepted.

Job activity preference and information input pattern of extension personnel were in negative trend. Since job activity preference is personal liking and governed by several considerations like pay, post they carry, status of the post, nature of the job, whether remunerative or not etc. therefore, the quantum of information extension personnel possessed did not seem to have very much linkage with the job activity preference.

It can be concluded that the job activity preference had negative but non-significant relationship with the information input pattern of agricultural extension personnel.

This finding is in line with the findings of Pelze & Andrew (1966), Patel (1978) and Ambastha (1986). They reported non-significant relationship between job activity preference and information input pattern, whereas Malik et al. (1990) reported negatively significant relationship.

4.4.2 Correlation coefficient between information processing pattern and antecedent variables of agricultural extension personnel:

The relationship of nine antecedent variables with
information processing pattern of extension personnel was studied. The results are presented in Table-27.

**TABLE 27 : ZERO ORDER CORRELATION COEFFICIENT BETWEEN INFORMATION PROCESSING PATTERN AND ANTECEDENT VARIABLES OF AGRICULTURAL EXTENSION PERSONNEL**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Antecedent variables</th>
<th>Correlation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age</td>
<td>0.07817</td>
</tr>
<tr>
<td>2.</td>
<td>Education</td>
<td>0.05068</td>
</tr>
<tr>
<td>3.</td>
<td>Training</td>
<td>0.04949</td>
</tr>
<tr>
<td>4.</td>
<td>Experience</td>
<td>0.06036</td>
</tr>
<tr>
<td>5.</td>
<td>Family background</td>
<td>0.13568</td>
</tr>
<tr>
<td>6.</td>
<td>Infra-structural facilities for communication</td>
<td>0.09576</td>
</tr>
<tr>
<td>7.</td>
<td>Job satisfaction</td>
<td>0.15858*</td>
</tr>
<tr>
<td>8.</td>
<td>Job commitment</td>
<td>0.16279*</td>
</tr>
<tr>
<td>9.</td>
<td>Job activity preference</td>
<td>-0.13184</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level of probability.

4.4.2.1 **Association between age and information processing pattern:**

The data presented in Table-27 reveal that the calculated correlation coefficient value of $r = 0.07817$ was non-significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between the age and information processing pattern of extension personnel was accepted.

It can be concluded that the age of agricultural extension personnel had positive but non-significant
relationship with information processing pattern.

This finding was in agreement with the finding of Malik et al. (1990).

4.4.2.2 Association between education and information processing pattern of agricultural extension personnel:

Data presented in Table-27 reveal that calculated correlation coefficient value of $r = 0.05068$ was less than the critical value at 0.05 level of probability. It means the result was non-significant. Hence, the hypothesis that there will be no relationship between education and information processing pattern of extension personnel was accepted.

It can be concluded that education and information processing pattern of agricultural extension personnel had positive but non-significant relationship.

This finding was in line with the findings of Patel (1978), Talukdar (1984) and Malik et al. (1990).

4.4.2.3 Association between training and information processing pattern:

The data presented in Table-27 reveal that calculated correlation coefficient value of $r = 0.04949$ was non-significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between training
and information processing pattern of agricultural extension personnel was accepted.

It can be concluded that training had non-significant but positive relationship with information processing pattern of agricultural extension personnel.

This finding was in agreement with the findings of Pelze & Andrew (1966), Patel & Leagans (1968) and Malik et al. (1990).

4.4.2.4 Association between experience and information processing pattern

The data presented in Table-27 reveal that calculated correlation coefficient value of $r = 0.06036$ was non-significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between experience and information processing pattern of agricultural extension personnel was accepted. This means experience of extension personnel was not associated with information processing pattern. The high or low experience do not affect the information processing pattern. The probable reason may be that the extension personnel had to contact the same type of clients under fixed programme of Training & Visit. They had similar type of information to disseminate during the coming fortnight. Because the message was more over similar and the time span was also equal for the
dissemination of message. Therefore, the information processing pattern might be similar.

It can be concluded that experience had positive but non-significant relationship with information processing pattern of extension personnel.

This finding is in line with the finding of Malik et al. (1990).

4.4.2.5 Association between family background and information processing pattern:

The data presented in Table-27 reveal that calculated correlation coefficient value of $r = 0.13568$ at 0.05 level of probability was non-significant. Hence, the null hypothesis that there will be no relationship between family background and information processing pattern of agricultural extension personnel was accepted. It means family background of extension personnel do not affect the information processing pattern. The reason may be that extension personnel are getting same type of trainings continuously. The message for dissemination of agricultural information was also same and extension personnel are doing this type of processing continuously. Therefore, processing of message do not affect with the family background of extension personnel.

It can be concluded that family background had
non-significant but positive relationship with information processing pattern of agricultural extension personnel. This finding was in line with the finding of Malik et al. (1990).

4.4.2.6 Association between infrastructural facilities for communication and information processing pattern

The data presented in Table-27 reveal that calculated correlation coefficient value of $r = 0.09576$ was non-significant at 0.05 level of probability. That means infrastructural facilities for communication do not affect the information processing pattern of agricultural extension personnel. Null hypothesis that there will be no relationship between infrastructural facilities with the information processing pattern of agricultural extension personnel was accepted.

It can be concluded that infrastructural facilities had positive but non-significant relationship with information processing pattern of agricultural extension personnel. This finding is in line with the finding of Malik et al. (1990).

4.4.2.7 Association between job satisfaction and information processing pattern of agricultural extension personnel

The data presented in Table-27 reveal that
calculated correlation coefficient value or \( r = 0.15858 \) was significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between job satisfaction and information processing pattern was rejected. That means, job satisfaction affect the information processing pattern positively, i.e. higher the job satisfaction, more methods and procedures are adopted by the extension personnel for evaluation, storage and transformation of farm information. More satisfied extension personnel take keen interest in proper preservation of acquired information for dissemination at the time of need.

It can be concluded that job satisfaction had positive significant relationship with information processing pattern of extension personnel.

This finding was in agreement with the findings of Ambastha (1986).

4.4.2.8 Association between job-commitment and information processing pattern:

The data presented in Table-27 reveal that calculated correlation coefficient value of \( r = 0.16279 \) was significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between job commitment and information processing pattern of agricultural
extension personnel was rejected.

It can be concluded that job commitment had significant relationship with information processing pattern of extension personnel. The personnel who are more committed for information input, naturally will be more committed for the processing of obtained information. Positively significant job commitment is a very healthy symptom of progress. If a person will devote more time in performing the assigned job, the result will be better and vice versa.

This finding is in conformity with that of Pelze & Andrew (1966).

4.4.2.9 Association between job preference and information processing pattern:

The data presented in Table-27 reveal that calculated correlation coefficient value of \( r = -0.13184 \) was non-significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between job activity preference and information processing pattern of agricultural extension personnel was accepted.

It can be concluded that job activity preference and information processing pattern had negative but non-significant relationship. The reason may be that as the information input pattern was showing negative trend with job preference, naturally the information processing pattern
will also show the negative relation with job activity preference.

This finding is similar to the findings of Pelze & Andrew (1966), Patel (1978) and Malik et al. (1990) in respect of significance, but they all exhibited the positive trend.

4.4.3 Correlation coefficient between information output pattern and antecedent variables of agricultural extension personnel:

The association between nine antecedent variables and information output pattern of extension personnel was studied. The results are presented in Table-28.

TABLE 28 : ZERO ORDER CORRELATION COEFFICIENT BETWEEN INFORMATION OUTPUT PATTERN AND ANTECEDENT VARIABLES OF AGRICULTURAL EXTENSION PERSONNEL

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Antecedent variables</th>
<th>Correlation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age</td>
<td>-0.15687*</td>
</tr>
<tr>
<td>2.</td>
<td>Education</td>
<td>-0.05025</td>
</tr>
<tr>
<td>3.</td>
<td>Training</td>
<td>0.06541</td>
</tr>
<tr>
<td>4.</td>
<td>Experience</td>
<td>-0.09590</td>
</tr>
<tr>
<td>5.</td>
<td>Family background</td>
<td>0.26780*</td>
</tr>
<tr>
<td>6.</td>
<td>Infrastructural facilities for communication</td>
<td>0.27128*</td>
</tr>
<tr>
<td>7.</td>
<td>Job satisfaction</td>
<td>0.29070*</td>
</tr>
<tr>
<td>8.</td>
<td>Job commitment</td>
<td>0.22422*</td>
</tr>
<tr>
<td>9.</td>
<td>Job activity preference</td>
<td>0.09343</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level of probability.

Critical Value : 0.15282
4.4.3.1 **Association between age and information output pattern of agricultural extension personnel**

The data regarding association between age and information output pattern are presented in Table-28. Data presented in Table-28 reveal that calculated value of \( r = -0.15687 \) was significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between the age and output pattern of extension personnel was rejected.

It can be concluded that age of agricultural extension personnel had negatively significant relationship with information output pattern. It means the output pattern of extension personnel significantly decreased with increase in age. It might be due to the reason that extension personnel of older age think that they had done lot of work in the past years, now they are going to be retired very shortly and become slow in relation to information output pattern. The other reason may be that the older aged extension workers had been working on the same post without further promotion for the last many years. They think that more output is not going to improve their status in the department and become slow. It is also thought that with the increase in age, social involvement also increased, and aged person would be less aggressive.
and enthusiastic than younger one for the dissemination of stored information. These all leads to low output.

4.4.3.2 Association between education and information output pattern of agricultural extension personnel:

The data presented in Table-28 reveal that calculated correlation coefficient value of \( r = -0.05025 \) was non-significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between education and information output pattern of extension personnel was accepted.

It can be concluded that education had negative non-significant relationship with information output pattern of agricultural extension personnel. This finding was contradictory to the findings of Patel (1978) and Ambastha (1986).

Education showing negative trend, this may be due to the fact that those who have higher education may aspire for better job and also may consider themselves misfit for extension type of job. This leads to low information output pattern.

4.4.3.3 Association between training and information output pattern:

The data presented in Table-28 reveal that calculated correlation coefficient value of \( r = 0.06541 \) was
non-significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between training and information output pattern of agricultural extension personnel was accepted.

It can be concluded that training had non-significant relationship with information output pattern of extension personnel.

This finding is in line with the findings of Pelze & Andrew (1966). The probable reason may be that extension personnel are getting similar type of fortnightly training under T & V programme. The same type of training will result into similar type of output.

4.4.3.4 Association between experience and information output pattern of agricultural extension personnel

The data presented in Table-28 reveal that calculated correlation coefficient value $r = -0.09590$ was non-significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between experience and information output pattern of agricultural extension personnel was accepted.

It can be concluded that experience and information output of extension personnel had negative non-significant relationship.
Experience is showing negative trend, the probable reason may be that experienced person think themselves more acquainted with the farm information, hence, put less efforts to obtain more information resulted into low output.

This findings got support from the findings of Popat (1991).

4.4.3.5 Association between family background and information output pattern of extension personnel:

The data presented in Table-28 reveal that calculated correlation coefficient value of \( r = 0.2678 \) was significant at 0.05 level of probability. Hence, the null hypothesis that there will be no relationship between the family background and information output pattern of agricultural extension personnel was rejected.

It can be concluded that family background had positive and significant relationship with the information output pattern of agricultural extension personnel.

This finding got support from the findings of Siddaramaiah and Gowda (1987).

This is simple, the extension person who had rural family background will be more acquainted with the rural people, with their customs and norms and could generate
good efforts for the dissemination of agricultural information.

4.4.3.6 **Association between infrastructural facilities for communication and information output pattern of extension personnel**:

The data presented in Table-28 reveal that the calculated value of $r = 0.26780$ was significant at $0.05$ level of probability. Hence, the hypothesis that there will be no relationship between infrastructural facilities for communication and information output pattern of extension personnel was rejected. The probable reason may be that a person who had good infrastructural facilities for communication can disseminate the gained information effectively.

It can be concluded that infrastructural facility for communication had significant relationship with information output pattern of agricultural extension personnel.

This finding is in line with the findings of Talukdar (1984) and Popat (1991).

4.4.3.7 **Association between job satisfaction and information output pattern of agricultural extension personnel**:

The Table-28 reveals that the calculated value of $r = 0.29070$ was significant at $0.05$ level of probability.
Hence, the null hypothesis that there will be no relationship between the job satisfaction and information output pattern of agricultural extension personnel was rejected.

It can be concluded that job satisfaction had positive and significant correlation with the information output pattern of agricultural extension personnel. It is simple, when a person will be satisfied with his job he will put full efforts and automatically the output will be high.

This finding is in line with the findings of Patel (1978) and Ambastha (1986).

4.4.3.8 Association between job commitment and information output pattern of agricultural extension personnel:

The data presented in Table-28 reveal that calculated value of $r = 0.22422$ was significant at 0.05 level of probability. Hence, the null hypothesis that there will be no association between job commitment and information output pattern of extension personnel was rejected.

It can be concluded that job commitment had significant correlation with the information output pattern of agricultural extension personnel.

This finding got support from the findings of Pelze & Andrew (1966) and Ambastha and Singh (1978).
4.4.3.9 Association between job activity preference and information output pattern of agricultural extension personnel

The data presented in Table-28 reveal that calculated correlation coefficient value of \( r = 0.09343 \) was non-significant at 0.05 level of probability. Hence, the hypothesis that there will be no association between job activity preference and information output pattern of extension personnel was accepted.

It can be concluded that job activity preference had a non-significant relationship with the information output pattern of agricultural extension personnel.

This finding is in line with the findings of Pelze and Andrew (1966), Patel (1978), Ambastha (1986) and Malik et al. (1990).

4.6 DIFFERENCE BETWEEN COMMUNICATION PATTERN (INFORMATION INPUT PATTERN, PROCESSING AND OUTPUT PATTERN) OF AEOs AND VLWs

Two categories of extension personnel were studied to know their communication pattern. The comparison of these two categories i.e. Agricultural Extension Officers and Village Level Workers was done by taking their mean score of information input pattern, processing and output pattern. The results are presented in Table-29.
TABLE 29 : DIFFERENCE IN THE COMMUNICATION PATTERN (INFORMATION INPUT, PROCESSING AND OUTPUT PATTERN)
MEAN SCORES BETWEEN AEOs AND VLWs

<table>
<thead>
<tr>
<th>Communication Pattern</th>
<th>Mean score</th>
<th>'t' value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Information input pattern</td>
<td>22.40</td>
<td>22.52</td>
</tr>
<tr>
<td>2. Information processing pattern</td>
<td>28.40</td>
<td>27.99</td>
</tr>
<tr>
<td>3. Information output pattern</td>
<td>224.92</td>
<td>230.44</td>
</tr>
</tbody>
</table>

NS = Non-significant

The data presented in Table-29 indicate that there exist no difference between the communication pattern of AEOs and VLWs. The probable reason may be that both categories of extension personnel were getting similar type of trainings under T & V programme. Secondly about fifty percent of AEOs (11 out of 25) were promoted from VLWs and having similar qualification. Due to their similar training, qualification and nature of work resulted into similar type of communication pattern.

The hypothesis that there will be no difference between communication pattern of AEOs and VLWs was accepted.

It can be concluded that communication pattern of AEOs was not significantly different than the communication pattern of VLWs.

EMPIRICAL MODEL OF THE STUDY

A conceptual model (Fig.1) developed was tested
FIG. 3: EMPIRICAL MODEL OF THE STUDY
with the help of correlation coefficient and the results were presented in the empirical model (Fig. 3). Since the study aimed at analysis of communication pattern of agricultural extension personnel and the variables related with their communication pattern, all those variables which were found significantly related to the communication pattern of extension personnel were incorporated in the model. It is hoped that these variables will help the researchers in future. The arrows point out the relation of different variables in relation to communication pattern of agricultural extension personnel.
SUMMARY
AND
CONCLUSION
The success of agricultural development programme in developing countries depends upon its extension functionaries. The transfer of knowledge from research scientists to the farmers largely depends upon the communication techniques used by the extension personnel. Thus the extension personnel serve as a chain between research scientists and farmers. The extension personnel play a pivotal role to educate, train and to persuade the farmers to adopt new ideas and skills. Therefore, extension personnel operating in the Department of Agriculture play an important role in bringing transformation in agricultural and people associated with it. It is generally opined that communication pattern of extension personnel is greatly linked with all those factors related with social system to which they belong. To test this assumption of extension personnel’s communication pattern and linkage of factors of social system with their communication pattern, the present study was designed and carried out.

3.1 OBJECTIVES OF THE STUDY

The specific objectives of the study were as under:

1. To study the personal, socio-psychological characteristics of extension personnel.
2. To determine the source credibility perception and
credibility variation of sources.

(3) To study the information input, processing and output pattern of extension personnel.

(4) To establish association between communication pattern and extension personnel's antecedent factors.

(5) To study the difference between communication pattern of AEOs and VLWs.

5.2 HYPOTHESES OF THE STUDY

To determine the association between communication pattern of extension personnel with their antecedent variables, the following broad null hypotheses were formulated.

(1) There is no association between information input pattern and antecedent variables of extension personnel.

(2) There is no association between information processing pattern and antecedent variables of extension personnel.

(3) There is no association between information output pattern and antecedent variables of extension personnel.

(4) There is no difference between communication pattern of AEOs and VLWs.
5.3 REVIEW OF LITERATURE

The literature reviewed have been grouped under the following heads:

1. Personal, socio-psychological characteristics of extension personnel.
2. Source credibility perception and credibility variation of sources.
3. Information input, processing and output pattern of extension personnel.
4. Association between the communication pattern (information input, processing and output pattern) and extension personnel's antecedent factors.

5.4 METHODOLOGY

The study was confined to purposively selected district Kheda of Gujarat state. The Agriculture Extension Officers (AEOs) and Village Level Workers (VLWs) were the extension personnel and constituted the population of this study. The random sampling was done for the selection of respondents. Data from respondents were collected through well structured questionnaire. However, personal contacts with the respondents were also made to get objective information. Nine variables as independent and communication pattern as dependent variables were selected on the basis of the past researchers, discussion with agricultural extension experts
and personal experiences. The information pertaining to variables were sought through relevant questions developed for the purpose.

Personal and socio-psychological variables were studied and presented in terms of frequencies and percentages. Some variables viz., job commitment and job activity preference were also studied by assigning rank order. Information input and processing pattern were studied by assigning rank order on the basis of mean choice scores. Hence, scoring method was used wherever necessary. For testing the relationship between communication pattern and antecedent variables zero order correlation was used and for testing the difference Fishers' 't' test was used.

The data collected through questionnaire were tabulated, organised, analysed and presented in a way that it may give proper presentation and answers to the specific objectives of the study. The findings of the study emerged out of the data are summarised as below.

5.5 MAJOR FINDINGS

5.5.1 Personal, socio-psychological characteristics of agricultural extension personnel:

(1) Majority (67.88 per cent) of the extension personnel belonged to the middle age group.
(2) Majority (81.82 per cent) of extension personnel had their qualification matric with diploma in Agriculture.

(3) Majority (81.82 per cent) of the extension personnel had medium level of training experience.

(4) Nearly forty per cent of the extension personnel revealed that deputation on training was exclusively the desire of senior officers.

(5) Majority (72.72 per cent) of the extension personnel revealed that training was very useful.

(6) Majority (95.15 per cent) of the extension personnel revealed that fortnightly training should be continued.

(7) Majority (73.94 per cent) of the extension personnel had medium level of service experience.

(8) Majority of the extension personnel had joint (68.48 per cent), rural (93.33 per cent) and farming (92.12 per cent) family background.

(9) Majority (74.54 per cent) of extension personnel had medium level infrastructural facilities for communication.

(10) Majority (73.94 per cent) of extension personnel had medium level of job satisfaction.
Field visit ranked first among eight job activities performed by the extension personnel. The job activity 'organising exhibition' ranked least. This activity performed by least number of respondents.

 Majority of extension personnel (73.94 per cent) had good level of job commitment.

 'Farm and home visit' was the job activity preferred by the majority of respondents and ranked first among all 10 job activities, whereas, 'Preparation of message card' preferred by least respondents and ranked last.

5.5.2 Differential source credibility perception and variation of extension personnel:

The findings of the study revealed that Assistant Director of Agriculture and Deputy Director of Agriculture were the most credible source of information as perceived by the extension personnel followed by result demonstration, Agricultural Scientist, trainings, Joint Director of Agriculture, exhibition, meetings, television, discussion, radio, field days, family members, education films, magazines, newspaper, relative and friends, neighbours, local leaders and private dealers.

5.5.3 Information input, processing and output pattern of agricultural extension personnel:
5.5.3.1 **Information input pattern :-**

As regards information input aspect of communication pattern, it was found that books/package of practices booklet ranked first among all 16 sources of information utilized by the agricultural extension personnel, followed by fortnightly trainings/group discussion, senior extension personnel, news letters, farm visits, other trainings, popular magazines, telecasts, radio broadcasts, leaflets/pamphlets/handouts, extension journals, professional meetings, workshop/seminar, kisan mela, personal visit to researchers and personal correspondences with researchers respectively.

Majority (76.97 per cent) of the extension personnel fell into medium level of information input pattern category.

5.5.3.2 **Information processing pattern :-**

(1) Economic and local feasibility of innovation was considered as main characteristics of evaluation and ranked first among all seven criteria of judging information.

(2) 'Study the useful information carefully' and 'take note in diary' were the methods of preservation of information and scored first and second positions.
(3) 'Translate into local dialects' and 'use of chart and graphs' were the important methods used by the extension personnel for dissemination of farm information.

(4) Majority (76.97 per cent) of the extension personnel were in medium level of information processing pattern category.

5.5.3.3 Information output pattern :-

Majority (83.64 per cent) of extension personnel fell in medium level of information output pattern category. Similarly in both categories (AEOs and VLWs) majority of them were in low to medium level of information output pattern. The processing and output pattern of information is, in fact, dependent on information input pattern. Medium level of information input of extension personnel, must probably led to medium level of information processing and output pattern. This logic seems to be quite justified.

5.5.4 Extension personnel-Researchers Communication (EP-RC) :

Extension Personnel-Researchers Communication (EP-RC) was found to be of medium level with 85.45 per cent of the respondents. This speaks of medium level of linkage between the extension personnel and researchers. There should be a high level of EP-RC so that they could get latest technology for dissemination to the farmers.
5.5.5 **Extension Personnel-Farmers Communication (EP-FC):**

The Extension Personnel-Farmers Communication was found to be of medium level with 74.55 per cent respondents. This speaks that the links between extension personnel and farmers are not as dynamic and close as these should be to disseminate useful and latest farm technology. Very less number of extension personnel were found to be of high level of extension personnel farmers communication and this type of communication between these two categories may not be helpful in achieving the desired progress in agriculture which is the ultimate goal of extension work.

5.5.6 **Extension Personnel-Farmers Contact Span (EP-FCS):**

The extension personnel farmers contact span (EP-FCS) was observed to be of medium level with 65.45 per cent respondents. More than 84.00 per cent of extension personnel had contacted farmers low to moderately. It was found that extension personnel had contacted only contact growers whereas contact with opinion leaders and panchayat members was of very low level. This is also not desirable for the overall development of the farming community.

5.5.7 **Association of extension personnel's antecedent variables with their communication pattern:**

The association between antecedent variables of extension personnel and their communication pattern i.e.
information input, processing and output pattern were summarised separately as under:

5.5.7.1 Association between extension personnel's antecedent variables and their information input pattern:

(1) Age of extension personnel had non-significant relationship with their information input pattern.

(2) Education had positive but non-significant relationship with information input pattern of extension personnel.

(3) It can be concluded that training had non-significant relationship with information input pattern of extension personnel.

(4) The experience of extension personnel had negative and non-significant relationship with their information input pattern.

(5) The family background had positive but non-significant relationship with information input pattern of extension personnel.

(6) The infrastructural facilities for communication had non-significant relationship with information input pattern of extension personnel.

(7) Job satisfaction of extension personnel had non-significant relationship with their information input pattern.
The job commitment had positive and significant relationship with information input pattern of extension personnel.

There was negative but non-significant relationship between job activity preference and information input pattern of extension personnel.

Association between antecedent variables and information processing pattern of extension personnel:

The age of agricultural extension personnel had non-significant relationship with their information processing pattern.

The education had non-significant relationship with information processing pattern of extension personnel.

Training of extension personnel had non-significant relationship with their information processing pattern.

The experience had positive but non-significant relationship with information processing pattern of agricultural extension personnel.

The family background had non-significant relationship with information processing pattern of extension personnel.
(6) Infrastructural facilities for communication had positive but non-significant relationship with the information processing pattern of agricultural extension personnel.

(7) The job satisfaction had significant relationship with information processing pattern of extension personnel.

(8) The job commitment had significant relationship with the information processing pattern of extension personnel.

(9) The job activity preference had negative but non-significant relationship with the information processing pattern of extension personnel.

5.5.7.3 Association between information output pattern and antecedent variables of agricultural extension personnel:

It observed that:

(1) The age of agricultural extension personnel had negatively significant relationship with their information output pattern.

(2) The education had negative but non-significant relationship with information output pattern of extension personnel.

(3) The training had non-significant relationship with
the information output pattern of extension personnel.

(4) The experience and information output pattern of agricultural extension personnel had negative but non-significant relationship.

(5) The family background had significant relationship with information output pattern of agricultural extension personnel.

(6) It was observed that infrastructural facilities for communication had significant relationship with information output pattern of agricultural extension personnel.

(7) It was found that job satisfaction had significant relationship with information output pattern of agricultural extension personnel.

(8) It was revealed that job commitment had significant relationship with the information output pattern of agricultural extension personnel.

(9) It was observed that job activity preference had non-significant relationship with information output pattern of agricultural extension personnel.

5.5.8 Difference between communication pattern of AEOs & VLWs:
It was observed that there was no significant
difference in the mean communication pattern scores of AEOs and VLWs.

5.6 SUGGESTIONS FOR FUTURE RESEARCH

In light of the findings of the study, following studies can be undertaken to explore more in the area of communication pattern of extension personnel.

(1) Similar investigation may be conducted in other districts of Gujarat and other states, so that the results of this study can be strengthened.

(2) To have an indepth analysis of the study, more categories of extension personnel could be selected as respondents for detailed analysis.

(3) Similar type of study may be conducted with more variables which have not been included in this study in the same area.
REFERENCES
REFERENCES


* Original is not seen.
APPENDICES
Dear Sir,

Shri P.L. Sharma is the Student of G.A.U., Anand Campus Anand. He is doing M.Sc. (Agri.) in Extension Education under my guidance. He has selected "COMMUNICATION PATTERN OF AGRICULTURAL EXTENSION PERSONNEL" as his research problem for the thesis of M.Sc. (Agri.) degree in Extension Education. The AEOs & VLWs of Kheda district are the respondents of this study.

Shri P.L. Sharma is approaching you personally to collect the views of AEOs/VLWs regarding communication pattern. Therefore, kindly direct these functionaries to fill up the questionaire developed for this purpose and oblige him. Their valuable views will help him to make his study successful. I am sure your co-operation will be forthcoming without any reservation.

It is assured that the information furnished by them will be treated as confidential and used only for the purpose of this study.

Thanking you for your co-operation.

Yours Sincerely,

(H.L.PATEL)

To,

S.D.A.O.
ANAND / BORSAD / KHAMBHAT /
KAPADVANJ / NADIAD.
APPENDIX - II

COMMUNICATION PATTERN OF AGRICULTURAL EXTENSION PERSONNEL

QUESTIONNAIRE

1. GENERAL INFORMATION
   i. Name : ____________________________
   ii. Age : _______ years
   iii. Designation: ____________________________ VLM / AEO
   iv. Place of posting: ____________________________
       Village: ____________________________ Block: _______ Dist: _______
   v. Academic qualification:
       a. Below Matric + Diploma in agriculture
       b. Matriculation with diploma in agriculture
       c. B.Sc. Agriculture

2. TRAINING:
   i. How many training you have attended till date?
      ______ Nos.
   ii. Give information of the training attended by you.
       | Sr. No. | Name of training | Duration | Where obtain |
       |--------|-----------------|----------|--------------|
       | 1.     |                 |          |              |
       | 2.     |                 |          |              |
       | 3.     |                 |          |              |

3. Give your considered opinion about the usefulness of the fortnightly training by putting (✓) mark in column considered appropriate.
   Very useful / Useful / Not useful

4. Would you like the above mentioned training to be continued / discontinued? Yes / No

5. What do you think is the basis of deputing extension personnel for other than fortnightly training?
   a. Purely random
   b. As per specialization
   c. A set procedure does not exist
   d. Deputation of training exclusively the discretion of senior officers
   e. any other:
6. EXPERIENCE:
Furnish the following information:
a. Service as VLM/AEO: ________ years.
b. Total service: ________ years.

7. FAMILY BACKGROUND:
Indicate whether your family is:
(a) Nuclear / Joint
(b) Rural / Urban
(c) Agricultural / Non-agricultural

8. INFRASTRUCTURAL FACILITIES FOR COMMUNICATION:
Indicate the availability of the following facilities/equipments for farm information communication work.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Facilities/equipment</th>
<th>Available</th>
<th>Not available</th>
<th>If available frequency of use during a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Projecting aids:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i.</td>
<td>16mm movis projector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii.</td>
<td>8 mm slide projector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii.</td>
<td>Overhead projector</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>iv.</td>
<td>Television</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>v.</td>
<td>V.C.P.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vi.</td>
<td>Slide viewer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Non-projected aids:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i.</td>
<td>Poster</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii.</td>
<td>Chart</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>iii.</td>
<td>Flash card</td>
<td></td>
<td></td>
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<tr>
<td>iv.</td>
<td>Flannel graph</td>
<td></td>
<td></td>
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<tr>
<td>v.</td>
<td>Exhibition material</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vi.</td>
<td>Any other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Projection material:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i.</td>
<td>Films</td>
<td></td>
<td></td>
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</tbody>
</table>
| ii.     | Slides                |           |               |                                           | contd...
### Facilities which promote communication:

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>i.</strong></td>
<td>Typing, Cyclostyle, Printing</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>ii.</strong></td>
<td>Conveyance</td>
<td></td>
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</tr>
<tr>
<td><strong>iii.</strong></td>
<td>Stationery</td>
<td></td>
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</tr>
<tr>
<td><strong>iv.</strong></td>
<td>T.A. and other official facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>v.</strong></td>
<td>Public address set</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>vi.</strong></td>
<td>Any other</td>
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</table>

### General facilities for promotion of extension work:

<p>| | | | | |</p>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>i.</strong></td>
<td>Medical aid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ii.</strong></td>
<td>Office space</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>iii.</strong></td>
<td>Furniture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>iv.</strong></td>
<td>Electricity</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>v.</strong></td>
<td>Water supply</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>vi.</strong></td>
<td>Postal facilities</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>vii.</strong></td>
<td>Any other</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### JOB SATISFACTION:

A list of statements/items concerning your job is given below. Against each statement there are five columns representing the degree of satisfaction on the job. Please tick mark (✓) against each statement in any one of the five columns indicating your level of satisfaction concerning these statements.

**JOB SATISFACTION OF EXTENSION PERSONNEL:**

Following are some of the statements which are intended to measure the job satisfaction of Extension personnel. Against each statement you will find five response categories.
that represents your degree of response to that particular statement as strongly agree (SA); Agree (A); Undecided (UD); Disagree (DA); Strongly disagree (SDA).

Please go through the statements carefully and record your response (extent of agreement with each statement) by tick (✓) mark against the appropriate response category of each statement.

**PLEASE ATTEMPT ALL THE STATEMENT**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Statements</th>
<th>Response categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1. I am getting recognition from the people for the good work I have done in my areas.</td>
<td>SA 3</td>
</tr>
<tr>
<td>2</td>
<td>2. I feel insecure in my job.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3. I feel I am paid fairly, compared with other employees with similar qualification.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4. My job is not considered to be prestigious.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5. There is enough appreciation from higher ups for new and useful ideas suggested by me.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6. I am very much under paid for the work I do in this organisation.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>7. My work load is so heavy that I can not spare enough time for my family.</td>
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</tr>
<tr>
<td>8</td>
<td>8. I do not get enough guidance and supervision for doing my work.</td>
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<tr>
<td>9</td>
<td>9. I feels my job provides me an atmosphere to exchange ideas freely with colleagues,</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10. I am in dual subordination which hinders my quality of work.</td>
<td></td>
</tr>
</tbody>
</table>

contd.
11. I rarely get timely advise from my superiors.

12. My superiors are not competent enough to supervise my work.

13. There is an effective coordination among the staff in my department for efficient execution of job responsibilities.

14. My supervisor is friendly towards his subordinates.

15. I get ample co-operation from my colleagues in the performance of my duties.

16. My superior is unfair in his dealings with me.

17. I have not been able to prove my merit in my job.

18. My superior get employees to work together as team.

19. I get the required co-operation from the farmers of my circle.

20. My superior rarely lives up to his promises.

---

10 JOB COMMITMENT:

Indicate the time utilized by you on different activities. Tick (✓) mark against the appropriate item.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Activities</th>
<th>Much</th>
<th>Moderate</th>
<th>Less</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Field visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Technical guidance to farmers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Technical guidance to contact farmers only</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Office work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

contd...
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Activities</th>
<th>Much</th>
<th>Moderate</th>
<th>Less</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Conducting demonstration/field trials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Organising field days</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Organising exhibitions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Organising farmers training</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Any others</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

11. JOB ACTIVITY PREFERENCE:

Please write 3, 2 and 1 numbers in the boxes against the sources of information for Highly preferred, Preferred, Least preferred, respectively.

1. Conducting Training
2. Farm and home visit
3. Laying out of demonstration
4. Providing technical guidance to farmers
5. Doing office work
6. Conducting meeting with farmers
7. Preparation of message cards
8. Conducting meeting with officials
9. Management of inputs
10. Exhibitions

12. INFORMATION INPUT PATTERN:

Indicate the source/channels of information utilized by you for obtaining agricultural information. How often you utilize the following source/channels of information:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Sources/channels</th>
<th>Frequency of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Professional meetings</td>
<td>Always 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sometime 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Never 5</td>
</tr>
<tr>
<td>2</td>
<td>Books/package of practice booklets</td>
<td></td>
</tr>
</tbody>
</table>

contd...
3. Popular magazine
4. News letters
5. Extension journals
6. Leaflets/Pamphlets/Handouts
7. Senior Extension Personnel
8. Kisan Mela
9. Farm visit
10. Fortnightly training/Group discussion
11. Other trainings
12. Workshop/Seminar
13. Radio Broadcasts
14. Telecasts
15. Personal visit to researchers
16. Personal correspondence with researchers
17. Any other (specify).

13. SOURCE CREDIBILITY:

The information pertaining to new agricultural technology is received by you from a number of sources. Indicate your opinion by putting (✓) mark in one of the column of credibility continuum (Most credible, Credible and Least credible).

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Source</th>
<th>Most credible</th>
<th>Credible</th>
<th>Least credible</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Personal :—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>Family members</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>Relative and friends</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>Neighbours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>Agricultural Scientists</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>Local leaders</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>Private dealers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

contd...
14. INFORMATION PROCESSING PATTERN :

(1) Do you process (evaluate) the incoming information before it passed on to the clients? Yes / No

If yes, while evaluating the information which of the following characteristics of innovation you take into consideration. Tick mark (✓) the relevant ones in one column against them.
Characteristics of evaluation

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Frequency of consideration</th>
<th>Always</th>
<th>Sometime</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Accept it unreservedly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Weigh it in the light of past experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Consider its economic and local feasibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Suitability of the message to local situation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Complexity of the message</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Compatibility of message with other informations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Divisibility of the message as per the convenience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Any others</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(2) Preservation:

How do you preserve the available information for future use? Check against each item in a column which you feel applicable.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Item</th>
<th>Always</th>
<th>Sometime</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Go through it at a glance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Study the useful information carefully</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Take notes in a diary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Preserve the information in personal custody</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Maintain a subject matter file</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Any other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(3) Transformation:

For communication of knowledge to the farmers the processed knowledge has to be converted into a form which can easily be understood by the farmers for acceptance put tick mark (✓) in the appropriate column against each item listed below which you think is applicable to you.
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Item</th>
<th>Always</th>
<th>Sometime</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Translate into local dialect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Use of chart and graphs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Use cyclostyle material</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Use leaflets and handouts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Use of posters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Use of slides and transparency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Any other.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. INFORMATION OUTPUT PATTERN:

(1) How many visits during last one year you have paid to the villagers for communication of Agril. Technology to the farmers?  
No. of visits: __________

(2) How often you visited the farmers during last one year for communication of agril. technology?  
- Once in a week  
- Once in a fortnight  
- Once in a month  
- Any other

(3) Have you ever communicated agril. technology to your clientele through wall-writings on the public places?  
Yes / No

If yes, on an average how often you have written.  
Nos. __________

- Fortnightly  
- Monthly  
- Quarterly  
- Half yearly  
- Never

(4) Did you arrange field days to disseminate farm information?  
Yes / No.
If yes, mention the number of field days organised by you during the last one year.

Nos. of field days __________

(5) Did you arrange any training programme for villages for providing agric. information?  
Yes / No.

If yes, give the following information for the last year.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of training</th>
<th>Duration</th>
<th>Place</th>
<th>No. of farmers</th>
<th>Type of personnel attended</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(6) How many demonstration did you conduct/associate for teaching agricultural skills to farmers during the last year?

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Type of Demonstration</th>
<th>No. of farmers covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(7) During last one year how many leaflets/handouts containing agric. information did you distribute among farmers.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of leaflet/handout</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>

(8) How many times did you attended the Gram Sabha meeting during last one year.

Nos._________
16. EXTENSION PERSONNEL V/s. RESEARCHERS COMMUNICATION:

For the purpose of communication which of the following method and with what frequency are used in receiving agriculture information from the researcher and feedback for further solution. Please tick mark ( ) wherever it is applicable.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Media/methods used</th>
<th>Frequency of use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Most frequently</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1-2 months</td>
</tr>
</tbody>
</table>

1. Personal contact
2. Personal letter
3. Meetings
4. Office letters
5. Farm literature
6. Kisan Mela
7. Trainings
8. Farm visit
9. Group discussions
10. Any others

17. EXTENSION PERSONNEL FARMERS COMMUNICATION:

You might have used several media/methods for transmitting agricultural knowledge to the farmers. Indicate which and with what frequency you used the following media/methods so as to transmit agril. knowledge to the farmers by putting (✓) mark in the appropriate column against the method used.

<table>
<thead>
<tr>
<th>Sr.</th>
<th>Media/channel</th>
<th>Frequency of use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Most frequently</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1-2 months</td>
</tr>
</tbody>
</table>

1. Farm and home visit
2. Field days/field trips

contd...
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Type of village farmers</th>
<th>Frequency of communication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&lt;1m</td>
</tr>
<tr>
<td>1</td>
<td>Progressive farmers</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Contact farmers</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Non-contact farmers</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Opinion leaders</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Panchayat members</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Any other</td>
<td></td>
</tr>
</tbody>
</table>

(1) With whom and how often you generally make contacts in the village. Check the one whom you actually contacted by putting (✓) mark against them.

(2) How much time you devote per meeting with the farmers in case of personal contact while communicating agricultural technology? Put (✓) mark on the appropriate.

- Upto 1 hour / 1-2 hours / 2-3 hours / More than 3 hours.

(3) How much time you devote with the group of farmers during a group discussion? Put (✓) mark on the appropriate.

- Upto 1 hour / 1-2 hours / 2-3 hours / more than 3 hours.