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**A STUDY OF COMMUNICATION PATTERNS, NET-WORKS
AND KEY-COMMUNICATORS IN THE SEQUENTIAL ADOPTION OF SOME
AGRICULTURAL INNOVATIONS**

THESIS SUBMITTED TO THE
ANDHRA PRADESH AGRICULTURAL UNIVERSITY
IN PART FULFILMENT OF THE REQUIREMENTS FOR
THE AWARD OF THE DEGREE OF
MASTER OF SCIENCE IN AGRICULTURE
(EXTENSION EDUCATION)

BY

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1981

CERTIFICATE

This is to certify that the thesis entitled "A STUDY OF COMMUNICATION PATTERNS, NETWORKS AND KEY-COMMUNICATORS IN THE SEQUENTIAL ADOPTION OF SOME AGRICULTURAL INNOVATIONS" submitted to the Andhra Pradesh Agricultural University in part fulfilment of the requirements for the award of the degree of **Master of Science in Agriculture**. (Extension Education) is a record of bonafied research work carried out by Mr. S Jayarama Reddy, under my guidance and that this has not formed in whole or in part the basis for the award of any degree or diploma.

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

OCTOBER 8, 1981


S. VENKU REDDY
Major Advisor
And
Associate Professor
Extension Education Institute

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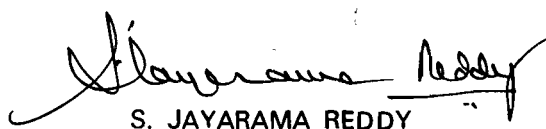
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Bound by the benevolent benefaction of the **Andhra Pradesh Agricultural University** - in providing the greatest opportunity to prosecute Post-Graduate Studies - I remain committed with fierce determination.

DECEMBER 8, 1981


S. JAYARAMA REDDY

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INTRODUCTION

INTRODUCTION

It has been proclaimed that we have attained the stage of self-sufficiency in food production. But we are yet to see the complete transformation of traditional agriculture into a modern commercial endeavour. There need be no doubt about the availability of technical know-how to take rural India forward. But the human element is to be exploited for agricultural development as the key to agricultural development lies in the minds, hearts and hand of the so called 'back-bones' of our country - the farmers.

In fact, it is the motivated technology that must release the lock and swing the doors open for modernisation of agriculture. To accelerate this process, it needs effective communication of relevant technology which is emerging almost daily to the farmers. In other words, effective communication plays a very important role in the rapid growth of agriculture.

Effective communication of scientific findings to the millions of farmers is a necessity and key to economic progress of the nation. This is more so in developing countries like ours, where the gap between intellectuals and common man is very wide. It is strongly felt that man's greatest enslaver has always been ignorance and his greatest emancipator has always been truth and scientific knowledge.

In short, communication is a *condictio sine-qua-non* of national prosperity and international understanding. As *the prosperity of a nation depends largely on the agricultural development, communication is apparently applicable* to the development of agriculture because it is the fundamental step in bringing about a desirable change in any aspect of client system. This aspect has rightly attracted the attention of Behavioural Scientists in our country for the past few years. Consequently, many studies have been undertaken to widen the scope of agricultural communication so that the innovations would reach the target clientele effectively.

Even now, we are not able to build up appropriate communication strategy for popularising the improved and latest technology. As a result, the technology is still at the research laboratories without being effectively transferred to the door-steps of farmers or their fields. This has become a challenging task and it can be overcome only through skillful communicators and by using appropriate communication media.

The success of "Green Revolution" in our country depended very much upon the large scale adoption of high yielding varieties and improved agricultural practices by our farmers. The adoption of an innovation is viewed as a process which requires many kinds of information. Such an

information may range from the initial knowledge about the innovation to an understanding of how it can be more satisfying after it is used.

There are many sources through which farmers seek or get information about the technological change in farming. The preference and selectivity for a particular source may vary with the stages of adoption. In addition, their personal attributes also influence the selection of a particular source at a particular stage. Nevertheless, Interpersonal communication still plays an appreciable role in the communication of technology in rural areas.

It is well known that all the persons in a community do not play equal role in transmitting information to their fellow beings. The flow of information is usually from the more informed to the less informed although the reverse may also occur.

In agricultural extension work, it is very important to know persons in a community who have been mostly sought as information sources. The key-elements in a process of person-to-person communication are certain individuals who play a very important role in accelerating or retarding the spread of change. They can be called as key-communicators who play an appreciable role in relaying new farm ideas to the other persons. Moreover, farmers pay more credibility to the advice and information given to them by their fellow farmers rather

than any other source. Therefore, it is worthwhile that such communicators be identified, trained and utilized properly. It is possible to identify them only by identifying the patterns of communication and through communication networks.

It has been observed that developmental and welfare agencies go to the rural areas with preconceived ideas of some fixed characteristics of such communicators and consequently failed to strike the right type of communicators. It is therefore imperative that we must understand communication networks, patterns and key-communicators existing in the rural areas and plan appropriate strategies of communication in different situations.

NEED AND IMPORTANCE OF THE STUDY

In one way or another, communication has become to a large extent, the common problem of the science and arts alike. In fact the behavioural scientists concern themselves directly with communication, for, it is the process of communication which defines and maintains the structure and functioning of living things. The progress and development of any science depends upon communication. It is fundamental to man's functioning to make sense of whatever it is in his environment which he wishes to deal with. It is through communication that man relates himself to his world and to his fellow-beings. Man's every endeavour, as his very existence, depends upon communication.

The greatest need of the day is, therefore, to effectively communicate the latest agricultural technology so that it will be understood, accepted and adopted by the farmers. The process is calling for imagination of all those concerned, for, the agricultural technology is emerging almost daily.

Pye¹ observed, "News about dramatic events may travel very rapidly throughout the society. The speed with which most Indian villagers learned of Gan hi's death is often cited as an example of the efficiency of the word-of-mouth process of communication but interpretations that give context to such events are far less effectively communicated."

Schramm², after reviewing many researches on communication, conclusively stated that events like fighting in the Himalayas (Chinese aggression) could be carried effectively by grapevine communication; but interpretation, explanatory, technical and persuasive materials are hopelessly destroyed.

-
1. Lucin Pye - "Communication pattern and the problem of Representative Government in Non-Western Societies" - Public Opinion Quarterly, 20, 1956, pp. 250-1.
 2. Wilbur Schramm- "Mass Media and National Development", Stanford University Press, 1964, pp. 81-7.
-

Flow of communication is a phenomenon highly related to a specific context, space, time, practice and people and as such a complex process. If the generalisations derived from the studies are applied without enough caution, modification, and understanding, they might prove misleading and even disastrous.

Hence, the present study was undertaken to provide an insight into the actual flow of agricultural information and existing differential patterns and net-works of communication with special reference to the High Yielding Varieties of Paddy, Fertilizers, Pesticides and Multiple Cropping in a progressive and a less progressive village.

OBJECTIVES OF THE STUDY

GENERAL OBJECTIVE

To study the communication Patterns,
Net-works and Key-communicators in
the sequential adoption of some
agricultural innovations.

SPECIFIC OBJECTIVES

1. To identify the communication patterns followed by farmers in different stages of adoption of selected agricultural innovations.
2. To examine the communication networks among the farmers.
3. To identify the key-communicators and communicators with reference to adoption of selected agricultural innovations based on their interpersonal communication behaviour.
4. To understand the distribution of key-communicators and communicators with respect to their personal and socio-psychological variables.
5. To study the difference, if any, among the key-communicators and communicators with respect to their personal and socio-psychological variables.
6. To find out the association of selected independent variables with the interpersonal communication behaviour of the farmers.
7. To study the role expectation and role performance of key-communicators in view of the new strategy of agricultural production.

LIMITATIONS OF THE STUDY

All the social science researches have their own limitations and this study is no exception to the said fact.

1. This study has the limitation of time and resources for a single investigator. Due to this, the area of investigation has been kept limited to one district - one panchayat samithi; in one panchayat samithi two villages only, and the messages chosen were also limited in turn. As such, generalisations of this study would be restricted to the areas where similar conditions prevail.
2. Although the investigator has taken all the precautions to achieve objectivity in the study, the chances of biasness cannot be completely eliminated.
3. Because of the limitations of time and funds, on the spot observations for a longer period could not be made to study the communicator-communicatee interactions although such an attempt would have been relatively more meaningful.

In spite of these limitations, it is hoped that this study would provide a better conceptual background to understand the communication phenomena in general and interpersonal

communication in particular. Thus this study becomes meaningful to the planners, policy makers, extension personnel and the scholars connected directly or indirectly with the problems of communication and its role in agricultural production.

PRESENTATION OF THE STUDY

This thesis is divided into seven chapters. This chapter deals with the introduction including formulation of the problem, importance of the study, its objectives and limitations. In the second chapter, relevant literature is being cited. The methodology used in the study is explained in chapter three together with the statistical procedures besides the definitions and concepts. Chapter four describes the setting, in terms of geographical and ethnographical features. The findings and discussion in the fifth chapter are divided into seven sections each dealing with the communication patterns identified; communication networks; identification of key-communicators, communicators and non-communicators; distribution of key-communicators and communicators with respect to their socio-psychological variables; difference among the key-communicators, communicators and non-communicators with respect to selected variables; personal and socio-psychological variables associated with the interpersonal communication behaviour and the role expectations and role performance of key-communicators. While chapter six puts forth the summary and conclusions, chapter seven brings out implications and points for future research on the subject. At the end bibliography and appendices are given.

REVIEW OF LITERATURE

REVIEW OF LITERATURE

Though the area of communication has wide potentiality for scientific enquiry, yet, there are few studies carried out in this field particularly related to communication Patterns, Net-works and Key-communicators. However, the available related literature is presented in a chronological order under the following four heads.

1. Importance of key-communicators and leadership in extension programmes.
2. Personal and socio-economic variables connected with the leadership (Interpersonal communication behaviour of farmers).
3. Communication patterns and net-works.
4. Role of key-communicators in agricultural development.

IMPORTANCE OF LEADERSHIP AND KEY-COMMUNICATORS IN EXTENSION PROGRAMMES

Different terms have been used in the past studies to denote this concept. Key-communicators have been called as informal leaders (Uilkening, 1952); influencers (Emery Ocser, 1958); adoption leaders (Rogers, 1960) and key-communicators (Singh, 1965).

Various sociologists and extension educators had emphasised the importance of leadership in extension programmes.

Sanderson (1940) observed that what one local leader could do easily, might require considerable time and effort on the part of outsiders. The members of the group would expect the leader to speed up the process which would help them to achieve their common needs. They would do almost any one who truly represented them and had earned their loyalty.

The study of Ryan and Gross (1943) revealed that a typical farmer first heard of hybrid corn seed from a 'Salesman' but neighbours were the most influential sources leading to adoption.

Loomis (1945) described the role of leaders in extension programmes. He stated that leaders kept the extension agent in touch with the local problems and the felt needs and worked as the media between the rural folk and the research workers.

Tannone (1945) described leadership as an important principle that an extension worker should keep in his mind and added that much better results could be achieved if projects were undertaken with the consent and support of the leaders.

Hoffer (1946) identified some potential leaders in extension programme. They were responsible and influential in that community in getting new ideas accepted among other farmers because of their success in farming, good judgement and active interest in the welfare of farmers and community affairs.

Hatch (1948) stressed the importance and need for the development of local and voluntary leaders for the development of a country. With his experience of extension work in India, he felt that India was leading in the development of leadership programme.

Burner and Young (1949) concluded that the leader must be selected by the members on the group and not by any extension agency. Local leadership was indispensable for the development programme. These principles guarantee that not only extension could reach the people through their own neighbours, but also the professional staff could gain the accumulated experience and knowledge of the local people.

Wilson and Gallup (1955) observed that the village leaders could do four times more effectively in an extension programme than the extension personnel and has thus indicated the critical importance of local leadership in extension programme.

Ensminger (1956) remarked that the community development programme should foster the development and effectiveness of local leaders. He stated that the Gramsevak could not succeed in his job of being friend, philosopher and guide to the village people unless he was oriented to work with the village people through their leaders.

Raheja (1956) stressed the importance of rural leadership in the intensive cultivation scheme and pointed out that the leaders exercised a great influence on the members in their acceptance or resistance to new practices.

Lionberger (1959) observed, some farmers are sought distinctly more as source of information than others and that they possess other characteristics pertinent to the diffusion and use of farm information. Such persons were referred to as local influentials, adoption leaders, opinion leaders or simply as leaders.

The introduction of new farm practices in local system is largely concentrated in the hands of a few people. They have generally been referred to as innovators.

Lionberger (1960) summarising several researches concluded that key-communicators were actively seeking new ideas and made more use of information sources than the other farmers.

Sauhney (1961) observed that the leaders recognised in the village had also been named as persons whom the respondents sought for information and advice on farm matters. He rightly, therefore, concluded that "village leaders and adoption leaders" tended to converge in the same person.

Mukherji (1961) pointed out "the importance of using natural groups in community development follows the importance of developing and utilizing local leaders. It is important that all workers in the programme not only understand this but know all about these local leaders."

Reddy (1964) concluded that local leadership does exist in rural communities in the diffusion of improved agricultural practices, whether they be called informal leaders, key-communicators, adoption leaders, local influentials etc.

Rogers (1964) found in his study that the opinion leaders in the communities acted as key-individuals in the process by which new ideas entered the systems.

Sinha (1966) observed that local leaders were of very little effectiveness, indicating thereby either their lack of interest in the programme or lack of coordination between extension personnel and local leaders.

Sandhu (1967) observed that in each village key-communicators existed although very few farmers sought advice and guidance in farm affairs.

Singh (1970) stated in his study the characteristics of key-communicators could be expanded to include several factors like - leadership potential, communication motives, amorism, dogmatism, confirmity, deviancy, ethnocentrism, venturesomeness, expertness and innovativeness.

Reddy (1971) stated that based on their interpersonal communication behaviour and with special reference to agriculture, three types of leaders were identified, namely, key-leaders, ordinary leaders and non-leaders (followers). Among some were 'Agricultural' and others 'Agro-social' in nature. Further, among them some were 'Informal' and others 'Composite' in nature. The percentage of leaders in the progressive village was more than in the non-progressive village, but the key-leaders' percentage was more in a non-progressive village.

Shankaraiah (1972) assessed the relative contribution of key-communicators. It was found that while in the progressive village 69.35 per cent of farmers heard first from key-communicators, it was relatively more in non-progressive village.

Reddy (1974) identified four categories of communicators among farmers viz., key-communicators, communicators, low-communicators and non-communicators. Further he concluded that the percentage of communicators in the less progressive village was more than in the progressive villages.

PERSONAL AND SOCIO-ECONOMIC VARIABLES CONNECTED
WITH THE LEADERSHIP (INTERPERSONAL
COMMUNICATION BEHAVIOUR OF FARMERS)

While studying the voting behaviour of the American Public, Lazarsfeld et al (1940) reported that the opinion leaders were not different from their followers in education, socio-economic status and age, whereas, they showed significant difference in the extent of mass media used.

Lewis (1954) revealed that leadership depends upon the following factors in order of their importance - wealth, family reputation, age, personality traits, state of retirement, education, connection with outsiders and numerical strength of family and linkage. Wealth was a basic criterion of leadership. Although leaders were found in some measure among all the socio-economic classes, yet, in considerably large numbers they represented the upper levels.

Programme Evaluation Organization (1955) stated that the factors contributing to the development of leadership were the socio-economic status of the family and the individual and personality traits.

Kar (1959) reported that the leaders belonging to 35-50 years age groups were literates belonged to upper and middle caste groups, and were operating on larger farms of more than 15 acres.

Rahudkar (1960) indicated that leaders as compared to non-leaders had higher social status, more land and were more educated. These findings were quite in conformity with Barnabus (1958) and Norang (1966).

Cohen et al (1961) pointed out that persons who are more accurate in their prediction of the attitude of others, are more likely to be chosen leaders on a socio-metric scale and/or on election. They further emphasized that 'preferred peers' do indeed influence attitudes. Attitude change is followed by behavioural change.

Rahim (1963) discussed that farm influentials operated large farms, were younger in age with more percentage of membership in organisations and were having more contact with sources of information.

Rogers (1964) reported that leaders were having larger size farms, more of formal education, slightly higher formal participation, higher knowledge, more innovativeness in both home and agricultural innovations and higher exposure to mass media than the followers in both traditional and modern communities. However, he observed that opinion leaders in more modern communities travel more times per year to urban centres than followers, but in traditional communities it is just the reverse.

Singh and Pareek (1965) pointed out that key-communicators and non-communicators differed significantly in their farm size, communication skill and change agent contact.

Deshnukh (1966) in his study observed that majority of the leaders were from upper castes, owning larger holdings of land, belonging to the age group of 26 to 40 years and were literates.

Reddy (1966) found that traditional, caste and political leaders belonged to higher socio-economic status, operated on large farms, and were literates; whereas, functional leaders belonged to middle socio-economic status, operated on medium sized farms and were also literates.

Reddy (1967) found that influence with officials followed by wealth, heredity, education, personal interest, authority and social service in that order were the factors responsible for assuming leadership in the introduction of agricultural innovations in rural areas and he further added that the majority of the leaders were above 31 years of age and were literates, having medium and large sized land holdings, belonging to middle order castes and were having families with three to five members.

Sen (1969) reported that among the socio-demographic characteristics; age, caste, literacy and the number of formal positions held; in economic characteristics, farm labour efficiency and farm specialisations, mass media use, exposure to newspaper and change agency contact under systemic

linkage; and among the socio-psychological characteristics political knowledge was found to be significantly associated with the opinion leadership.

Singh (1970) in his paper on studies of agricultural communication in India, summarised the findings of different researches and concluded that there was difference (in most cases statistically significant) between key-communicators and non-communicators in farm size, number of houses owned, economic status, composite score of socio-economic status, extension contact, change agent linkage, trade union contact, level of living, social participation, adoption behaviour, opinion leadership, ideal role incumbency, popularity status, and communication skills as determined by Mahalanobis D^2 test has also been reported to be significant. The two groups did not differ in age, education and values namely, conservatism-liberalism, cosmopolitaness-localitiness, fatalism-scientificism, and attitude towards change.

Verma (1970) found that the farmers with high interpersonal communication and influence behaviour were found in both the villages - progressive and non-progressive in twelve socio-psychological characteristics such as; socio-economic status, farm size, social participation, communication skill, knowledge, attitude, innovativeness, popularity status, ideal role incumbency, mass-media exposure, personal contact and urban contact. The factors like education (non-

progressive village only) and cosmopolite-localite dimension of value-orientation (progressive village only) were also found to be high in those who were higher in interpersonal communication and influence. Two dimensions of value-orientation viz., conservatism-liberalism and fatalism-scienticism were found to be low in those who were higher in interpersonal communication and influence behaviour (in progressive village only). Age and authoritarianism - non-authoritarianism dimension of value-orientation did not play any significant role to affect the interpersonal communication and influence behaviour of farmers in both the villages.

Reddy (1971) observed that the following factors were associated with the farm leadership (interpersonal communication behaviour of the farmers) in the progressive village. They are - number of houses owned, types of houses owned, material possession, farm size, farm power, socio-economic status, social participation, attitude towards high yielding varieties, attitude towards credit, attitude towards marketing, attitude towards multiple cropping, knowledge of high yielding varieties of paddy, knowledge of credit, knowledge of marketing, knowledge of multiple cropping, risk orientation, economic motivation, value-orientation, cosmopolitaness-localitess, contact with extension agency, innovativeness, gregariousness, mass media exposure, empathy and urban contact. Where as, the variables like age, education, conservatism-liberalism etc.,

were found to have been associated with the farm leadership in the non-progressive village.

Shankarajah (1972) found that 70.8 per cent of the key-communicators in the progressive village were from upper and upper-middle classes. In contrast to this, 80 per cent of the key-communicators in the non-progressive village were from these classes. He further pointed out the choice of the people in seeking the information and guidance from the people of higher socio-economic status.

✓ Reddy (1974) observed that the factors like age, education, caste, farm size, social participation, socio-economic status, urban contact, innovativeness and mass media exposure were found to be the essential variables associated with the interpersonal communication behaviour of farmers in a progressive village. The factors like age, education, caste, farm size, socio-economic status, urban contact, contact with extension agency, innovativeness and mass media exposure were found to be significantly associated variables with interpersonal communication behaviour of farmers in a less progressive village.

✓ COMMUNICATION PATTERNS AND NET-WORKS

Leavitt (1951) used four types of net-works in his study viz. circle, chain, wheel and 'Y' type.

Hare (1962) identified communication net-works as four types viz. circle, chain, 'Y' and wheel.

Singh (1965) stressed the interpersonal communication at different stages of adoption has been found to have distinct pattern. These patterns are based on the relationship between the communicator and communicatee. The patterns at awareness, interest, deliberation and evaluation stages appear as spoked wheel type, emerging star-type and unfinished star type respectively. This interpersonal communication at trial stage takes place only in those practices about which farmers had little previous experience and the pattern in such a case is centripetal.

Cohen (1967) used four distinct kinds of communication net-works in different combinations to study change in the organizational structure of groups. They were wheel, chain, circle and completely connected net-works.

The wheel was considered as the most centralised net-work. In this, each member in the peripheral position can communicate with the member in the centre, but no one else.

The chain was next highest in centrality. In this two members occupy the end position. Each of these members can communicate with only the members at the relay position.

The circle net-work contrasts sharply with both wheel and chain net-works. Each member can communicate to two others

but to no one else. Thus it does not impose some communication restrictions on members.

The completely connected net-work is decentralised. Just as in the circle net-work, all members have equal communication opportunities. Each member can communicate directly with every other member.

Shankaraiah (1972) observed in his study that there are three types of communication patterns namely - Friendship pattern, Perceived best farmer and Neighbourhood pattern in both progressive and non-progressive village. He further concluded that the fact that Farm-discussion group pattern on HYV of wheat followed the perceived best farmer pattern rather than the friendship pattern in progressive village, but in non-progressive village friendship pattern was followed by perceived best farmer pattern.

✓ Reddy (1974) observed, with special reference to agriculture, four types of communication patterns were identified in both the villages, namely - perceived best farmer pattern, relationship pattern, friendship pattern and neighbourhood pattern. But the order in which they were followed is different from a progressive village to a less progressive village. Nevertheless, the perceived best farmer pattern was found to have followed by the majority in both the villages.

Reo, M.R. (1980) observed, the socio-metric analysis of interpersonal communication behaviour among the farmers had revealed that in all the five situations taken for study, chain, spoked-wheel and star type of communication networks have emerged.

The key-communicators differed in their role in different situations. Some were found to be highly influential in one situation while others were found to be more influential in other situations.

Besides, it was also found that there were one key-communicator and nine communicators among the non-sample farmers. Further, the study reveals that there were some of the fellow farmers who have received high socio-metric scores but were not selected as contact farmers.

From the analysis of the interactions among the contact farmers, wheel, star, chain and common type of communication networks were emerged. Here also, not all the contact farmers were found to be equally influential in the communication acts. Besides, all the contact farmers who were identified as non-communicators in the general consultation pattern, were found to be non-communicators here also. They were not performing any communication activity. All these 10 non-sample farmers were being involved in the process of communication in this situation also.

ROLE OF KEY-COMMUNICATORS IN AGRICULTURAL DEVELOPMENT

According to Lionberger (1960) the role played by key-communicators involves a process which has been termed as "multi-step-flow" or "triple-down" theory, according to which they secure new information directly from institutionalised sources and pass on the same to those who are less likely to have direct contact with the institutionalised sources or agencies.

Reddy (1966) stated various roles performed by leaders in the community. They were, securing, supplies of seeds and fertilizers, raising contribution, arbitration of disputes, organising community action, giving information and advice, propagation of new ideas, guiding and helping people in getting governmental assistance, focussing the problems of villagers and helping the extension workers. On the negative side, roles performed by leaders were - opposing the spread of new practices, opposing community action, self-seeking, opposing raising of contributions, misguiding people about new practices and non-cooperation with extension workers. In both the villages there were differences in role expectations of leaders, as seen by leaders and non-leaders themselves. Further, roles with agricultural development in general showed low to medium rank in terms of expectations and performance compared to the community roles.

Sharma (1966) studied the roles of leaders in the dissemination of improved agricultural practices and observed that leaders and their role changed from situation to situation depending on the objectives of the group. Leaders made efforts to convince the farmers to adopt improved practices and provided help by way of supervision, technical guidance, services and supplies to those who tried these innovations. Farmers also consulted them for advice and acted upon such advice.

Reddy (1967) in his study on the leadership patterns in the adoption of some agricultural innovations in rural Andhra assessed the role of the leaders in two stages of the adoption process namely - awareness and adoption. In all the five innovations taken for study, it is observed that lay leaders were the most utilised source in both the villages. The contribution of lay leaders towards the awareness and adoption was more pronounced in the village having rural impact. It was further found that local illustration set by rural leaders served as the main source of awareness.

Reddy (1971) stated various roles expectations of the farm leaders in relation to the new agricultural strategy. They were, raising demonstration plots and showing it to others, keeping themselves atleast with latest agricultural technology, adopting all the improved agricultural

practices, organising meetings and other discussion groups, serving as the marketing advisors, supplying the improved seeds to the farmers, assisting the farmers in getting credit, serving as the innovative farmers in the village, educating the farmers to grow more than two crops a year, acting as a liaison officer between the extension workers and the farmers, educating the farmers on latest agricultural technology and helping the fellow farmers in getting the needy agricultural inputs.

Thus, it is evident from the above review that there are not enough number of studies showing the role of key-communicators in the new strategy of Agricultural Development.

The over view of the previous studies indicated that key-communicators were playing very important role in the different stages of adoption of agricultural innovations. It was observed from the literature that key-communicators were differing from non-communicators in respect of farm size, socio-economic status, extension contact, social participation, mass media exposure and innovativeness. Besides the communication patterns and networks differed with respect to different villages having different levels of progressiveness. In addition, there was no single study conducted in rural andhra which has prompted the investigator to take up the present study.

RESEARCH METHODOLOGY

RESEARCH METHODOLOGY

The present study aims to study the communication patterns, net-works and key-communicators in the sequential adoption of some agricultural innovations in Chittoor district of Andhra Pradesh.

The study was conducted in two villages (one agriculturally progressive and the other agriculturally less progressive) of Chandragiri Panchayat Samithi of Chittoor district with a view to study the communication patterns, net-works and key-communicators followed by the farmers of two villages and to identify the key-communicators, communicators and non-communicators on the basis of their interpersonal communication behaviour. Besides, the role expectations and role performance of the key-communicators and also the factors that are associated with communicators in the adoption of agricultural innovations were also studied.

This chapter consists of five parts - the first part deals with the design of the study, second part concerns with the procedures followed for the selection of sample for the study, third part describes the procedure used for scoring and measuring the variables, fourth part deals with statistical procedures followed in the analysis of data and the last part deals with the operational definitions including conceptual model.

STEPS IN THE DESIGN OF THE STUDY

The research design followed was ex-post-facto. The study was divided into following phases.

1. Identification of key-communicators, communicators and non-communicators.
2. Study of the communication patterns and net-works.
3. Study of the factors associated with the communicators.
4. Study of the roles of key-communicators.

Identification of Key-communicators, Communicators and Non-communicators

The communicators were identified with the help of the interpersonal communication behaviour quotient¹ (I.C.B.Q) by measuring the interpersonal communication behaviour (I.C.B) of the respondents.

Study of communication Patterns and Net-works

This was done with the help of a schedule at different stages of adoption of agricultural innovations by the farmers viz. Knowledge, Persuasion, Decision and Confirmation stages.

1. Reddy, S.V. (1972), Developed the quotient for his Ph.D. programme and later it was widely used, tested and published in Indian Anthropologist, Vol. 3, No.2, Dec., 1973.

Study of factors associated with Key-communicators,
Communicators and Non-communicators

This was determined with the help of a schedule which contained the measurement of different variables.

Study of the roles of Key-communicators

The role expectations of key-communicators have been determined by the experts and the farmers with an open ended questionnaire and the role performance has been determined by the respondents with the help of schedule having some role expectation items.

SAMPLING PROCEDURE

Selection of District

Since the study particularly attempted to explore the communication patterns in relation to adoption of agricultural innovations, it would be worthwhile to conduct it in the area where there is accelerated agricultural development, as such, Chittoor district was purposively selected¹ for it is one of the agriculturally progressive districts in Rayalaseema area. Besides, it is also educationally progressive district and several developmental programmes like D.P.A.P., I.R.D.P.,

1. The basic assumption underlying the purposive sampling is that the investigator can pick the appropriate cases with a definite criterion to be included in the sample. Thus one can make the samples satisfactorily to one's own requirement.

and S.F.D.A. are in operation in the district. It was selected basing on the records and by the consultations with the state level officials. In addition, the investigator is familiar with the socio-cultural milieu of the people of the district which in turn facilitated for building up quick rapport with the villagers.

Selection of Panchayat Samithi

Chittoor district consists of 20 Panchayat Samithis. Out of them, one Panchayat Samithi namely - Chandragiri was purposively selected with the help of a schedule administered to the Zilla Parishad Officials for it was adjudged as the best Panchayat Samithi. Besides, it was one of the samithies rapidly developing in the district of Chittoor and much of the efforts of the developmental agencies has been concentrated on the samithi in the recent past. The Agricultural College and Research Station were also located within the samithi area.

Selection of Villages

Multi-stage purposive sampling procedure was used for the selection of the two villages (one agriculturally progressive and the other less progressive) for the present study.

STAGE - I

For selection of villages, firstly an interview guide was administered to the Extension officers of the selected block to know the names of the villages having about 100 to 150 farm families. This was done to facilitate better the use of interpersonal communication behaviour quotient which was mainly based on the sociometric technique. Thus in the selected block, villages with about 100 to 150 farm families could be screened out.

STAGE - II

Secondly, a scale to judge the agricultural progressiveness of a village¹ has been administered to the Block Extension Officers to judge the agricultural progressiveness of the villages. The villages selected in Stage - I were thus arranged in an array on their extent of progressiveness in agriculture.

STAGE - III

Finally, two villages (one from upper 5 per cent and one from lower 5 per cent villages) were matched with the similar content areas (i.e. messages or innovations) and were selected for the purpose of this study. Thus Narasingapuram (agriculturally progressive village) and Karakambadi (agri-

1. Singh, K.N., Singh, S.N. and Lokhande, M.R. "A scale for the measurement of Agricultural Progressiveness of a village". Measurements in Extension, Divn. of Agri. Extn., I.A.R.I., New Delhi, 1972.

culturally less progressive village) from Chandragiri Panchayat Samithi were selected for the purpose of this study.

Selection of Respondents

The list of all the heads of the families of both the villages were obtained from the respective villages. From the lists all the farm families were selected, which ultimately constituted the sample. There were 78 farm families (out of 93 families) in the progressive village and 105 farm families (out of 178 families) in less progressive village. Only heads of the farm families were interviewed. Taking both villages together, the total sample came to 183 heads of farm families.

Selection of Agricultural Innovations

Since the new strategy of agricultural production is mainly oriented towards High Yielding Varieties of Paddy, effective use of fertilizers, pesticides and Multiple cropping. The above messages have been taken for the purpose of this study and they also form the communication content areas (messages).

These innovations were selected on the following criteria.

1. The innovations which were oriented to the needs of the respondents.

2. Since the study was directed towards tracing communication patterns, net-works and key-communicators with reference to adoption of innovations, the innovations selected were introduced in such time limit that respondents would be able to recollect the details of communication acts with respect to the selected innovations.

Based on the above criterion, four innovations were selected i.e., High Yielding Varieties of Paddy, Fertilizers, Pesticides and Multiple Cropping for this study.

THE VARIABLES - MEASUREMENT AND SCORING

The relevant variables for the study have been selected based on the extensive review and consultation with experts. The Table - 3.1 shows the different variables selected for the study along with their empirical measurements.

TABLE - 3.1

THE VARIABLES AND THEIR EMPIRICAL MEASUREMENTS

S.No.	VARIABLE	MEASUREMENT
A. <u>DEPENDENT VARIABLES</u>		
1.	Interpersonal Communication Behaviour (ICB)	ICB Quotient developed by Reddy, S.V. (1971)
2.	Communication Patterns	Schedule
3.	Communication Net-works	Schedule
4.	Role expectations of Key-communicators	Schedule and Questionnaire
5.	Role performance of Key-communicators	Schedule

TABLE - 3.1 (Contd.)

THE VARIABLES AND THEIR EMPIRICAL MEASUREMENTS

S.No.	VARIABLES	MEASUREMENT
B. <u>INDEPENDENT VARIABLES</u>		
1.	Age	Chronological age of respondent
2.	Education	Socio-Economic status scale developed by Trivedi (1963) modified to suit the locale of the study.
3.	Caste	Schedule
4.	Farm Size	Socio-Economic scale developed by Trivedi (1963)
5.	Social Participation	-do-
6.	Socio-Economic Status	-do-
7.	Urban Contact	Index developed for the study
8.	Contact with Extension Agency	Measurement developed by Reddy, S.V. (1971)
9.	Innovativeness	Scale developed by Feaston (1968) modified to suit the locale of the study
10.	Mass Media Exposure	Measurement developed by Verma (1970) modified to suit the locale of the study
11.	Gregariousness	Measurement developed by Reddy, S.V. (1971)
12.	Aspirations	-do-

DEPENDENT VARIABLES**Interpersonal Communication Behaviour (ICB)**

It was measured by a quotient developed by Reddy, S.V. (1972). This measurement of ICB mainly was an extension and refinement of socio-metric method, which was primarily concerned with obtaining choices in the interpersonal interactions. From these interpersonal interactions, it was intended to locate the central figures (i.e. key-communicators and communicators). This measurement was more valid than the simple socio-metric method. The ICB was measured as follows.

STAGE - I

Socio-metric questions¹ pertaining to different messages were asked to the farmers with the help of a schedule. The farmers were asked to name three farmers of the village through whom they got the information regarding the different communication content areas in order of preference.

STAGE - II

The frequency of the choice of particular farmer in a particular preference was calculated. The farmer in the first preference was scored 3, second preference 2 and last preference 1. The scores of each respondent on each of the communication

1. The Sociometric Schedule used for the collection of data pertaining to ICBQ is given in APPENDIX - I

content areas were computed separately and their communicative scores were obtained as per the procedure described below. The communicative power for each respondent with respect to particular content area was calculated as follows.

$$f_1 u_1 + f_2 u_2 + f_3 u_3 = \text{Communicative Power}$$

- where, f_1 = frequency with which any person is being chosen in primary sociometric choice
- f_2 = frequency with which a person is being chosen in the secondary sociometric choice
- f_3 = frequency with which a person is being chosen in the tertiary choice
- u_1 = weightage given to the first choice (which is 3)
- u_2 = weightage given to the second choice (which is 2)
- u_3 = weightage given to the third choice (which is 1)

Later, communication potentiality was calculated in the following way.

By subtracting one from the total number of farmers of the sample and then multiplying by weightage given to first choice i.e., 3.

$$(N-1) W_1 = \text{Communication Potentiality}$$

- where, N = Total number of respondents in the village
- W_1 = Weightage given to first choice

STAGE - III

Weightage of the different communication content areas (messages) was assigned. The messages were assigned weightage

based on their ease or difficulty in person-to-person communication. Here, four messages were selected, namely - HYV of Paddy, Fertilizers, Pesticides and Multiple Cropping. These messages were sent to the experts in the field of agricultural extension and communication as well as to the agricultural development personnel. They were asked to make comparative judgement of each message regarding its difficulty or easy in interpersonal communication. The message which got maximum mean score was decided as very difficult to communicate and which got least mean score was decided as very easy to communicate. The messages were arranged based on their mean score on a difficulty-easy continuum and they were assigned arbitrary weightages as shown below.

MESSAGES AND WEIGHTAGES

Weightages	1	2	3	4
Messages	Fertilizers	HYV of Paddy	Pesticides	Multiple Cropping

STAGE - IV

The interpersonal communication behaviour scores were obtained or calculated with the help of the interpersonal communication behaviour quotient. A complete view of the quotient is given below.

$$\frac{f_1 u_1 + f_2 u_2 + f_3 u_3}{(N-1) u_1} \times Wm_1 = YJ_1$$

$$\frac{f_1 u_1 + f_2 u_2 + f_3 u_3}{(N-1) u_1} \times Wm_2 = YJ_2$$

$$\frac{f_1 u_1 + f_2 u_2 + f_3 u_3}{(N-1) u_1} \times Wm_3 = YJ_3$$

$$\frac{f_1 u_1 + f_2 u_2 + f_3 u_3}{(N-1) u_1} \times Wm_4 = YJ_4$$

$$\frac{YJ_1 + YJ_2 + YJ_3 + YJ_4}{Wm} \times 100 = \text{Interpersonal Communication Behaviour Score (ICBS)}$$

$$\frac{YJ}{Wm} \times 100 = \text{I.C.B.S.}$$

- where, f_1 = frequency with which any person is chosen in primary socio-metric choice
- f_2 = frequency with which any person is chosen in secondary socio-metric choice
- f_3 = frequency with which any person is chosen in tertiary socio-metric choice
- u_1 = weightage given to first choice (which is 3)
- u_2 = weightage given to second choice (which is 2)
- u_3 = weightage given to third choice (which is 1)
- N = Total number of respondents (sample)
- Wm_1 = Weightage given to first message
- Wm_2 = Weightage given to second message

- Wm_3 = Weightage given to third message
 Wm_4 = Weightage given to fourth message
 Wm = Total weightage of all messages
 YJ = Communicative power of an individual

STAGE - V

The scores thus obtained ranged from 0.70 to 54.90. Those with score more than '0' were regarded as communicators and those with '0' as non-communicators. The communicators were further divided into two categories based on mean. Those individuals with scores more than mean were regarded as key-communicators. Those with scores of mean and below mean were considered as communicators. Thus, the farmers were categorised into three groups namely - key-communicators, communicators and non-communicators. Here, the non-communicators are those who have not communicated any message with others. However, some of them were involved in consultations as receivers. Those who have not acted as either communicators or receivers among the non-communicators were regarded as Isolates for the purpose of plotting the sociometric network analysis.

Communication Patterns

The communication patterns were studied with the help of a schedule constructed for the purpose of the study. For this, four sociometric situations - friendship, relationship,

perceived best farmer and neighbourhood were constructed representing four patterns of communication. Under each situation at different stages of adoption the respondents were asked to name the pattern followed by them. The frequency of a particular pattern responded by the farmers was calculated and presented in percentages.

Communication Net-works

The communication Net-works are studied with the help of schedule constructed for the purpose of the study. It was intended to examine whether the net-works are in the shape of wheel type, spoked wheel, Y type, star type, comconbent type etc., so that it is possible to build up appropriate communication strategy for different villages with different levels of progressiveness as well as to locate the central figures in the Net-work (stars etc.).

Role expectations of the Key-communicators

The role expectations of key-communicators in view of the new strategy of agriculture as perceived by the experts in the field of extension education was measured with an open ended questionnaire sent to the experts by mail and the role expectations as perceived by the farmers was studied by the schedule.

Role performance of Key-communicators

The role performance of key-communicators as perceived by the farmers was measured by the schedule consisting of different role expectation items.

INDEPENDENT VARIABLES

The measurement, scoring and categorisation of the independent variables used in this study have been described in this section.

Age

Age was computed on the basis of actual chronological age reported by the respondent. The respondents were categorised into three groups as follows.

Group - I	:	Below 25 years
Group - II	:	26 to 50 years
Group - III	:	51 years and above

Education

It was operationalised as the informal and formal schooling attended and for the measurement socio-economic status scale (Trivedi, 1963)¹ was used. The respondents were grouped into seven categories basing on Trivedi socio-economic status scale as follows.

i) Illiterate	...	0
ii) Can read only	...	1
iii) Can read and write	...	2
iv) Primary	...	3
v) Middle	...	4
vi) High School	...	5
vii) Above High School	...	6

1. Socio-Economic Status scale is given in APPENDIX-I

For the purpose of distribution of key-communicators and communicators, two categories were evolved i.e., Illiterates and Literates.

Caste

This variable was measured by a schedule and categorised and scored according to Laxmanna¹ (1973) with few modifications as follows.

i) Brahmins	...	8
ii) Kshatriyas	...	7
iii) Vaishyas	...	6
iv) Upper caste	...	5
v) Artisan castes	...	4
vi) Service castes	...	3
vii) Harijans and untouchables	...	2
viii) Detribalized castes and others	...	1

For the purpose of distribution of key-communicators and communicators based on caste, three groups were evolved i.e., Upper caste, Middle caste and Lower caste.

Farm Size

The land owned by the respondent has been measured by a schedule and reported as farm size of a particular respondent.

1. Laxmanna, C. (1973), Caste Dynamics in Village India -
 "A study in Andhra Pradesh, Nachiketa Publications Ltd.,
 5, Kasthuri Buildings, Tata Road, Bombay.

It has been found that some farmers had wet land and dry lands. Therefore, for the purpose of analysis of land holding of varying types entire land was converted into a single unit (1 wet acre = 3 dry acres). This facilitated the quantification and classification of the holdings better. Based on the size of holding, the farmers were grouped into three categories - small, medium and big farmers. For purpose of calculating the socio-economic status of the farmers, the categorisation and scoring has been done according to Trivedi Socio-economic status scale.

Social Participation

This was operationalised basing on whether an individual is a member of one organisation, more than one organisation, an office holder and other distinguishing features, if any. The measurement scoring and categorisation has been done in accordance with Trivedi Socio-economic status scale. For the purpose of categorisation mean was used i.e., those above mean score and those below mean score.

Socio-Economic Status

Socio-economic status scale (Trivedi, 1963) was used with few modifications to measure socio-economic status of the farmers in this study. The measurement of individual items on the scale together with their scoring has been given in APPENDIX - I. The modifications of the scale to suit the locale of the study has been done during pre-testing. The

socio-economic status score of each respondent was obtained by administering the scale. The farmers were grouped into two two categories based on mean and standard deviation i.e., those with higher socio-economic status and lower socio-economic status.

Urban Contact

Following Loomis (1967), and Day (1965) an index of urban contact was developed. This consists of places visited, frequency of visit and purpose of visit. The respondents were grouped into two on the basis of mean visits. Those with above mean score (i.e. more than 20 visits/year) were assigned a score of 2 and with below mean score (i.e., less than 20 visits/year) were assigned a score of 1.

Innovativeness

This variable was measured by innovativeness scale developed for this study. This scale consisted of nine items. Each item was related in five-point continuum; i.e., strongly agree, agree, undecided, disagree, strongly disagree and scoring was given as follows - 5, 4, 3, 2 and 1 for positive items and 1, 2, 3, 4 and 5 for negative items. The farmers were categorised into two groups based on mean.

Extension Contact

This variable was measured in terms of the frequency of meetings of the farmers with the change agent, such as,

village development officer, Agricultural Extension Officer, Block Development Officer and Subject Matter Specialists. The responses were recorded in four point continuum; i.e., very frequent, frequent, often and never. The scoring system followed was 3, 2, 1 and 0 respectively. The pooled score expressed the degree of contact of farmers with the extension agency. The respondents were grouped into two categories based on mean as higher extension contact and lower extension contact.

Mass Media Exposure

Mass media was measured in terms of radio listening behaviour, newspaper and other literature readership and exposure to films. Different questions have been asked to know the mass media exposure of the farmers in the above areas. The mass media exposure has been measured and quantified as per mass media exposure index developed by Verma (1970). The farmers were grouped into two categories based on the mean, i.e., those with high exposure and those with low exposure to mass media.

Gregariousness

The gregariousness has been operationalised as the measure of farmer's social contacts. The index of gregariousness constructed by Katz and Lazarsfeld (1966) for measuring the Women's gregariousness was used in this study to measure the farmers' gregariousness. Two questions were included in

the index. How many people are there with whom you are friendly, talk with fairly often, who are not and never have been your neighbours? What organisations, clubs and discussion groups do you belong to? The first question provides a measure of the magnitude of the individual's sphere of intimate, informal relationships, and the immediate environments of the household. The second question covers social participation in more or less public associations.

Both the questions presumably reflect the degree of opportunity to participate in the person-to-person process of influence.

In order to reduce the two into one scale each has been reduced to high-low dichotomy. Based on the median number of friends named by the farmer, the farmers were grouped into high and low classes. Then the sample was divided again into another high-low classification by using membership activity. While the indices were applied simultaneously it was possible to classify the farmers into high, low and medium in the gregariousness scores. This has been presented in Table - 3.2.

TABLE - 3.2

CATEGORISATION OF RESPONDENTS ON GREGARIOUSNESS SCORES			

Number of friendship			

		High	Low

Number of organisations			
High	P	R ₁	
Low	R ₂	Q	

Thus the number falling in 'P' category can be said to be highly gregarious and those falling in 'Q' category as very low in gregariousness. Farmers falling in R_1 and R_2 (or $R_1 + R_2$) fall under medium category of gregariousness.

Aspirations

Aspirations are goal statements conceiving future level of achievement. In order to assess the aspiration, open-ended questions covering certain areas of individual needs were used. The scale developed by Muthayya, (1971) was used for the purpose of measurement of this variable. The following areas were included for a measurement of aspirations, i.e., education to son/daughter, better house, farm power, land-holding and material possession. It was decided to use the question "what would you expect to have" to elicit aspiration as it was thought to bring about a realistic orientation. Based on the magnitude of the aspiration as revealed by the average standard scores for aspiration through open-ended questions, the respondents were grouped into two categories. Mean was used for the purpose of classification.

Devices used for Data Collection

The following devices were used for the collection of data.

Personal Interview Schedule

This is the name usually applied to the set of questions which are asked and filled in by an interviewer in a face-to-face situation with the subject. This technique was considered to be useful in dealing with farmers of different educational attainments. It was also possible to have reliable and valid data from the respondents.

A pre-tested interview schedule was, therefore, administered to the respondents to identify the key-communicators and communication patterns in the villages in the sequential adoption of some agricultural innovations. The schedule has been divided into four major sections. The first section dealt with bio-data of the respondents. In the second section pertinent socio-metric questions to trace the key-communicators and to study the communication patterns were structured. The third section dealt with role performance of the key-communicators. Last section dealt with different variables and their measurement. This was also coupled by Flangen's critical incident technique sheet.

Establishing the necessary rapport

Sufficient rapport was established during the preliminary village visits. To create confidence and faith, the investigator was introduced by some of the officials and non-officials of the Panchayat Samithi to the villagers of the respective villages. Later some informal discussion was held

with the villagers to know their problems. It was also made clear to them that the study is purely for academic purpose. Besides the local language was used during the conversation to gain their confidence and make them feel that the investigator is their own friend and not an outsider.

STATISTICAL PROCEDURES

The following statistical tests and measures were used for the analysis of data.

Mean

The arithmetic mean (\bar{X}) is the quotient that results when the sum of all items in the series is divided by the number of items.

The formula in terms of symbol is $\bar{X} = \frac{\sum x}{N}$

where, \bar{X} = the arithmetic mean

\sum = the sum of

x = each individual item

N = the number of items

Standard Deviation

The standard deviation (σ) is found by taking the difference of each item in the series from the Arithmetic mean (\bar{X}), squaring this difference (x^2), summing all the squared differences ($\sum x^2$), dividing by the number of items (N) and then extracting the square root.

$$s = \sqrt{\frac{\sum x^2}{N}}$$

where, s = standard deviation

Σ = the sum of

x^2 = sum of squared deviation from mean

N = number of items

Coefficient of Correlation

Simple linear correlation coefficient was computed to study the relationship between the independent variables and dependent variables.

$$r = \frac{\sum xy - \frac{(\sum x)(\sum y)}{n}}{\sqrt{\sum x^2 - \frac{(\sum x)^2}{n} \quad \sum y^2 - \frac{(\sum y)^2}{n}}}$$

where, r = co-efficient of correlation

$\sum xy$ = sum of product of pairs

$\sum x$ = sum of the first sample

$\sum y$ = sum of the second sample

In order to test the significance of the results, 't' test was used.

$$t = \frac{r \sqrt{n-2}}{\sqrt{1-r^2}}$$

't' calculated values were compared with 't' table value. If the 't' calculated value is greater than or equal to the obtained value, null hypothesis was rejected otherwise, null hypothesis was accepted and found that there was no significant difference between independent and dependent variables.

"t" - test

The 't' test was used to find out whether there was significant difference in the mean scores of personal and socio-psychological characteristics of key-communicators and communicators. The description and formula of the test is as follows.

$$t = \frac{|\bar{X}_1 - \bar{X}_2|}{\sqrt{\frac{n_1 s_1^2 + n_2 s_2^2}{n_1 + n_2 - 2}} \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \quad \text{with } t \text{ (n-2) d.f.}$$

where, \bar{X}_1 = Mean of X_1 series

\bar{X}_2 = Mean of X_2 series

$|\bar{X}_1 - \bar{X}_2|$ = difference between the two means taken as positive

s_1^2 = variance of X_1 series

s_2^2 = variance of X_2 series

n_1 = Total number of observations in X_1 series

n_2 = Total number of observations in X_2 series

d.f. = Degree of freedom

Spearman Rank Order Correlation Coefficient (rs)

This test is used when statistical series are composed of items the exact of which cannot be ascertained but which are ranked according to the size. This test helps to determine the extent of agreement among the two sets of respondents on a given issue. To find the coefficient of correlation of ranked data Spearman Rank Order Correlation Coefficient was used.

$$rs = 1 - \frac{6 \sum d_i^2}{N(N^2 - 1)}$$

where, rs = Coefficient of correlation of ranked data

di = Difference in rank between paired items in the two series

N = Total number of items

The calculated 'rs' value was compared with table value of the 'rs'.

Mann-Whitney U - Test

This test is a counterpart of t-test in parametric case. This is the most powerful test among the non-parametric tests when two samples are independent.

$$U_1 = n_1 n_2 + \frac{n_1 (n_1 + 1)}{2} - R_1$$

$$U_2 = n_1 n_2 + \frac{n_2 (n_1 + 1)}{2} - R_2$$

where, $n_1 n_2$ = are sizes of two samples

R_1 = Total of the ranks for the first sample, when the ranks are awarded for all the scores taking together for both the samples into consideration

R_2 = Total of the ranks for second sample, when the ranks are awarded for all the scores taking together for both the samples into consideration

when U_1 is not available in the table 'K' of Sidney Siegel (1956) book then U_2 can be calculated.

$$U_2 = n_1 n_2 - U_1$$

$$U_1 = n_1 n_2 - U_2$$

$$U_1 + U_2 = n_1 n_2$$

when both the samples or single sample is more than 20, the significance of observed value of 'U' may be determined by

$$Z = \frac{\left| U_1 - \frac{n_1 n_2}{2} \right|}{\sqrt{\frac{n_1 n_2 (n_1 + n_2 + 1)}{12}}} \sim N(0,1)$$

This observed Z-value was compared with table value of 'Z'.

Frequency and Percentages

Some of the data were subjected to and interpreted in terms of frequency and percentages.

OPERATIONAL DEFINITIONS

COMMUNICATION

Communication is a process by which two or more people exchange ideas, facts, feelings or impressions in ways that each gains a common understanding of the meaning, intent and use of message.

INTERPERSONAL COMMUNICATION BEHAVIOUR

It is operationalized as the degree to which a farmer exposes the other farmers of his village about a particular message in an informal face-to-face social interaction through word-of-mouth or other channels of communication with a view to influence the behaviour of other farmers.

COMMUNICATION PATTERN

It is the physical and informal structure that defines who consulted whom - and with what relationship in a given situation.

COMMUNICATION NET-WORD

It is defined as the channels of communication among members and sub-groups or groups showing the communicator - communicatee actions and interactions with respect to farm consultation.

KEY-COMMUNICATOR

Key-communicators are those who performed more than average number of communication acts at different stages of adoption.

COMMUNICATOR

Communicators are those who performed average or less than average number of communication acts at different stages of adoption.

NON-COMMUNICATOR

Non-communicators are those who had not performed even a single communication act at different stages of adoption.

INNOVATION

It is a new idea or a practice which is intended to replace an old idea or practice with a view to bring about progressive change in the existing pattern. Here, the agricultural innovations taken for study are - High Yielding Varieties of Paddy, Fertilizers, Pesticides and Multiple Cropping.

ADOPTION PROCESS

The adoption process is the mental process through which an individual passes from first hearing about an innovation to final adoption. There were four stages identified in the

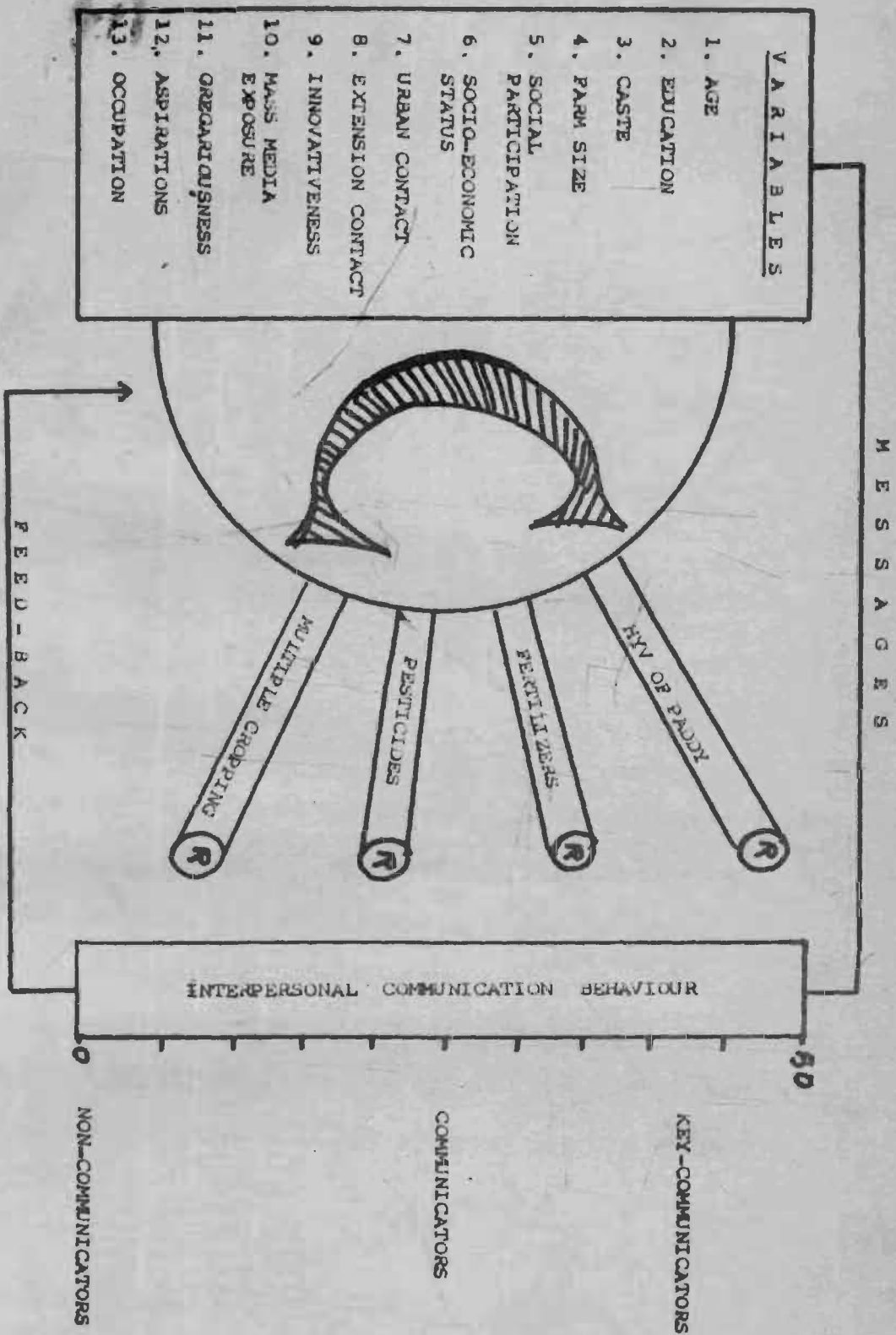
adoption process by Rogers (1965) namely - Knowledge, Persuasion, Decision and Confirmation.

SOCIOMETRIC METHOD

This consists in asking the persons to whom they go for advice and information about the idea or thing. This is primarily concerned with obtaining the interpersonal interactions. From these interactional patterns it was intended to locate the central figures who are sought for advice on farm practices. It would be necessary that these persons involved in sociometric test should know each other.

ROLE

The function or expected behaviour of an individual in a group.



A CONCEPTUAL MODEL EXPLAINING THE PHENOMENON OF INTERPERSONAL COMMUNICATION BEHAVIOUR OF FARMERS

CONCEPTUAL MODEL

This model has been conceptualized keeping in view the Newcomb (1953) and Westly and McClean (1957) models of interpersonal communication.

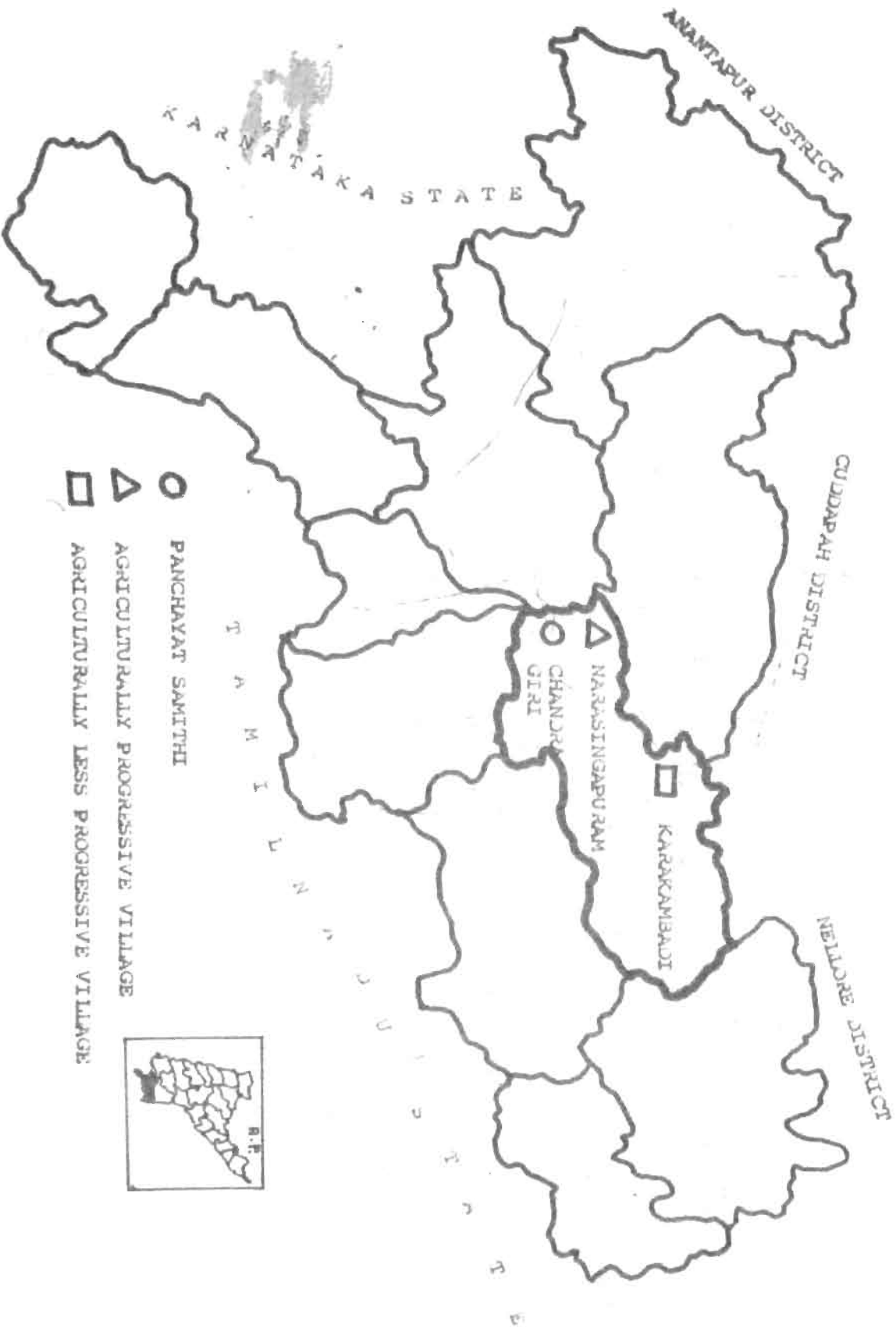
A close look at the model reveals that a communicator is communicating the messages relating to High Yielding Varieties of Paddy, Fertilizers, Pesticides and Multiple Cropping through the word-of-mouth channel to his followers (receivers). Here the communicators and receivers are the farmers in a village. The entire communication potentiality of the communicator has been quantified as his interpersonal communication behaviour. Based on the degree of intensity of the interpersonal communication behaviour of a farmer they have been called either as key-communicators or communicators or non-communicators. The receivers (the farmers who got '0' scores) are in other words called as non-communicators.

Besides this, thirteen personal and socio-psychological variables which have a bearing on interpersonal communication behaviour have been pin pointed and their association to the interpersonal communication behaviour has been indicated with an arrow mark.

SETTING

MAP OF CHITTOOR DISTRICT

SHOWING CHANDRAGIRI PANCHAYAT SAMITHI



S E T T I N G

A brief description of the geo-physical features of the District, Panchayat Samithi and Villages selected for the study is dealt in this chapter.

Chittoor district is the southern most district of Andhra Pradesh covering an area of 15,143 sq. kms with a population of 27.29 lakhs (as per 1981 census) between $12^{\circ} 67'$ - $14^{\circ} 8'$ of Northern latitudes and $79^{\circ} 55'$ - $78^{\circ} 3'$ of eastern longitudes. On the south and south-eastern side of the district lies Tamilnadu State. Correspondingly there is heavy Tamil influence in the cultures and production patterns of the people of Satyavedu, Srikalahasti, Nagiri, Puttur, Pichatur, Thottembedu and parts of Chittoor panchayat samithies. On the west and south-west there is partial geographical and cultural influence of Karnataka in the panchayat samithies of Kuppam, Palamaner, Punganur, Chodepalli, Madanapalle and Thamballapalle. And the district is bounded by Anantapur, Cuddapah and Nellore districts on the northern side. The density of population is 180 per sq. km. The district is divided into 20 panchayat samithies. There were altogether 1277 inhabited villages and 13 towns in the district constituting 11 taluks. The literacy rate in males was 35.95 per cent and the females was 14.41 per cent. Urban population was 13.45 per cent, workers 41.10 per cent, Scheduled caste population was 14.62 per cent, Scheduled tribe population

was 2.44 per cent and Backward caste population was 20.00 per cent.

The population is mainly agricultural and groundnut was the most important dry crop covering 2,04,775 ha. in the whole district, besides paddy being the main wet crop.

The district had neither a major river nor a perennial river. Minor rivers such as Peddur, Bahuda and Pince take birth in this district and drain off to Ananthapur and Cuddapah districts. The other rivers Ponnai, Kusastali and Araniar also originate in the district and drain off into the neighbouring state Tamilnadu. Suvarnamukhi and Kalangi which normally take birth in this district finally drain off into Nellore district. Even these rivers occasionally get flooded during heavy rains and dry up quickly. The position becomes acute when the rainfall is scanty and erratic.

The climate of the district was moderate with a normal average rainfall of 827.5 mm. It had the marginal and fringe benefits of both south-west and north-east monsoon. However, the capricious behaviour of the seasonal winds which did not always carry rain and in time caused frequent drought conditions. The eastern sector comprising of Srikalahasti, Chendragiri, Puttur, Nagari, Satyavedu, Thottambedu and Pichatur panchayat samithis get normal rainfall from the out pouring of the north-east monsoon in winter.

The general dry and drought prone ecology of the district is an important factor to be considered. It must be emphasised that the difficult and drought prone terrain of the district has made the people since historical times, a hardy and clever lot. They are very good agriculturists, capable of producing crops from very poor land.

Red soils are generally shallow to moderately deep with appreciable distribution of gravel on the surface. The top soil is loose and structureless and low in organic matter content. The soil reaction is generally neutral or non-alkaline. In high terrace lands, the soil is quite deep with clay sub-soil.

Of the total geographical area of the district 30.30 per cent is represented by forests and an equal percentage is cultivated and about 16.00 per cent is fallow land.

There were 94,433 Small farmers, 1,73,114 Marginal farmers and 3,98,251 Agricultural labourers in the district.

There were five medium irrigation sources, 8519 minor irrigation sources and about a lakh dug wells with a total net irrigated area of 3,68,788 acres as against the total cultivated area of 13,06,000 acres. About 95,000 acres still remains unirrigated.

Cropping Pattern

1. Paddy followed by Paddy, followed by Paddy
2. Paddy followed by Paddy
3. Paddy followed by Ragi
4. Paddy followed by Bajra
5. Paddy followed by Jowar
6. Paddy followed by Sugarcane
7. Paddy followed by Groundnut

Land Utilisation

Important crops grown in this block during 1980-81 were given below together with their acreage.

1. Paddy	...	5,80,992 acres
2. Groundnut	...	4,22,044 acres
3. Sugarcane	...	71,664 acres
4. Bajra	...	1,22,000 acres
5. Jowar	...	80,000 acres
6. Ragi	...	30,400 acres

With the introduction of short duration high yielding varieties much stress was laid on growing more number of crops in a year.

The area under multiple cropping and double cropping in this district during 1980-81 was 8,92,046 acres.

The following patterns were adopted.

1. Paddy followed by Paddy, followed by Paddy
2. Paddy followed by Ragi, followed by Paddy
3. Paddy followed by Bajra
4. Paddy followed by Groundnut
5. Paddy followed by Sugarcane

The following high yielding varieties were under cultivation in the district.

Paddy	-	1444, IR-8, IR-20, Jaya, Kaveri, Tella Hansa
Ragi	-	Sarada, Kalyani
Bajra	-	B.J. 104, Balaji Composite
Groundnut	-	TMV-2, Kadiri 71-1
Sugarcane	-	Co-419, Co-62175, Co-A.71-1
Jowar	-	CSH1, CSH5

CHANDRAGIRI PANCHAYAT SAMITHI

Chandragiri Panchayat Samithi is in existence ever since the formation of Panchayat Raj. Chandragiri panchayat samithi is located on the Tirupati to Chittoor high way at a distance of 12 kms from Tirupati. It is one of the agriculturally rapid developing samithies in the district. This samithi was included under Integrated Rural Development Programme (IRDP) from 2.10.1980. It had a total number of 78 revenue villages. It had an average annual rain fall of 905.8 mm.

The main crops and their extents are,

1. Paddy	...	10,819 acres
2. Sugarcane	...	5,539 acres
3. Groundnut	...	25,952 acres

Chandragiri Panchayat Samithi has been broadly divided into three firks of Chandragiri, Tirupati and Renigunta consisting of 19, 31 and 28 villages respectively. And this samithi has been provided with three agricultural officers to help assist the farming community, of the respective area.

DESCRIPTION OF THE VILLAGES

NARASINGAPURAM

This village was one of the agriculturally progressive villages in the Chandragiri Panchayat Samithi. It is located at a distance of 3 kms from the samithi headquarters, and at a wakable distance of 1/2 km from the Chandragiri Railway Station on the Tirupati-Katpadi Railway line about 12 kms from Tirupati.

The total population of the village was 1900, and the area is 5010 acres of which the total cultivable is 1575 acres, of which the total mostly of red sandy loams.

Since agriculture was the main occupation of the inhabitants of the village, they were cultivating paddy, groundnut, sugarcane, jowar and ragi.

The source of irrigation was mostly lift-irrigation, through wells, with the help of electric pumpsets.

Because of the unique location of having been connected to the Chittoor highway on one side and Railways on the other and besides being in juxtaposition to the samithi headquarters, the village had good communication facilities.

The inhabitants of the village were predominantly hindus and muslims where the latter are very less. Out of the total 93 families in the village, 78 belonged to farm families. There were seven major castes in the village namely - Reddies, Gandla, Balijas, Gollas, Harijans, Dhobis and Barbers.

Agriculture was the major occupation in the village followed by a few traditional caste occupations.

The village had a primary health centre and the facility of mobile veterinary clinic of the College of Veterinary Science, Tirupati.

The village which had a panchayat possessed primary school, agricultural credit cooperative society.

KARAKAMBADI

This village was said to be one of the agriculturally less progressive villages in the Chandragiri panchayat samithi was situated at the extreme end of the samithi touching upon the cuddapah district border and was situated at a distance of 28 kms from the block headquarters.

The population of this village was 1780 with a total area of 4,241 acres out of which 1,326 acres of land was under cultivation. The soils were mostly chalka, red sandy loams.

The farmers of the village were cultivating paddy, groundnut, sugarcane, Jowar and ragi.

The source of irrigation was mostly well and few small tanks. The communication facilities to the village were rather comparatively poor because of its abutting into the reserve forest though it had a road link. Out of the total 178 families 105 belonged to the farm families. There were six major castes in the village namely - Balijas, Gollas, Reddies, Harijans, Vaisyas, Dhobies and Barbers.

The main occupation in the village was agriculture followed by a few traditional caste occupations.

There was one primary school and a village panchayat besides an agricultural credit cooperative society.

FINDINGS AND DISCUSSION

FINDINGS AND DISCUSSION

In spite of several schemes proposed by Government of India to maximise the food production, still it is lagging behind the population growth, as such, the paramount importance is to step up it by inducing the farmers to adopt improved agricultural practices. To induce our tradition bound and illiterate farmer of rural areas to adopt agricultural innovations, a powerful communication system, which can effectively bring the fruits of innovations or practices to the door of cultivators is greatly needed. Hence, it is pertinent to undertake a scientific investigation on communication patterns, networks and key-communicators in order to utilise them better in the adoption of agricultural innovations and agricultural developmental programmes.

In this chapter, the findings related to different aspects of the problem are presented and discussed in detail. The data, having been processed and analysed are presented under the following heads.

- A) Communication patterns followed by the farmers in the sequential adoption of agricultural innovations.

- B) Communication Net-works among the farmers - Sociometric analysis.
- C) Identification of Key-communicators, Communicators and Non-communicators among the farmers.
- D) Distribution of key-communicators and communicators with respect to their personal and socio-psychological variables.
- E) The difference among the key-communicators and communicators with respect to their personal and socio-psychological variables.
- F) Personal and Socio-psychological variables associated with the interpersonal communication behaviour of farmers.
- G) Role expectations and role performance of the key-communicators in relation to new strategy of Agricultural Production.

SECTION - A

COMMUNICATION PATTERNS FOLLOWED BY THE FARMERS IN THE SEQUENTIAL ADOPTION OF AGRICULTURAL INNOVATIONS

The communication patterns were examined at different stages of adoption process with the help of interview schedule constructed for the purpose, in agriculturally progressive and less progressive villages. On the basis of response of the

TABLE - 5.1

COMMUNICATION PATTERNS IDENTIFIED AT DIFFERENT STAGES OF ADOPTION PROCESS IN A PROGRESSIVE

VILLAGE WITH RESPECT TO HIGH YIELDING VARIETIES OF PADDY

Stage of Adoption	COMMUNICATION PATTERNS					TOTAL
	Friendship pattern	Relationship pattern	Perceived Farmer pattern	Best pattern	Neighbourhood pattern	
	£	£	£	£	£	£
	%	%	%	%	%	%
Knowledge	19	26	9	5	59	100.00
Persuasion	11	26	6	5	46	100.00
Decision	-	20	5	-	25	100.00
Confirmation	2	26	7	2	37	100.00

TABLE - 5.2

COMMUNICATION PATTERNS IDENTIFIED AT DIFFERENT STAGES OF ADOPTION PROCESS IN A PROGRESSIVE

VILLAGE WITH RESPECT TO FERTILIZERS

Stage of Adoption	COMMUNICATION PATTERNS					TOTAL
	Friendship pattern	Relationship pattern	Perceived Farmer pattern	Best pattern	Neighbourhood pattern	
	£	£	£	£	£	£
	%	%	%	%	%	%
Knowledge	15	26	14	6	61	100.00
Persuasion	-	10	5	1	16	100.00
Decision	2	16	7	2	27	100.00
Confirmation	2	16	7	2	27	100.00

respondents four communication patterns were identified namely - friendship pattern, relationship pattern, best farmer pattern and neighbourhood pattern. Further the communication patterns are examined at different stages of adoption namely - Knowledge, Persuasion, Decision and Confirmation as well as with respect to different agricultural innovations taken for study.

Communication patterns followed in a progressive village

Table - 5.1 shows the communication patterns identified at different stages of adoption process with respect to high yielding varieties of paddy in a progressive village.

From the Table - 5.1 it is clear that majority of the farmers followed relationship pattern in all the stages of adoption process. However, 32.2 per cent of the farmers at knowledge stage and 23.91 per cent of farmers at persuasion stage have consulted their friends. It is startling to note at decision making stage the prominent consultation patterns seems to be relationship pattern and perceived best farmer pattern, in that order.

The Table - 5.2 shows the communication patterns identified at different stages of adoption process in a progressive village with respect to fertilizers use.

From Table - 5.2 it is clear that the farm consultation pattern with respect to fertilizers seems to be relation-

TABLE - 5.3

COMMUNICATION PATTERNS IDENTIFIED AT DIFFERENT STAGES OF ADOPTION PROCESS IN A PROGRESSIVE VILLAGE WITH RESPECT TO PESTICIDES

Stage of Adoption	COMMUNICATION PATTERNS					TOTAL
	Friendship Pattern	Relationship Pattern	Perceived Best Farmer Pattern	Neighbourhood Pattern	%	
Knowledge	15	40	17	11	13.25	93
100.00						
Persuasion	2	16	7	6	19.36	31
100.00						
Decision	2	16	7	2	7.40	27
100.00						
Confirmation	2	16	7	2	7.40	27
100.00						

TABLE - 5.4

COMMUNICATION PATTERNS IDENTIFIED AT DIFFERENT STAGES OF ADOPTION PROCESS IN A PROGRESSIVE VILLAGE WITH RESPECT TO MULTIPLE CROPPING

Stage of Adoption	COMMUNICATION PATTERNS					TOTAL
	Friendship Pattern	Relationship Pattern	Perceived Best Farmer Pattern	Neighbourhood Pattern	%	
Knowledge	15	61	49	29	18.83	154
100.00						
Persuasion	-	20	13	7	17.50	40
100.00						
Decision	-	20	13	7	17.50	40
100.00						
Confirmation	2	25	15	9	17.64	51
100.00						

ship pattern followed by best farmer pattern and neighbourhood pattern. However, 24.59 per cent of the farmers expressed that they have followed the friendship pattern at knowledge stage of adoption. So, in all the stages of adoption the relationship pattern was most commonly followed pattern by a large majority.

The Table - 5.3 shows the communication patterns identified at different stages of adoption with respect to use of pesticides in a progressive village.

From Table - 5.3 it is evident that the majority of the farmers were found to have expressed the communication patterns followed as relationship pattern followed by best farmer pattern. The percentage of farmers expressing the friendship pattern and neighbourhood pattern seems to be almost equal, in all the stages of adoption process, whereas at persuasion stage, majority followed relationship pattern, best farmer pattern, neighbourhood pattern (19.36 per cent) and friendship pattern (6.45 per cent) in that order.

Table - 5.4 indicates the communication patterns identified at different stages of adoption process with respect to multiple cropping in a progressive village.

It is clear from Table 5.4 that in the case of multiple cropping also the most predominant pattern of communication identified was relationship pattern followed

TABLE - 5.5

COMMUNICATION PATTERNS IDENTIFIED AT DIFFERENT STAGES OF ADOPTION PROCESS IN A PROGRESSIVE VILLAGE

Stage of Adoption	COMMUNICATION PATTERNS						TOTAL
	Friendship pattern	Relationship pattern	Perceived Best Farmer pattern	Neighbourhood pattern	£	%	
Knowledge	64	153	89	51	357	100.00	
Persuasion	13	72	31	17	133	100.00	
Decision	4	72	32	11	119	100.00	
Confirmation	8	83	36	15	142	100.00	

by perceived best farmer pattern and neighbourhood pattern in almost all stages of adoption. However, 9.74 per cent of farmers and 3.92 per cent of farmers have followed the friendship pattern at the knowledge and confirmation stages of adoption process.

The Table - 5.5 shows the communication patterns identified at different stages of adoption process in a progressive village when all the practices clubbed together.

From the Table - 5.5 it is very clear that the majority of the farmers have consulted their relatives followed by perceived best farmers at different stages of adoption process. However, the percentage of farmers consulting their friends and neighbours seems to be almost equal, in all the four stages of adoption process.

The over view of the Tables - 5.1 to 5.5 clearly indicates that the communication pattern followed in general was relationship pattern followed by perceived best farmer pattern, in all the stages of adoption and with respect to different agricultural innovations taken for study in a progressive village.

Communication patterns followed in a less progressive village

Table - 5.6 shows the communication patterns identified at different stages of adoption process in a less progressive village with respect to adoption of high yielding varieties of paddy.

TABLE - 5.6

COMMUNICATION PATTERNS IDENTIFIED AT DIFFERENT STAGES OF ADOPTION PROCESS IN A LESS PROGRESSIVE VILLAGE WITH RESPECT TO HIGH YIELDING VARIETIES OF PADDY

Stage of Adoption	COMMUNICATION PATTERNS				TOTAL
	Friendship Pattern	Relationship Pattern	Perceived Best Farmer Pattern	Neighborhood Pattern	
	£	£	£	£	£
	%	%	%	%	%
Knowledge	14	6	67	6	93
Persuasion	10	24	82	13	129
Decision	10	25	84	13	132
Confirmation	10	33	79	12	134

TABLE - 5.7

COMMUNICATION PATTERNS IDENTIFIED AT DIFFERENT STAGES OF ADOPTION PROCESS IN A LESS PROGRESSIVE VILLAGE WITH RESPECT TO FERTILIZERS

Stage of Adoption	COMMUNICATION PATTERNS				TOTAL
	Friendship Pattern	Relationship Pattern	Perceived Best Farmer Pattern	Neighborhood Pattern	
	£	£	£	£	£
	%	%	%	%	%
Knowledge	3	30	44	38	143
Persuasion	18	15	65	13	111
Decision	4	13	60	13	90
Confirmation	17	16	70	26	129

From the Table - 5.6 it is clear that majority of the farmers were found to have expressed the communication patterns followed as perceived best farmer pattern. This was followed by relationship pattern at persuasion, decision and confirmation stages of adoption. However, at knowledge stage 15.06 per cent of farmers seems to have consulted their friends for getting the information on High Yielding Varieties of Paddy.

The Table - 5.7 shows communication patterns identified at different stages of adoption process in a less progressive village with respect to adoption of fertilizers.

It is evident from the Table - 5.7 that majority of the farmers followed perceived best farmer pattern in the farm consultation with respect to fertilizers, in all the stages of adoption process. However, at knowledge and persuasion stages the friendship pattern, relationship pattern and neighbourhood pattern received almost equal scores indicating the preferences of the farmers in the farm consultations.

The Table - 5.8 shows the communication patterns identified at different stages of adoption with respect to use of pesticides in a less progressive village.

From the Table - 5.8 it is clear that a large majority of the farmers followed the perceived best farmer

TABLE - 5.3

COMMUNICATION PATTERNS IDENTIFIED AT DIFFERENT STAGES OF ADOPTION PROCESS IN A LESS PROGRESSIVE VILLAGE WITH RESPECT TO PESTICIDES

Stage of Adoption	COMMUNICATION PATTERNS					TOTAL
	Friendship Pattern	Relationship Pattern	Perceived best Farmer pattern	Neighborhood pattern	F	
Knowledge	1	18	125	13	157	100.00
Persuasion	-	10	64	12	86	100.00
Decision	-	10	64	12	86	100.00
Confirmation	-	10	64	12	86	100.00

TABLE - 5.9

COMMUNICATION PATTERNS IDENTIFIED AT DIFFERENT STAGES OF ADOPTION PROCESS IN A LESS PROGRESSIVE VILLAGE WITH RESPECT TO MULTIPLE CROPPING

Stage of Adoption	COMMUNICATION PATTERNS					TOTAL
	Friendship Pattern	Relationship Pattern	Perceived best Farmer pattern	Neighborhood pattern	F	
Knowledge	3	42	147	30	227	100.00
Persuasion	4	25	82	18	129	100.00
Decision	-	21	75	18	114	100.00
Confirmation	-	21	75	17	113	100.00

pattern followed by neighbourhood pattern and relationship pattern. However, none of the farmers followed the friendship pattern at persuasion, decision and confirmation stages except in knowledge stage where only one farmer opted to this pattern. However, at knowledge stage while 11.48 per cent of farmers expressed the relationship pattern only 8.29 per cent of farmers expressed the neighbourhood pattern.

The Table - 5.9 indicates the communication patterns identified at different stages of adoption process in a less progressive village with respect to Multiple cropping.

It is evident from Table - 5.9 that a large majority of the farmers preferred perceived best farmer pattern followed by relationship pattern and neighbourhood pattern. The farmers who followed the friendship pattern were almost negligible.

Table - 5.10 shows the communication patterns identified at different stages of adoption process in a less progressive village with respect to different agricultural innovations.

From the Table - 5.10 it is evident that majority of the farmers followed perceived best farmer pattern, neighbourhood pattern and friendship pattern in that order, in their consultations related to different agricultural innovations in a less progressive village.

TABLE - 5.10

COMMUNICATION PATTERNS IDENTIFIED AT DIFFERENT STAGES OF ADOPTION PROCESS IN A LESS PROGRESSIVE VILLAGE

Stage of Adoption	COMMUNICATION PATTERNS						TOTAL
	Friendship pattern	Relationship pattern	Perceived best Farmer pattern	Neighbourhood pattern			
	£	£	£	£	£	£	%
Knowledge	54	96	483	87	720	100.00	
Persuasion	32	74	293	56	455	100.00	
Decision	14	69	283	56	422	100.00	
Confirmation	27	80	288	67	462	100.00	

From the over view of the tables - 5.6 to 5.10 it is clear that the perceived best farmer pattern was followed by a large majority of the farmers in a less progressive village followed by relationship pattern.

Thus it is evident from the foregoing findings that the communication patterns followed in a progressive village differed with respect to the less progressive village. The difference between the communication patterns followed in a progressive village and a less progressive village may be due to the differential socio-cultural factors. Further it is striking to note that while in a progressive village relationship pattern was followed by perceived best farmer pattern; in a less progressive village perceived best farmer pattern was followed by the relationship pattern. This may be because of the closely knitted kinship structure in a progressive village compared to diversified and varied kinship structure in the less progressive village. However, in both the villages it was observed that a considerable percentage of farmers followed perceived best farmer pattern. This may be due to the fact that in the present day context of modernization generally every farmer wants to seek information from the well known persons who have higher communication credibility.

Another finding of the study showed that very small number of respondents sought information from neighbours and

Friends. This may be due to the fact that when the farmers went to seek information on the spot they might have consulted the neighbours and friends to save time.

SECTION - 8

COMMUNICATION NET-WORKS AMONG THE FARMERS - SOCIOMETRIC ANALYSIS

In this section, the communication net-works among the farmers were examined. This has facilitated the researcher to spot out the communication flow and patterns followed by the farmers in the progressive and less progressive villages.

The data obtained about who communicated whom has been presented in a clear way so that it could permit a 'Gestalt' type of relationships. This was done by graphically depicting the communicator - communicatee dyadic relationship, in relation to four situations namely - high yielding varieties of paddy, fertilizers, pesticides and multiple cropping. The figures were drawn on the Northway target pattern. Persons with highest sociometric scores (ICB Scores) were placed near the centre and those with lesser scores towards the periphery. Isolates¹ were placed outside the target.

The four different symbols - Hexagon, Circle, Triangle and Rectangle were used to denote key-communicators, communi-

1. Though the terms non-communicators and Isolates could be used identically, the farmers who sought information from other farmers were regarded as non-communicators and placed towards the periphery and those farmers who are not at all involved in interpersonal communication (either as receivers or communicators) were regarded as Isolates and placed outside the target of the sociogram.

cators, non-communicators and isolates respectively. Only the first choices were used for plotting the relationship. Double lined symbols were used to denote the communicators consulted in the second and third preference. An arrow has been drawn from the communicatee to his communicator for showing his communication effect network. Mutual choices were indicated by double headed arrow. From the analysis of sociograms, it is clear that the key-communicators exhibited more interpersonal communication behaviour followed by communicators.

SITUATION - I

High Yielding Varieties of Paddy in a Progressive Village

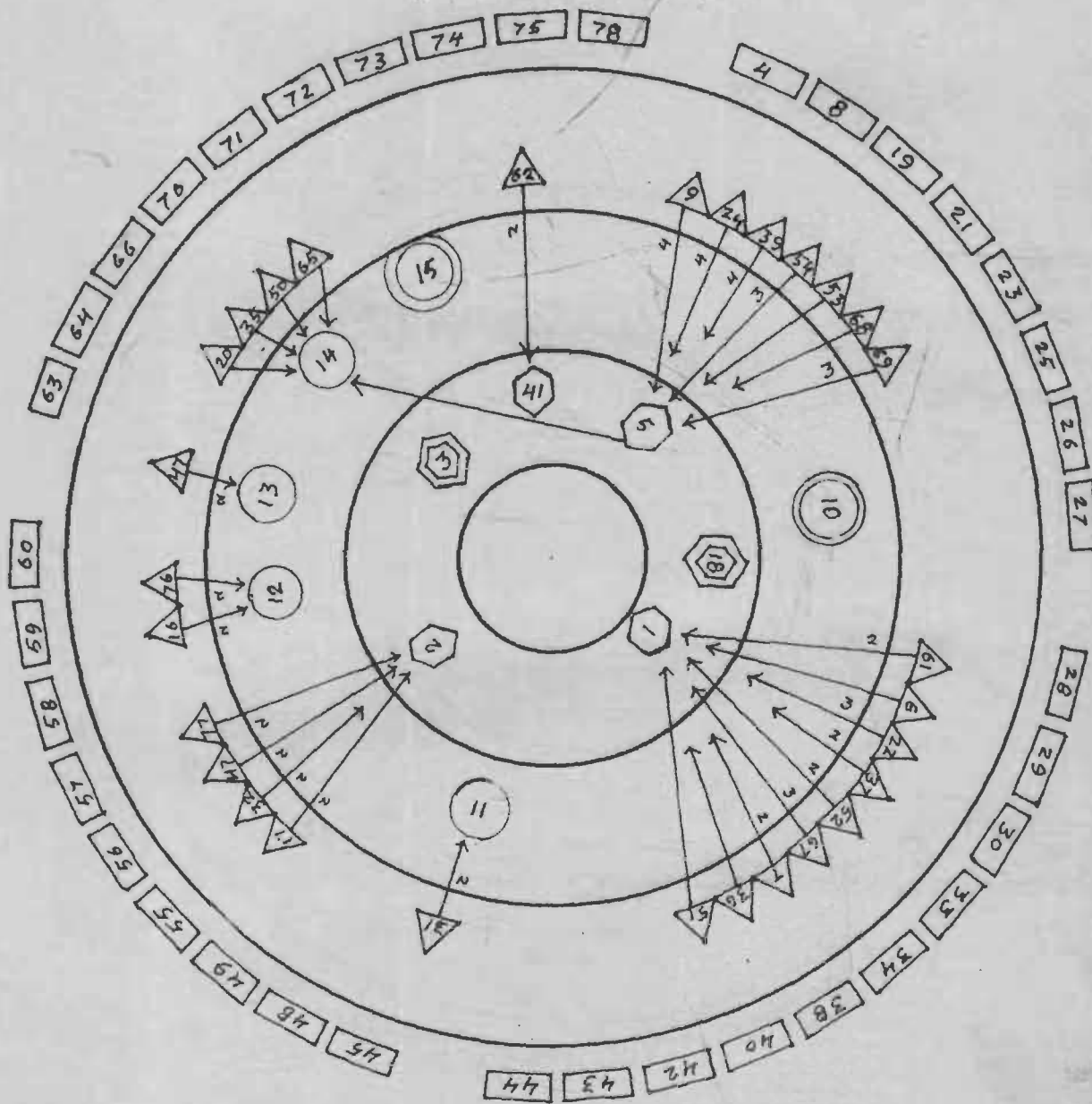
From the Sociogram No. 1 it is evident that there are four key-communicators and four communicators. It is interesting to note that only key-communicator No. 1 and 5 were involved more in the interpersonal communication acts. The rest of the communicators were consulted by a few farmers in the first, second and third preferences. Further it is clear from this situation that if the developmental personnel work through the key-communicator No. 1 and 5 it is possible to propagate high yielding varieties of paddy. The emerging pattern was spoked wheel type.

SITUATION - II

Fertilizers in a Progressive Village

In this situation, in Sociogram No.2 three key-

COMMUNICATION NET-WORKS AMONG
THE FARMERS IN PROGRESSIVE VILLAGE
(High Yielding Varieties of Paddy)

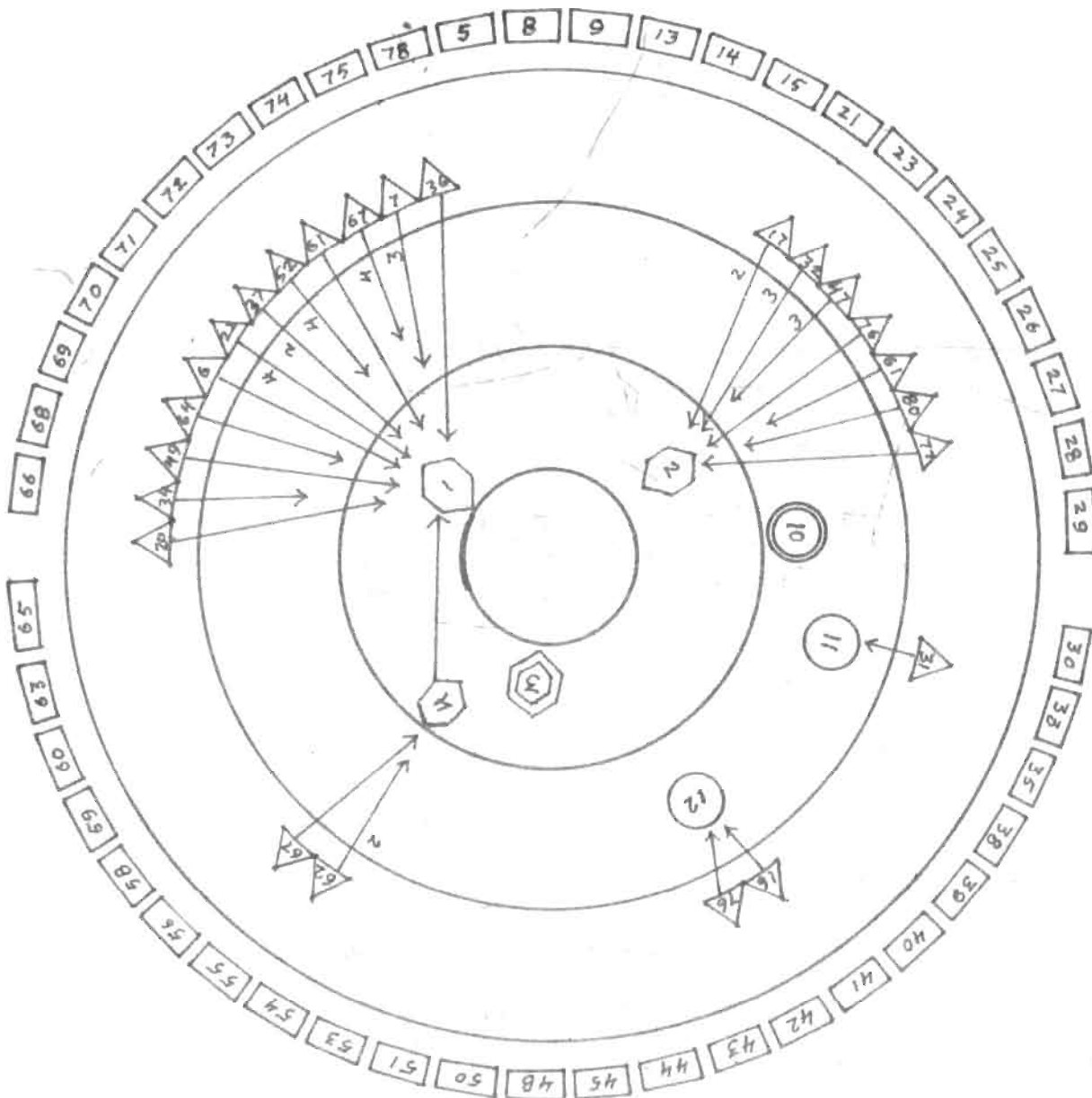


I N D E X

- | | | | |
|---|------------------|---|----------------------------|
| ◻ | KEY-COMMUNICATOR | ◻ | KEY-COMMUNICATOR 2nd & 3rd |
| ○ | COMMUNICATOR | ◻ | PREFERENCE |
| △ | NON-COMMUNICATOR | ◎ | COMMUNICATOR 2nd & 3rd |
| □ | ISOLATE | ◻ | PREFERENCE |

SOCIOGRAM - 2

COMMUNICATION NET-WORKS AMONG
THE FARMERS IN PROGRESSIVE VILLAGE
(Fertilizers)



I N D E X

- | | | | |
|---|------------------|---|---------------------------------------|
|  | KEY-COMMUNICATOR |  | KEY-COMMUNICATOR 2nd & 3rd PREFERENCE |
|  | COMMUNICATOR |  | COMMUNICATOR 2nd & 3rd PREFERENCE |
|  | NON-COMMUNICATOR | | |
|  | ISOLATE | | |

communicators and two communicators were noticed. Only the key-communicator No. 1 and 2 were mostly consulted by majority of farmers as indicated by their first choice. The spoked wheel type pattern was followed with respect to key-communicators No. 1 and 2.

SITUATION - III

Pesticides in a Progressive Village

In this situation, in Sociogram No. 3 three key-communicators and four communicators were noticed. Only key-communicator No. 1 and 2, and communicator No. 9 were mostly consulted by majority of the persons in different stages of adoption. The chain type and spoked wheel type of net-work were noticed.

SITUATION - IV

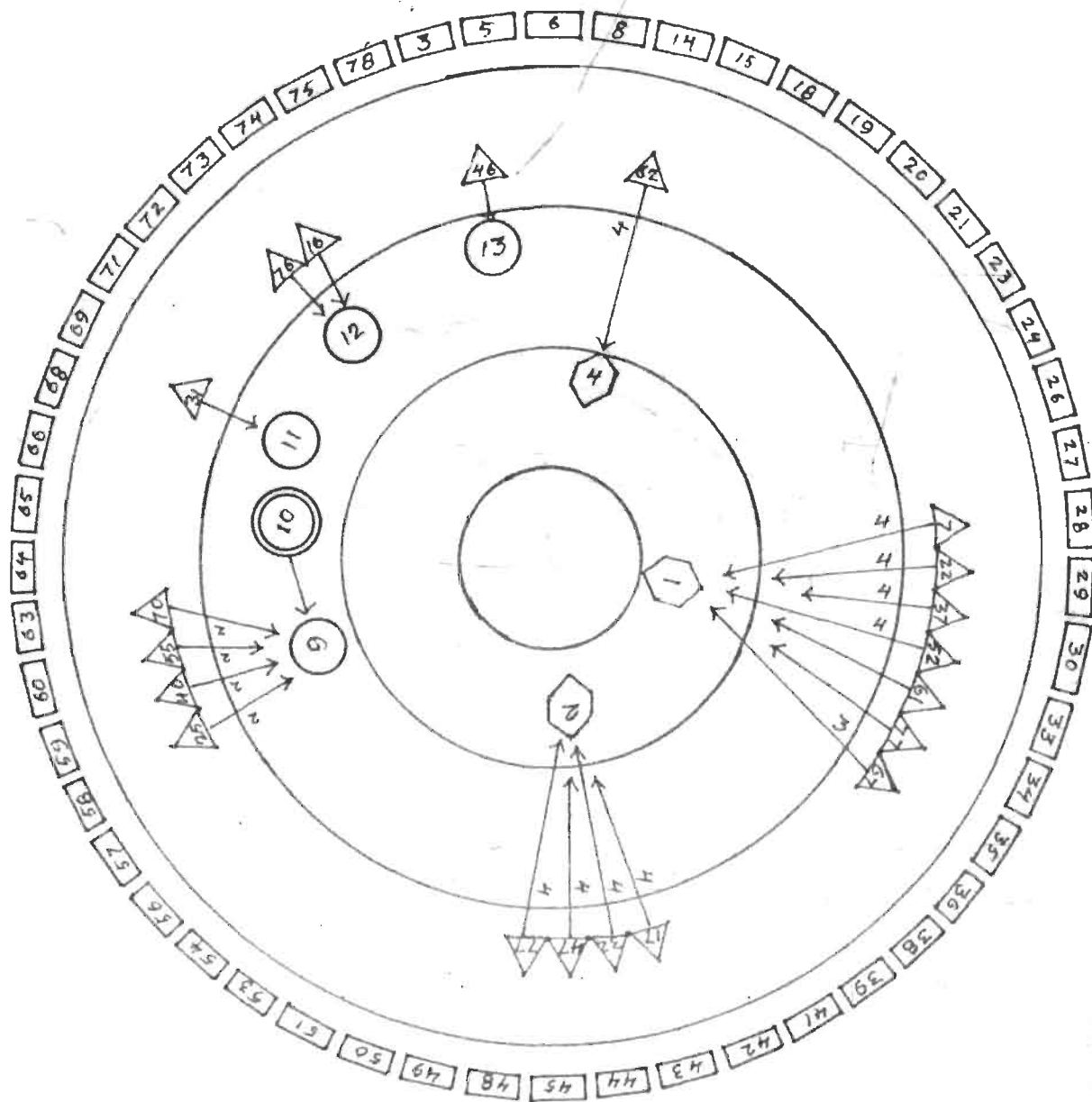
Multiple Cropping in a Progressive Village

In this situation, in Sociogram No. 4 six key-communicators and four communicators were noticed. The spoked wheel pattern was observed with respect to the key-communicators and chain type with respect to communicators. Here also distinct cleavages were noticed with respect to the interactional patterns.

From the over view of the Sociograms 1 to 4 it is evident that spoked wheel pattern was most predominant in

SOCIOGRAM - 3

COMMUNICATION NET-WORKS AMONG
THE FARMERS IN PROGRESSIVE VILLAGE
(Pesticides)



I N D E X

- | | | | |
|---|------------------|---|---------------------------------------|
| ⬡ | KEY-COMMUNICATOR | ⬡ | KEY-COMMUNICATOR 2nd & 3rd PREFERENCE |
| ○ | COMMUNICATOR | ⊙ | COMMUNICATOR 2nd & 3rd PREFERENCE |
| △ | NON-COMMUNICATOR | | |
| □ | ISOLATE | | |

the progressive village followed by chain type of net-work. However, it is interesting to note that only few communicators were instrumental in influencing the behaviour of a large majority of the farmers. The presence of few communicators in a progressive village and more number of communicators in less progressive village might be due to the close kinship structure and relationship patterns noticed in the progressive village.

SITUATION - V

High Yielding Varieties of Paddy in a Less Progressive Village

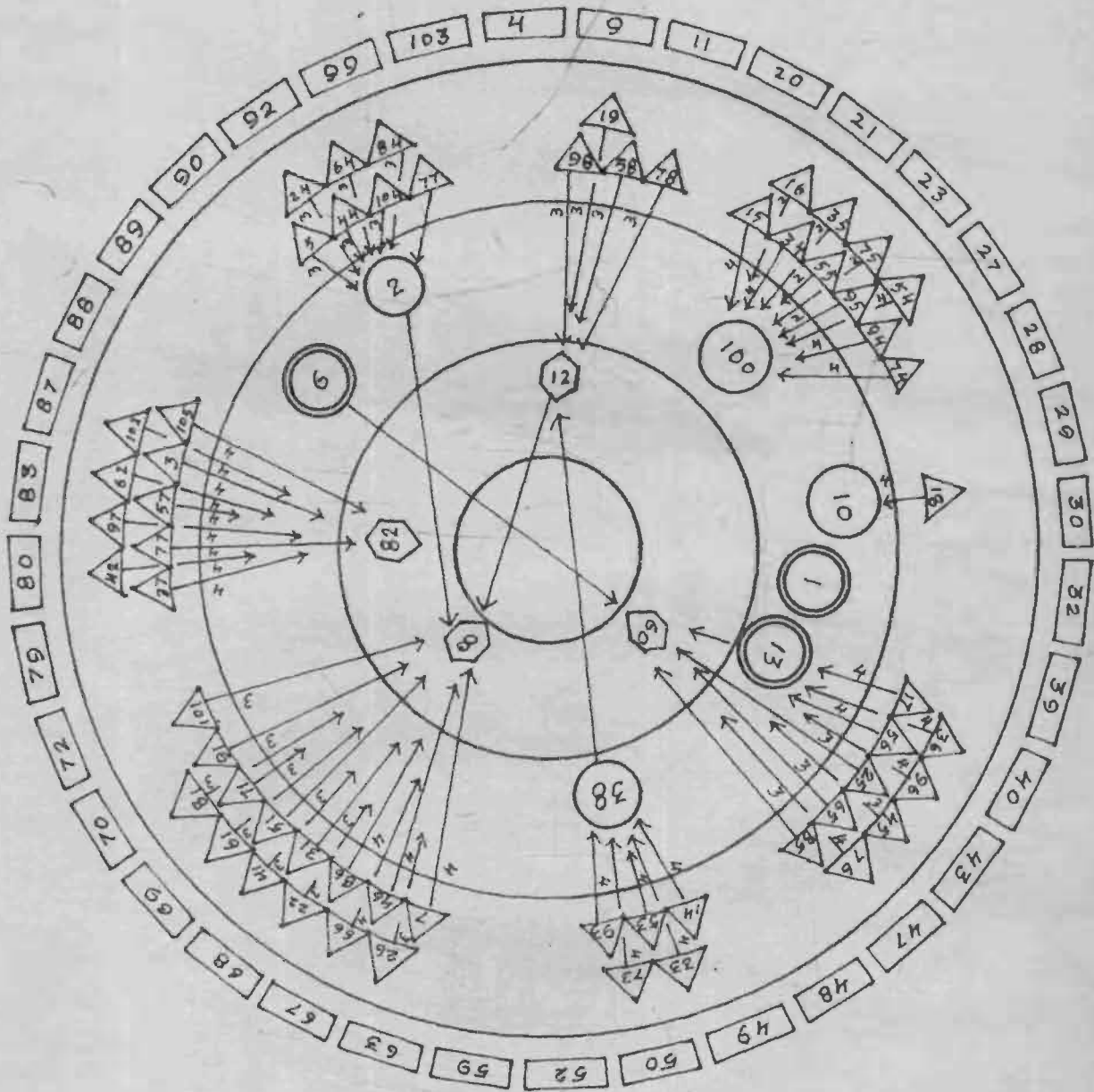
It is clear from Sociogram No. 5 that there are four key-communicators and seven communicators. The key-communicators have formed into separate cleavages. Only four communicators were involved in the act of interpersonal communication with respect to high yielding varieties of paddy as indicated by their first preferences. The rest of the communicators were consulted in the second and third preferences. It is interesting to note that farmer 8 who is a key-communicator with high ICB Scores emerged as 'Star' since the communicator No. 38 has consulted No. 12 who inturn has consulted No. 8. On the whole spoked wheel type of net-work has emerged.

SITUATION - VI

Fertilizers in a Less Progressive Village

It is clear from Sociogram No. 6 that there are four key-communicators and five communicators emerged out of the

COMMUNICATION NET-WORKS AMONG
THE FARMERS IN LESS PROGRESSIVE VILLAGE
(High Yielding Varieties of Paddy)

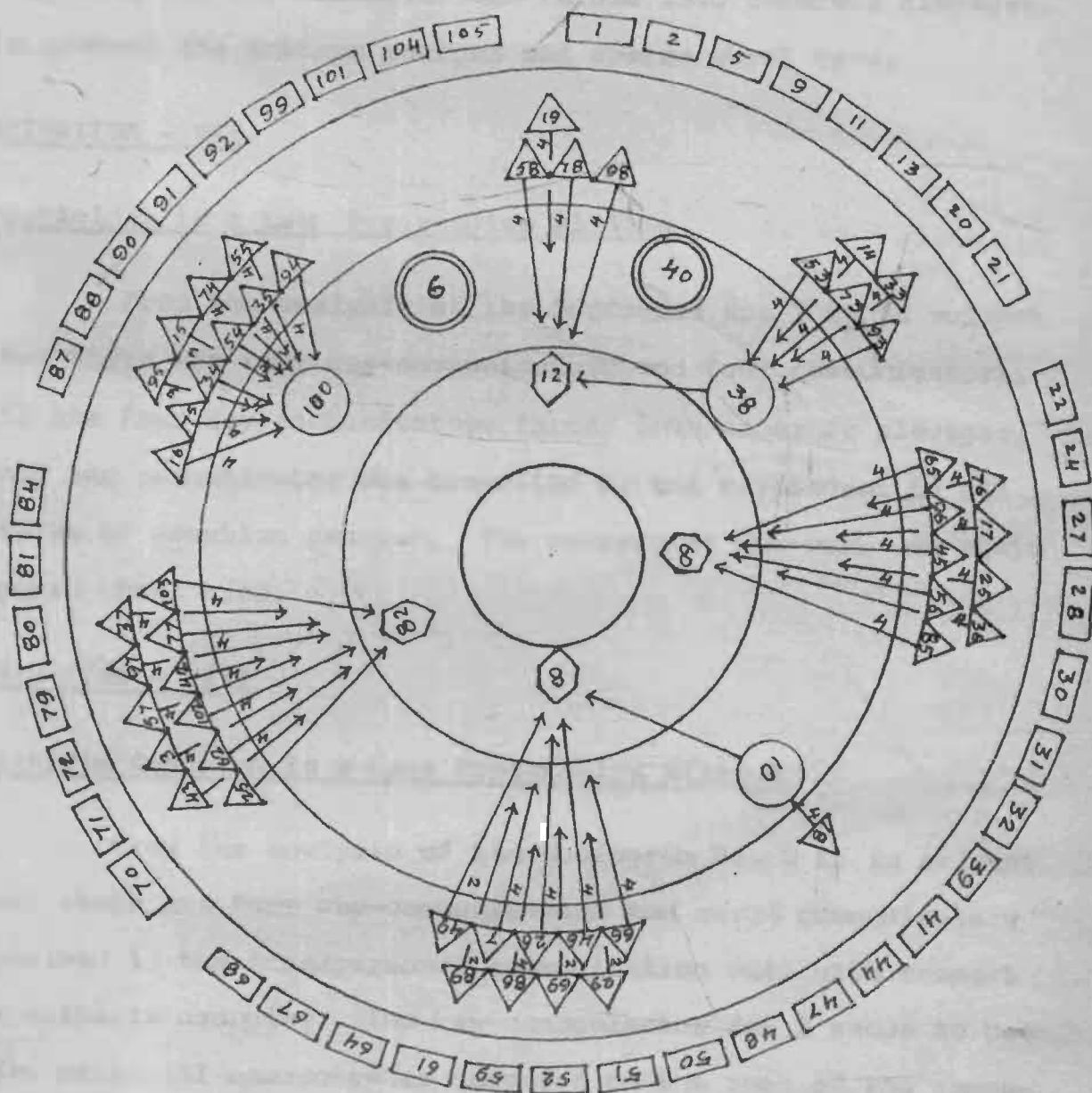


I N D E X









- | | | | |
|---|------------------|---|----------------------------|
| ◻ | KEY-COMMUNICATOR | ◻ | KEY-COMMUNICATOR 2nd & 3rd |
| ○ | COMMUNICATOR | ○ | PREFERENCE |
| △ | NON-COMMUNICATOR | ◉ | COMMUNICATOR 2nd & 3rd |
| ◻ | ISOLATE | ◉ | PREFERENCE |

S O C I O G R A M - 6

COMMUNICATION NET-WORKS AMONG
THE FARMERS IN LESS PROGRESSIVE VILLAGE
(Fertilizers)



I N D E X

- | | | | |
|---|------------------|---|----------------------------|
|  | KEY-COMMUNICATOR |  | KEY-COMMUNICATOR 2nd & 3rd |
|  | COMMUNICATOR |  | PREFERENCE |
|  | NON-COMMUNICATOR |  | COMMUNICATOR 2nd & 3rd |
|  | ISOLATE |  | PREFERENCE |

net-work. Only three communicators were involved in the consultation pattern as indicated by their first preference. The rest of them were consulted in second and third preferences. Here also the key-communicators formed into separate cleavages. In general the pattern emerged was spoked wheel type.

SITUATION - VII

Pesticides in a Less Progressive Village

From the analysis of the Sociogram No. 7 it is evident that there are four key-communicators and four communicators. All the four key-communicators formed into separate cleavages. Only one communicator was consulted by one respondent in all stages of adoption process. The pattern of net-work was again spoked wheel type.

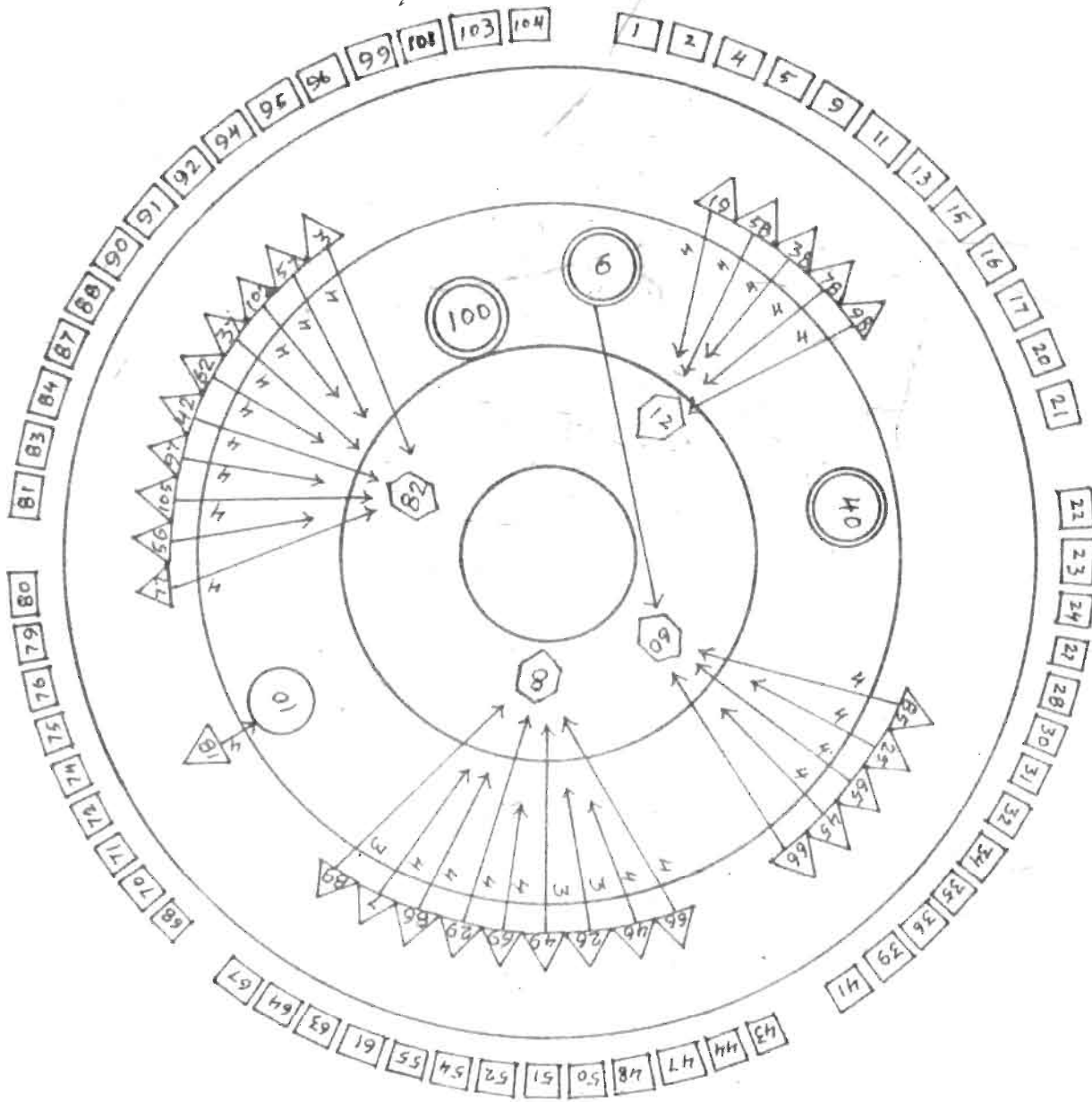
SITUATION - VIII

Multiple Cropping in a Less Progressive Village

From the analysis of the Sociogram No. 8 it is evident that there are four key-communicators and seven communicators involved in the interpersonal communication acts with respect to multiple cropping. The key-communicator No. 8 seems to be more potential communicator compared to the rest of the communicators identified in the net-work. It is startling to note that the key-communicator No. 60 has exhibited lesser interpersonal communication behaviour compared to other communicators in this situation. Here also there are number of

SOCIOGRAM - 7

COMMUNICATION NET-WORKS AMONG
THE FARMERS IN LESS PROGRESSIVE VILLAGE
(Pesticides)



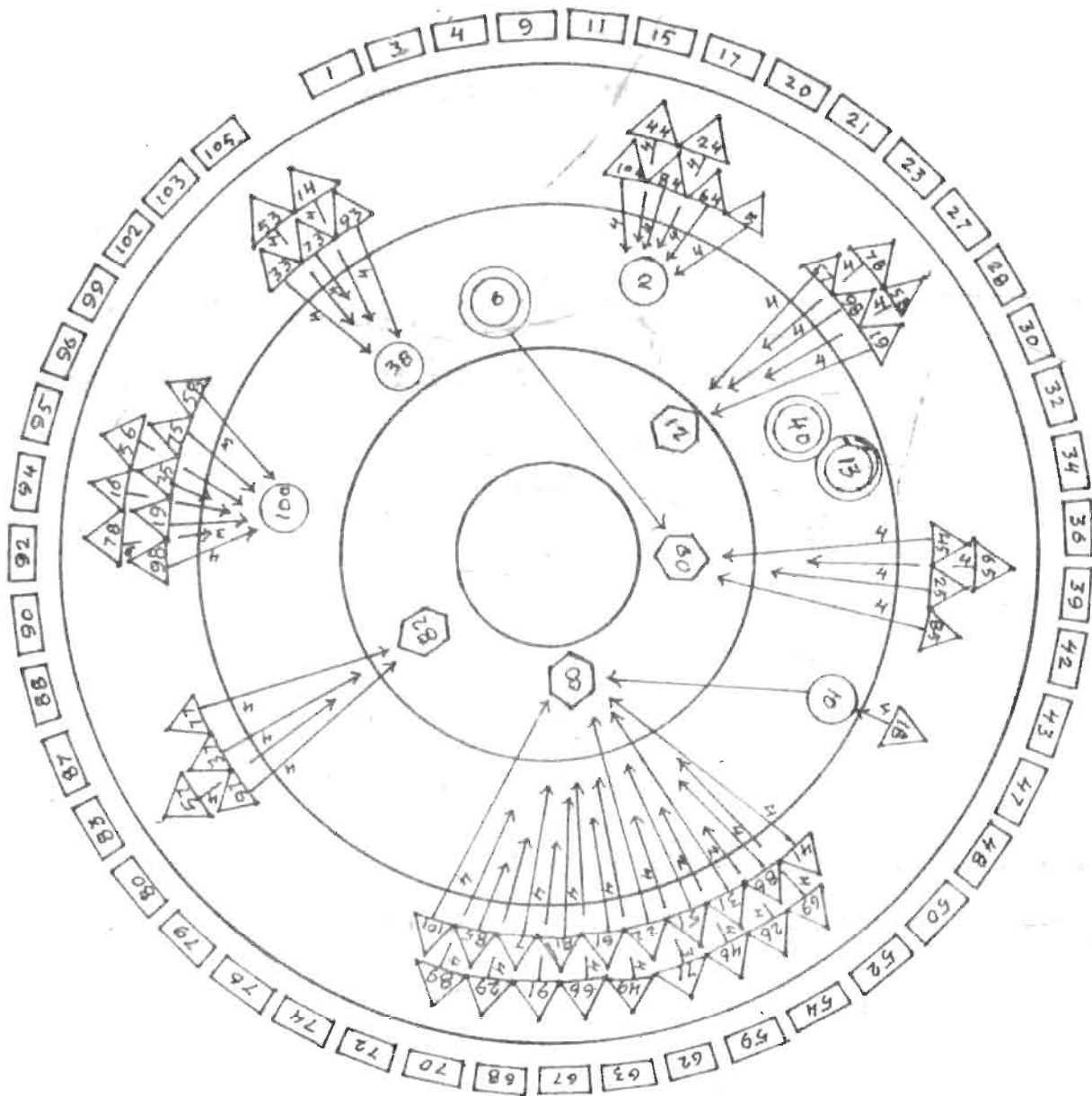
I N D E X

- ◻ KEY-COMMUNICATOR
- COMMUNICATOR
- △ NON-COMMUNICATOR
- ◻ ISOLATE



- ◻ KEY-COMMUNICATOR 2nd & 3rd PREFERENCE
- ⊙ COMMUNICATOR 2nd & 3rd PREFERENCE

SOCIOGRAM - B

COMMUNICATION NETWORKS AMONG
THE FARMERS IN LESS PROGRESSIVE VILLAGE
(Multiple Cropping)



I N D E X

- | | | | |
|---|------------------|---|---------------------------------------|
|  | KEY-COMMUNICATOR |  | KEY-COMMUNICATOR 2nd & 3rd PREFERENCE |
|  | COMMUNICATOR |  | COMMUNICATOR 2nd & 3rd PREFERENCE |
|  | NON-COMMUNICATOR | | |
|  | ISOLATE | | |

clevages with a few persons interacting with one communicator and in the other situations the spoked wheel type emerged as the most distinctive pattern of net-work.

The over view of the analysis of Sociograms 5 to 8 indicates that the spoked wheel type of communication pattern emerged in all the situations. However, the presence of distinct cleavages was also noticed, indicating different groups in the villages. Further the absence of clique is also quite conspicuous in the communication net-work. The developmental personnel in this village should concentrate their efforts through the key-communicators and communicators having large number of followers to multiply their extension efforts.

SECTION - C

IDENTIFICATION OF KEY-COMMUNICATORS, COMMUNICATORS AND NON-COMMUNICATORS AMONG THE FARMERS

The interpersonal communication behaviour of the farmers has been measured by means of a quotient developed by Geddy, S.V. (1971). On the basis of interpersonal communication behaviour of respondents in the context of agricultural innovations, different categories of communicators have been identified in a progressive and a less progressive villages. In this study, among the farmers, three categories were identified based on the interpersonal communication behaviour scores of each respondent. They were key-communicators, communicators

and non-communicators. This was done with the help of mean. Those farmers who received scores of mean and above on the ICB continuum were called as key-communicators. Those farmers who received less than the mean scores were called as communicators. And those farmers who received '0' scores on ICB continuum were placed under the non-communicators category, and they were not considered by at least one respondent as his communicator. They were therefore regarded as receivers or isolates. Thus the key-communicators were those who got highest ICB scores than the communicators.

Table - 5.11 shows the key-communicators, communicators and non-communicators identified in a progressive and less progressive villages.

TABLE - 5.11

KEY-COMMUNICATORS, COMMUNICATORS AND NON-COMMUNICATORS IN A PROGRESSIVE AND LESS PROGRESSIVE VILLAGES

Village	Key-Comm-unicators		Communi-cators		Non-Comm-unicators		TOTAL	
	P	%	P	%	P	%	P	%
Progressive	6	7.69	5	6.41	67	85.90	78	100.00
Less Progressive	4	3.81	9	8.57	92	87.62	105	100.00

It is clear from the above table that the total number of key-communicators identified were more in a progressive village. However total number of communicators identified

TABLE - 5.12

KEY-COMMUNICATORS AND COMMUNICATORS IDENTIFIED AT DIFFERENT STAGES OF ADOPTION PROCESS IN A PROGRESSIVE VILLAGE

Stage of Adoption	KEY-COMMUNICATORS				COMMUNICATORS			
	HV of Paddy	Fertlizers	Pesticides	Multiple Cropping	HV of Paddy	Fertlizers	Pesticides	Multiple Cropping
	F %	F %	F %	F %	F %	F %	F %	F %
Knowledge	4 100	3 100	3 100	6 100.00	4 100	2 100	4 100	3 100
Persuasion	3 75	3 100	3 100	6 100.00	4 100	- -	1 25	- -
Decision	2 50	1 25	3 100	5 83.33	- -	- -	- -	- -
Confirmation	2 50	2 50	2 100	2 33.33	- -	- -	- -	- -

TABLE - 5.13

KEY-COMMUNICATORS AND COMMUNICATORS IDENTIFIED AT DIFFERENT STAGES OF ADOPTION PROCESS IN A LESS PROGRESSIVE VILLAGE

Stage of Adoption	KEY-COMMUNICATORS				COMMUNICATORS			
	HV of Paddy	Fertlizers	Pesticides	Multiple Cropping	HV of Paddy	Fertlizers	Pesticides	Multiple Cropping
	F %	F %	F %	F %	F %	F %	F %	F %
Knowledge	4 100	4 100	4 100	4 100	4 100	3 100	1 100	4 100
Persuasion	4 100	4 100	4 100	4 100	4 100	3 100	1 100	4 100
Decision	4 100	4 100	4 100	4 100	4 100	3 100	1 100	4 100
Confirmation	3 75	4 100	4 100	4 100	3 75	3 100	1 100	4 100

were more in less progressive village. The percentage of communicators however was more in progressive village compared to less progressive village. In both villages, therefore, there are few individuals acting as key-informants indicating leadership traits among few people.

Tables - 5.12 and 5.13 show the key-communicators and communicators identified at different stages of adoption process in a progressive and less progressive villages.

From the analysis of Table - 5.12 it is clear that there are maximum number of key-communicators involved in Knowledge, Persuasion stages with respect to all the practices. Where as at Decision and Confirmation stages only 50 per cent and less number of key-communicators were identified with respect to their involvement in interpersonal communication acts pertaining to High Yielding Varieties of Paddy, Fertilizers and Multiple Cropping. None of the communicators seems to have been consulted at Decision and Confirmation stages with respect to all the innovations.

From the analysis of Table - 5.13 it is clear that all the key-communicators are involved in interpersonal communication acts pertaining to all messages at different stages of adoption process. Where as with respect to pesticides only one communicator was identified.

The Table - 5.14 shows the interpersonal communication Behaviour Scores of the key-communicators and communicators identified in a progressive and less progressive villages.

TABLE - 5.14

INTERPERSONAL COMMUNICATION BEHAVIOUR SCORES OF KEY-COMMUNICATORS AND COMMUNICATORS.

Code No. of the respondent	PROGRESSIVE VILLAGE		Code No. of the respondent	LESS PROGRESSIVE VILLAGE	
	K.C.	C		K.C.	C
2	13.00	-	1	-	4.00
5	-	10.40	2	-	12.70
6	-	1.30	6	-	15.00
8	-	0.70	8	77.10	-
15	14.40	-	10	-	3.40
16	11.80	-	12	45.80	-
24	-	6.50	13	-	5.10
46	13.00	-	22	-	5.60
49	-	3.80	36	-	23.00
60	23.40	-	40	-	10.80
76	30.40	-	60	54.90	-
			82	50.00	-
			100	-	20.60

K.C. - Key-communicator

C - Communicator

From the Table - 5.14 it is clear that the highest Interpersonal Communication Behaviour Score was recorded with respect to respondent No. 76 in a Progressive Village and respondent No. 8 with respect to less progressive village indicating their credibility in the farm consultation patterns. Further it is clear that interpersonal communication behaviour scores of the respondents from less progressive village was more compared to progressive village. This might be due to more number of farm families in that village and also more dependence on fellow farmers for getting advice and guidance. It is natural that other sources like extension workers, Mass media might have been much utilized in progressive village compared to less progressive village.

SECTION - D

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS WITH RESPECT TO THEIR PERSONAL AND SOCIO-PSYCHOLOGICAL VARIABLES

In this section, the key-communicators, communicators were distributed into different groups with respect to their personal and socio-psychological variables. This was done with the help of mean, standard deviation as well as by other standardised scales.

Age

The Tables - 5.15 and 5.16 show the distribution of key-communicators and communicators on the age groups in a progressive and less progressive village.

TABLE - 5.15

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR AGE IN A PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Old (51 and above)	3	50.00	4	80.00
Middle (26 to 50)	3	50.00	1	20.00
Young (upto 25)	-	-	-	-

TABLE - 5.16

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR AGE IN A LESS PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Old (51 and above)	-	-	1	11.11
Middle (26 to 50)	4	100.00	8	88.89
Young (upto 25)	-	-	-	-

Tables - 5.15 and 5.16 reveal that 50 per cent of key-communicators in progressive village and all of them in less progressive village belong to middle age group. None of the communicators and key-communicators are from young age group. By this one could conclude that middle and old age people still are considered as matured for consultations by virtue of their more farm experience.

Education

The respondents were distributed into two categories i.e., literates and illiterates.

The Tables - 5.17 and 5.18 show the distribution of key-communicators and communicators on the basis of their education in a progressive and less progressive village.

TABLE - 5.17

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR EDUCATION IN A PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Literates	6	100.00	4	80.00
Illiterates	-	-	1	20.00

TABLE - 5.18

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR EDUCATION IN A LESS PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Literates	2	50.00	8	88.89
Illiterates	2	50.00	1	11.11

From the Tables - 5.17 and 5.18 it is clear that all the key-communicators and majority of communicators are literates in a progressive village, where as, 50 per cent of the key-communicators are illiterates in a less progressive village. It is natural that in a less progressive village one can expect more illiterates than in a progressive village.

Caste

The respondents were categorised into three caste groups.

The Tables - 5.19 and 5.20 show the distribution of key-communicators and communicators on the basis of their caste in a progressive and less progressive village.

TABLE - 5.19

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON
THEIR CASTE IN A PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Upper	4	66.67	2	40.00
Middle	2	33.33	3	60.00
Lower	-	-	-	-

TABLE - 5.20

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON
THEIR CASTE IN A LESS PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Upper	-	-	-	-
Middle	2	50.00	8	88.89
Lower	2	50.00	1	11.11

The analysis of the distribution depicted in Tables - 5.19 and 5.20 clearly indicate that while majority of the key-communicators belonged to upper caste in the progressive village, 50 per cent of key-communicators belonged to lower caste in less progressive village. However, the over view of the tables indicate that upper and middle caste people are still performing the role of communicators in the rural areas.

Farm Size

The respondents were classified into three groups i.e., small farm, medium farm and large farm based on their farm size.

The Tables - 5.21 and 5.22 show the distribution of key-communicators and communicators based on their farm size in a progressive and less progressive village.

TABLE - 5.21

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR FARM SIZE IN A PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Small (upto 5 acres)	5	83.00	3	60.00
Medium (6 to 10 acres)	1	17.00	2	40.00
High (above 10 acres)	-	-	-	-

TABLE - 5.22

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR FARM SIZE IN A LESS PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Small (upto 5 acres)	3	75.00	7	77.78
Medium (6 to 10 acres)	1	25.00	1	11.11
Large (above 10 acres)	-	-	1	11.11

By observing the Tables - 5.21 and 5.22 it is clear that majority of the key-communicators in progressive and less progressive villages belonged to small farmer group. Similar trend is observed with respect to communicators. This might be due to the large number of small farmers in the villages taken for study.

Social Participation

The respondents were distributed into two categories i.e., above mean and below mean.

The Tables - 5.23 and 5.24 show the distribution of key-communicators and communicators on the basis of their social participation in a progressive and less progressive village.

TABLE - 5.23

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON
THEIR SOCIAL PARTICIPATION IN A PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Above mean	1	17.00	-	-
Below mean	5	83.00	5	100.00

TABLE - 5.24

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON
THEIR SOCIAL PARTICIPATION IN A LESS PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Percent
Above mean	1	25.00	-	-
Below mean	3	75.00	9	100.00

Analysis of the Tables - 5.23 and 5.24 show that majority of the key-communicators and communicators in both progressive and less progressive villages fell under below mean category, indicating the lesser social participation. Probably in the villages selected for study, there may be other leaders (social leaders) who are active in social development of the village.

Socio-Economic Status

The respondents were distributed into two categories i.e., above mean and below mean.

The Tables - 5.25 and 5.26 show the distribution of key-communicators and communicators on the basis of their socio-economic status in a progressive and less progressive village.

TABLE - 5.25

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR SOCIO-ECONOMIC STATUS IN A PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Above mean	3	50.00	3	60.00
Below mean	3	50.00	2	40.00

TABLE - 5.26

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR SOCIO-ECONOMIC STATUS IN A LESS PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Above mean	2	50.00	3	33.33
Below mean	2	50.00	6	66.67

Tables - 5.25 and 5.26 reveal that 50 per cent key-communicators in a progressive and less progressive villages belong to above mean socio-economic status group. While majority of communicators in progressive village are having higher socio-economic status, majority of communicators were having lesser socio-economic status in a less progressive village. It is natural that one can expect more communicators belonging to higher socio-economic status in a progressive village.

Urban Contact

The Tables - 5.27 and 5.28 show the distribution of key-communicators and communicators based on their urban contact in a progressive and less progressive village.

TABLE - 5.27

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR URBAN CONTACT IN A PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Above mean	6	100.00	1	20.00
Below mean	-	-	2	80.00

TABLE - 5.28

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR URBAN CONTACT IN A LESS PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Above mean	2	50.00	4	44.44
Below mean	2	50.00	5	55.56

It is revealed from the Table - 5.27 that all the key-communicators and majority of communicators are having above mean urban visits and below mean urban visits respectively. Table - 5.28 reveal that 50 per cent of key-communi-

cators and majority of communicators are having below mean urban visits in a less progressive village. It is clear, therefore, that key-communicators in a progressive village are having more urban contacts than the key-communicators of less progressive village.

Extension Contact

Tables - 5.29 and 5.30 show the distribution of key-communicators and communicators on the basis of extension contact in a progressive and a less progressive village.

TABLE - 5.29

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR EXTENSION CONTACT IN A PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Above mean	2	33.00	3	60.00
Below mean	4	67.00	2	40.00

TABLE - 5.30

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR EXTENSION CONTACT IN A LESS PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Above mean	1	25.00	3	33.33
Below mean	3	75.00	6	66.67

Tables - 5.29 and 5.30 reveal that majority of the key-communicators in a progressive village and less progressive village were having below mean extension contacts. Probably the extension workers might have not concentrating on key-communicators in both the villages.

Innovativeness

The respondents were distributed into two categories i.e., above mean and below mean.

The Tables - 5.31 and 5.32 show the distribution of key-communicators and communicators on the basis of their innovativeness in a progressive and less progressive village.

TABLE - 5.31

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR INNOVATIVENESS IN A PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Above mean	3	50.00	2	40.00
Below mean	3	50.00	3	60.00

TABLE - 5.32

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR INNOVATIVENESS IN A LESS PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Above mean	1	25.00	4	44.44
Below mean	3	75.00	5	56.56

Table - 5.31 reveal that 50 per cent of the key-communicators and 60 per cent of the communicators in a progressive village fell above mean innovativeness category and below the mean category of innovativeness respectively.

It could be made out from the Table - 5.32 that majority of the key-communicators and communicators in a less progressive village fell below mean innovativeness category. Here also similar trend is being observed with respect to the key-communicators in progressive village.

Mass Media Exposure

The respondents were distributed into two categories i.e., above mean and below mean.

The Tables - 5.33 and 5.34 show the distribution of key-communicators and communicators on the basis of their mass media exposure in a progressive village and less progressive village.

TABLE - 5.33

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR MASS MEDIA EXPOSURE IN A PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Above mean	3	50.00	3	60.00
Below mean	3	50.00	2	40.00

TABLE - 5.34

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR MASS MEDIA EXPOSURE IN A LESS PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Above mean	2	50.00	6	66.67
Below mean	2	50.00	3	33.33

It could be inferred from the Table - 5.33 that 50 per cent of key-communicators and 60 per cent of communicators fall above the mean mass media exposure category in a progressive village. Where as, 50 per cent of the key-communicators and 66.67 per cent of the communicators in less progressive village are having above mean mass media exposure. It is natural that communicators may be exposed to more mass media sources frequently.

Gregariousness

Tables - 5.35 and 5.36 show the distribution of key-communicators and communicators based on their gregariousness in a progressive and less progressive village.

TABLE - 5.35

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON
THEIR GREGARIOUSNESS IN A PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
High	1	16.66	-	-
Medium	1	16.66	-	-
Low	4	66.68	5	100.00

TABLE - 5.36

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON
THEIR GREGARIOUSNESS IN A LESS PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
High	1	25.00	2	22.22
Medium	1	25.00	2	22.22
Low	2	50.00	5	55.56

On perusal of Table - 5.35, one can make out that majority of key-communicators and communicators in a progressive village are having low gregariousness nature, where as, the same trend is observed in the case of a less progressive village i.e., majority of the key-communicators and communicators are having lesser gregariousness scores, as can be seen from Table - 5.36.

Aspirations

The respondents were distributed into two categories i.e., above mean and below mean.

The Tables - 5.37 and 5.38 show the distribution of key-communicators and communicators on the basis of their aspirations in a progressive village and less progressive village.

TABLE - 5.37

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR ASPIRATIONS IN A PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Above mean	1	17.00	5	100.00
Below mean	5	83.00	-	-

TABLE - 5.38

DISTRIBUTION OF KEY-COMMUNICATORS AND COMMUNICATORS BASED ON THEIR ASPIRATIONS IN A LESS PROGRESSIVE VILLAGE

Group	KEY-COMMUNICATORS		COMMUNICATORS	
	Number	Per cent	Number	Per cent
Above mean	4	100.00	7	77.78
Below mean	-	-	2	22.22

It could be seen from the Table - 5.37 that majority of key-communicators in a progressive village are having below mean score with respect to their aspirations. Where as, with regard to the less progressive village as can be seen from Table - 5.38 all the key-communicators and majority of communicators are showing above mean level of aspirations. Probably the communicators in a progressive village must be setting realistic levels of aspirations.

The overview of the Tables - 5.15 to 5.38 indicate that majority of the key-communicators belonged to old and middle age group, were literates, belonged to upper caste, operating small holdings with lesser social participation, extension contact and high urban contact, having low aspirations and gregariousness in a progressive village. However they were equally distributed with respect to their innovativeness and socio-economic status in the upper and lower groups.

However, majority of the key-communicators belonging to middle age group, middle and lower caste, operating small farms with low social participation, low extension contact and lesser innovativeness with high aspirations and low gregariousness, in a less progressive village. Nevertheless, they are equally distributed in high and low categories with respect to their mass media exposure, urban contact and socio-economic status.

SECTION - E

DIFFERENCE AMONG THE KEY-COMMUNICATORS AND COMMUNICATORS WITH RESPECT TO THEIR PERSONAL AND SOCIO-PSYCHOLOGICAL VARIABLES

In this section the significant difference between the key-communicators and communicators with respect to their personal and socio-psychological variables were examined. Two tests i.e., 't' test and Mann-Whitney 'U' test were used for testing the significant difference between two means (i.e., mean of key-communicators and mean of communicators). The results are given below.

The Table - 5.39 shows the 't' values indicating the significant difference between key-communicators and communicators with respect to certain variables.

TABLE - 5.39

DIFFERENCE BETWEEN KEY-COMMUNICATORS AND COMMUNICATORS WITH
RESPECT TO THEIR PERSONAL AND SOCIO-PSYCHOLOGICAL VARIABLES

S.No.	Variables	't' Values			
		Progressive Village		Less Progressive Village	
1.	Age	0.954	NS	0.544	NS
2.	Socio-Economic Status	3.090	*	0.403	NS
3.	Urban Contact	2.496	*	0.980	NS
4.	Extension Contact	1.800	NS	0.028	NS
5.	Innovativeness	0.278	NS	0.253	NS
6.	Mass Media Exposure	0.034	NS	0.352	NS
7.	Gregariousness	1.286	NS	1.009	NS

* - Significant at 5 per cent

NS - Not Significant

Age

NH₁: There will be no significant difference between the age of key-communicators and communicators of progressive village.

NH₂: There will be no significant difference between the age of key-communicators and communicators of less progressive village.

From the Table - 5.39 it is observed that the calculated 't' value is less than the table value with respect to their age. Therefore one can accept the NH_1 and NH_2 and can infer that there was not significant difference among key-communicators and communicators with respect to their age in a progressive and less progressive village.

Socio-Economic Status

NH_3 : There will be no significant difference between socio-economic status of key-communicators and communicators in progressive village.

NH_4 : There will be no significant difference between socio-economic status of key-communicators and communicators in less progressive village.

It can be seen that the calculated 't' value with respect to progressive village was more than table value. But with respect to less progressive village the calculated 't' value was less than table value with regard to socio-economic status. Therefore NH_3 was rejected while NH_4 was accepted. There was significant difference between the key-communicators with regard to their socio-economic status in the progressive village. Where as no such difference was found with respect to the less progressive village.

Probably all the key-communicators in a progressive village might be from upper socio-economic status.

Urban Contact

NH₅: There will be no significant difference between urban contact of the key-communicators and communicators of the progressive village.

NH₆: There will be no significant difference between urban contact of the key-communicators and communicators of the less progressive village.

From the Table - 5.39, it can be understood that the calculated 't' value was greater than the tabulated value with regard to the urban contact in the progressive village. Whereas, in case of less progressive village the calculated 't' value was less than table value. Therefore NH₅ was rejected but NH₆ was accepted. There was significant difference between key-communicators and communicators with regard to urban contact in the progressive village where as no such difference was found with respect to less progressive village. This might be due to the fact that all the key-communicators might be having more urban contacts in a progressive village.

Extension Contact

NH₇: There will be no significant difference between extension contact of key-communicators and communicators of progressive village.

NH₈: There will be no significant difference between extension contact of key-communicators and communicators of less progressive village.

As could be observed from the Table - 5.39 that the 't' calculated value is less than 't' tabulated value with respect to the extension contact. Therefore NH₇ and NH₈ can be accepted and inferred that there was not significant difference between the key-communicators and communicators with respect to their extension contact in progressive and less progressive villages. The reason could be that the key-communicators and communicators both might be relaying on radio, farm magazines, extension publications etc., rather than relaying on the extension workers such as Agricultural Extension Officer, Village Development Officer etc., in a progressive village and less progressive village.

Innovativeness

NH₉ : There will be no significant difference between innovativeness of key-communicators and communicators in progressive village.

NH₁₀: There will be no significant difference between innovativeness of key-communicators and communicators in less progressive village.

From the Table - 5.39, it could be inferred that the calculated 't' value is less than the table value with respect to their innovativeness. Therefore we can accept NH₉ and NH₁₀ and concluded that there was no significant difference among key-communicators and communicators with respect to their innovativeness in progressive and less progressive village.

Mass Media Exposure

NH₁₁: There will be no significant difference of mass media exposure between key-communicators and communicators of progressive village.

NH₁₂: There will be no significant difference of mass media exposure between key-communicators and communicators of less progressive village.

It is observed from the Table - 5.39 that the calculated 't' value is less than 't' tabulated value with respect to their mass media exposure. Therefore one can accept the NH_{11} and NH_{12} and can infer that there was not significant difference with respect to their mass media exposure of key-communicators and communicators of progressive and less progressive villages.

The following table shows the 'U' values indicating significant difference between the key-communicators and communicators with respect to education, caste and aspirations.

TABLE - 5.40

DIFFERENCE BETWEEN KEY-COMMUNICATORS AND COMMUNICATORS WITH RESPECT TO THEIR PERSONAL AND SOCIO-PSYCHOLOGICAL VARIABLES

S.No.	Variables	'U' Values	
		Progressive Village	Less Progressive Village
1.	Education	428.5 NS	334.5 NS
2.	Caste	418.0 NS	339.0 NS
3.	Aspirations	607.5 NS	330.0 NS

NS - Not Significant

Education

NH₁₃: There will be no significant difference between the education of key-communicators and communicators in progressive village.

NH₁₄: There will be no significant difference between the education of key-communicators and communicators in less progressive village.

From the Table - 5.40, it can be seen that the calculated 'U' value is more than the table value with respect to their education. Therefore one can accept the NH₁₃ and NH₁₄ and conclude that there was no significant difference among key-communicators and communicators in respect to their education in progressive and less progressive villages. The reasons could be that most of the key-communicators and the communicators in both progressive and less progressive villages are having similar type of distribution with respect to their education.

Caste

NH₁₅: There will be no significant difference between caste of key-communicators and communicators of progressive village.

NH₁₆: There will be no significant difference between caste of key-communicators and communicators of less progressive village.

From the above it can be seen that the calculated 'U' value is more than 'U' tabulated value with respect to their caste. Therefore one can accept the NH_{15} and NH_{16} and can infer that there was no significant difference between key-communicators and communicators of progressive and less progressive village with respect to their caste. This may be due to the fact that majority of key-communicators and communicators are belonging to middle and upper caste in the progressive village and to middle and lower caste in a less progressive village.

Aspirations

NH_{17} : There will be no significant difference of aspiration between key-communicators and communicators of progressive village.

NH_{18} : There will be no significant difference of aspiration between key-communicators and communicators of less progressive village.

From the Table - 5.40, it can be observed that 'U' calculated value is greater than the 'U' tabulated value with respect to their aspirations. Therefore one can accept the NH_{17} and infer that there was no significant difference between key-communicators and communicators with respect to their aspirations. It can also be observed from the Table - 5.40 that the calculated 'U' value is more than the 'U'

tabulated value with respect to their aspirations in a less progressive village. Therefore one can reject NH_{18} and can infer that there was no significant difference between key-communicators and communicators of less progressive village with respect to their aspirations.

From the overview of the Tables - 5.39 and 5.40 it is clear that the key-communicators and communicators significantly differed with respect to their socio-economic status and urban contact in a progressive village. However, there was no significant difference between key-communicators and communicators with respect to other variables. The developmental personnel may look into these characteristics while selecting key-communicators in a progressive village.

SECTION - F

PERSONAL AND SOCIO-PSYCHOLOGICAL VARIABLES ASSOCIATED WITH THE INTERPERSONAL COMMUNICATION BEHAVIOUR OF FARMERS

The Table - 5.41 shows the different variables associated with the interpersonal communication behaviour of the farmers. To isolate the most essential characteristics which contribute to the position of key-communicators and communicators, the correlation coefficient analysis was carried out and discussed below.

TABLE - 5.41

CORRELATION COEFFICIENT SHOWING THE ASSOCIATION BETWEEN THE
DEPENDENT AND INDEPENDENT VARIABLES

S.No.	Independent Variables	Progressive Village	Less Progressive Village
1.	Age	- 0.4343 NS	0.1817 NS
2.	Socio-Economic Status	- 0.0498 NS	0.0991 NS
3.	Urban Contact	0.4275 NS	0.3312 NS
4.	Extension Contact	- 0.2540 NS	- 0.0684 NS
5.	Innovativeness	- 0.0778 NS	0.6858 NS
6.	Mass Media Exposure	- 0.2368 NS	- 0.2205 NS
7.	Gregariousness	0.1278 NS	0.6255 *

* - Significant at 5 per cent

NS - Not Significant

Age

Empirical Hypothesis (E.H.) 1-1: There will be a positive and significant association between scores of age and the scores of interpersonal communication behaviour of the farmers.

Null Hypothesis (N.H.) 1-1: There will be no positive and significant association between the scores of interpersonal communication behaviour of the farmers.

It can be seen from the Table - 5.41 that the coefficient of correlation in a progressive village was negative and statistically not significant. Therefore, the null hypothesis was accepted and it was inferred that there was no positive association between age and interpersonal communication behaviour of farmers.

In case of less progressive village the correlation coefficient value was positive but statistically not significant, which meant that the null hypothesis of no positive and significant association between age and interpersonal communication behaviour of farmers was acceptable.

From the above results it was concluded that the age was independent of interpersonal communication behaviour of farmers of both progressive and less progressive villages.

Socio-Economic Status

Empirical Hypothesis (E.H.) 1-2: There will be positive and significant association between scores of socio-economic status and the scores of interpersonal communication behaviour of farmers.

Null Hypothesis (N.H.) 1-2: There will be no positive and significant association between scores of socio-economic status and interpersonal communication behaviour of farmers.

The computed coefficient of correlation values for progressive village was negative and statistically not signi-

ficant, where as, it was positive and statistically not significant for less progressive village. Therefore the null hypotheses in both cases were accepted and inferred that the socio-economic status of farmers in both the progressive and less progressive villages was not associated with their interpersonal communication behaviour.

It is therefore concluded that the socio-economic status is independent of the interpersonal communication behaviour of farmers in both progressive and less progressive villages.

Urban Contact

Empirical Hypothesis (E.H.) 1-3: There will be no positive and significant association between the scores of urban contact and the scores of interpersonal communication behaviour of farmers.

Null Hypothesis (N.H.) 1-3: There will be no positive and significant association between the scores of urban contact and the scores of interpersonal communication behaviour of farmers.

In both cases of progressive and less progressive villages the computed values of correlation coefficient were positive and statistically not significant. Hence the null hypothesis was accepted and stated that the urban contact of the farmers of both progressive and less progressive villages was not associated with their interpersonal communication behaviour.

From this, one could conclude that, the urban contact is independent of the interpersonal communication behaviour of both the progressive and less progressive villages.

Extension Contact

Empirical Hypothesis (E.H.) 1-4: There will be a positive and significant association between the scores of extension contact and the scores of interpersonal communication behaviour of farmers.

Null Hypothesis (N.H.) 1-4: There will be no positive and significant association between the scores of extension contact and the scores of interpersonal communication behaviour of the farmers.

The coefficient of correlation values in case of both progressive and less progressive villages were negative and statistically not significant. Hence, the null hypothesis was accepted and inferred that the contact with extension agency was not associated with the interpersonal communication behaviour of farmers.

It can be therefore concluded that the extension contact of the farmers is independent of their interpersonal communication behaviour.

Innovativeness

Empirical Hypothesis (E.H.) 1-5: There will be positive and significant association between the scores of innovativeness and the scores of interpersonal communication behaviour of the farmers.

Null Hypothesis (N.H.) 1-5: There will be no positive and significant association between the scores of innovativeness and scores of interpersonal communication behaviour of farmers.

The computed correlations coefficient value in case of progressive village was negative and statistically not significant, where as it was positive and statistically not significant in case of less progressive village resulting in acceptance of the null hypothesis. It can therefore be inferred that the innovativeness of the farmer is not associated with his interpersonal communication behaviour both in progressive and less progressive villages.

It is therefore concluded that the innovativeness is independent of interpersonal communication behaviour of farmers of both progressive and less progressive villages.

Mass Media Exposure

Empirical Hypothesis (E.H.) 1-6: There will be a positive and significant association between the scores of mass media exposure and scores of interpersonal communication behaviour of the farmers.

Null Hypothesis (N.H.) 1-6: There will be no positive and significant association between the scores of mass media exposure and scores of inter personal communication behaviour of the farmers.

From the Table - 5.41 it can be seen that the correlation coefficient values both progressive and less progressive villages were negative and statistically not significant. Hence the null hypothesis was accepted and concluded that the mass media exposure of farmers of both progressive and less progressive villages was not associated with their interpersonal communication behaviour.

It is therefore clear that the mass media exposure is independent of the interpersonal communication behaviour of farmers of both progressive and less progressive villages.

Gregariousness

Empirical Hypothesis (E.H.) 1-7: There will be a positive and significant association between scores of gregariousness and the scores of interpersonal communication behaviour of farmers.

Null Hypothesis (N.H.) 1-7: There will be no positive and significant association between the scores of gregariousness and the scores of interpersonal communication behaviour of farmers.

Table - 5.41 shows that the value of correlation coefficient in respect of progressive village was positive

and statistically not significant. Hence the null hypothesis is accepted and said that the gregariousness of the farmers of a progressive village is not associated with his interpersonal communication behaviour. Whereas the value of correlation coefficient in respect of less progressive village was positive and statistically significant at 0.05 level of probability. Therefore the null hypothesis was rejected and the data supported the empirical hypothesis. This shows that there was a positive and significant association of gregariousness with interpersonal communication behaviour of farmers of less progressive village.

It can be therefore concluded that the gregariousness of the farmers of progressive villages was independent of their interpersonal communication behaviour whereas it was seen dependent in case of farmers of less progressive village.

Part of the data on independent variables and dependent variables was subjected to non-parametric statistical tests like Spearman Rank Order correlation, to test the significant association if any between caste, occupation, farm size, social participation and aspirations of farmers of both progressive and less progressive villages and that of their interpersonal communication behaviour. The results are given in the following table.

TABLE - 5.42

RANK ORDER CORRELATION COEFFICIENT INDICATING THE ASSOCIATION BETWEEN INDEPENDENT VARIABLES AND DEPENDENT VARIABLES (ICB)

S.No.	Independent Variable	Progressive Village		Less Progressive Village	
		$ r_s $ Value	$ t $ Value	$ r_s $ Value	$ t $ Value
8.	Education	0.5088	1.8257 NS	0.1110	0.3710 NS
9.	Caste	0.0970	0.2923 NS	0.0892	0.2970 NS
10.	Occupation	- 0.3182	2.8461 NS	- 0.2588	3.1750 **
11.	Farm Size	- 0.3081	1.2633 NS	0.1964	0.1925 NS
12.	Social participation	0.1503	0.4560 NS	0.4629	1.7320 NS
13.	Aspirations	0.5710	2.0868 NS	0.4312	1.2839 NS

** - Significant at 0.01 level

NS - Not Significant

Education

Empirical Hypothesis (E.H.) 1-8: There will be a positive and significant association between the scores of the education and the scores of interpersonal communication behaviour of farmers.

Null Hypothesis (N.H.) 1-8: There will be no positive and significant association between the sources of education and sources of interpersonal communication behaviour of farmers.

From the Table - 5.42 it is evident that the spearman rank order correlation coefficient value both in cases of progressive and less progressive villages were positive and statistically not significant. Hence the null hypothesis was rejected and it can be inferred that there was no significant association between the education and interpersonal communication behaviour of farmers of both progressive and less progressive village.

It is therefore concluded that the education is independent of interpersonal communication behaviour of farmers of both progressive and less progressive village.

CASTE

Empirical Hypothesis (E.H.) 1-9: There will be a positive and significant association between the scores of caste and scores of interpersonal communication behaviour of the farmers.

Null Hypothesis (N.H.) 1-9: There will be no positive and significant association between the scores of caste and scores of interpersonal communication behaviour of the farmers.

From the Table - 5.42 it is evident that the spearman rank order correlation coefficient values are positive and statistically not significant for both progressive and less progressive villages. Hence the null hypothesis is accepted and it can be therefore inferred that the caste of the farmers of both progressive and less progressive villages was not associated with their interpersonal communication behaviour.

It is thus concluded that the caste of the farmer is independent of his interpersonal communication behaviour both in progressive and less progressive villages.

Occupation

Empirical Hypothesis (E.H.) 1-10: There will be a positive and significant association between the scores of occupation and the scores of interpersonal communication behaviour of the farmers.

Null Hypothesis (N.H.) 1-10: There will be no positive and significant association between the scores of occupation and scores of interpersonal communication behaviour of the farmers.

The spearman rank order correlation coefficient value in case of the progressive village was negative and statistically not significant accepting the null hypothesis. Whereas it was negative but statistically significant at 0.01 level of probability in case of less progressive village and therefore the null hypothesis was rejected, and the data supported the empirical hypothesis, indicating a positive association between occupation and interpersonal communication behaviour of farmers. As such it was concluded that the occupation was independent of the interpersonal communication of farmers of progressive village, whereas it was dependent in case of a less progressive village indicating those who are engaged in other occupations could be a good source for communications among farmers.

Farm Size

Empirical Hypothesis (E.H.) 1-11: There will be a positive and significant association between the scores of farm size and scores of interpersonal communication behaviour of the farmers.

Null Hypothesis (N.H.) 1-11: There will be no positive and significant association between the scores of farm size and scores of interpersonal communication behaviour of the farmers.

Table - 5.42 indicates the Spearman rank order correlation coefficient values pertaining to the progressive village was negative and not significant statistically with regard to less progressive village it was positive but statistically not significant. In both the cases the null hypothesis was accepted and inferred that the farm sizes of both progressive and less progressive villages farmers were not associated with their interpersonal communication behaviour.

It can be therefore concluded that the farm size of the farmers was independent of their interpersonal communication behaviour both in respect of progressive and less progressive villages.

Social Participation

Empirical Hypothesis (E.H.) 1-12: There will be a positive association between the scores of social participation and scores of interpersonal communication behaviour of the farmers.

Null Hypothesis (N.H.) 1-12: There will be no direct association between the scores of social participation and scores of interpersonal communication behaviour of the farmers.

The values of spearman rank order correlation coefficient in respect of both progressive and less progressive villages were positive but statistically not significant. Hence the null hypothesis is accepted and said that the social participation of farmers of both progressive and less progressive villages was not associated with their interpersonal communication behaviour.

Thus it was concluded that social participation is independent of the interpersonal communication behaviour of farmers of both progressive and less progressive villages.

Aspirations

Empirical Hypothesis (E.H.) 1-13: There will be a positive and significant association between the scores of aspirations and scores of interpersonal communication behaviour of the farmers.

Null Hypothesis (N.H.) 1-13: There will be no positive and significant association between the scores of aspirations and scores of interpersonal communication behaviour of the farmers.

Perusal of Table - 5.42 indicates that the spearman rank order correlation coefficient values of both progressive

and less progressive villages were positive although statistically not significant. Hence the null hypothesis was accepted. It was inferred that aspirations of the farmers of both progressive and less progressive villages was not associated with their interpersonal communication behaviour.

It can be therefore concluded that the aspirations of farmers of both progressive and less progressive villages was independent of their interpersonal communication behaviour.

An over view of the Tables - 5.41 and 5.42 indicates that the variables like Age, Socioeconomic status, Caste, Occupation, Farm Size, Social participation, Urban contact, Extension contact, Innovativeness, Mass media exposure, gregariousness and Aspirations were found to be independent of the interpersonal communication behaviour of the farmers of progressive village.

In case of the less progressive village, independent variables like Age, Education, Caste, Farm size, Social participation, Urban contact, Extension Contact, Innovativeness, Mass media exposure and Aspirations of farmers were found to be independent of their interpersonal communication behaviour, whereas, some independent variables like, Gregariousness and occupation were found to be dependent on interpersonal communication behaviour of farmers. However, the variables which were positively associated but could not demonstrate the

significant association could be subjected to correlation analysis in future studies with more sample and they might be considered to be having some association with interpersonal communication behaviour of farmers.

SECTION - G

ROLE EXPECTATIONS AND ROLE PERFORMANCE OF THE KEY-COMMUNICATORS IN RELATION TO NEW STRATEGY OF AGRICULTURAL PRODUCTION

It is worth while, to understand the roles expected and roles performed by the key-communicators in relation to new strategy of agricultural production. In this section however, the findings related to the above mentioned problem will be discussed.

Role expectations

The role expectations of the key-communicators in relation to the new strategy of agricultural production were ascertained from the experts in the field of agricultural extension. For this purpose, an open ended questionnaire was used.

The Table - 5.43 show the role expectations of the key-communicators as perceived by the experts in the field of agricultural extension and communication.

TABLE - 5.43

ROLE EXPECTATIONS OF THE KEY-COMMUNICATORS AS PERCEIVED BY THE EXPERTS IN THE FIELD OF AGRICULTURAL EXTENSION AND COMMUNICATION

S.No.	Role	f	Per cent
1.	Acting as liason officer on behalf of fellow farmers.	12	66.66
2.	Discharging the roles as a secondary level extension worker.	3	16.60
3.	Helping in educating the farmers.	8	44.40
4.	Helping in credit requirements of farmers.	9	50.00
5.	Helping the farmers in getting the agricultural inputs.	9	50.00
6.	Helping the farmers in marketing of their produce.	6	33.30
7.	Helping the farmers in securing different sources of agricultural information.	8	44.40
8.	Helping the farmers in identifying the farmers problems and resources.	6	33.30
9.	Acting as a friend, philosopher and guide to the fellow farmers.	3	16.60
10.	Keeping in touch with the developmental programmes.	3	16.60
11.	Acting as a guide to farmers by successfully communicating the new agricultural technology.	12	66.60

Table - 5.43 shows the different role expectations of key-communicators as perceived by the experts in the field of agricultural extension and communication. There were eleven roles expected by the experts to be performed by the key-commu-

nicators in order to meet the demands of new agricultural strategy out of them, the majority (50 per cent and above) agreed on the following role expectations - Acting as liason officer on behalf of the fellow farmers; Acting as guide to farmers by successfully communicating the new agricultural technology; Helping in credit requirements of farmers and Helping the farmers in getting the agricultural inputs.

Though some of these roles are expected to be performed generally by the leaders, yet the experts expecting the key-communicators also to act as leaders in some occasions wanted them to perform the roles mentioned above.

ROLE EXPECTATIONS OF THE KEY-COMMUNICATORS AS PERCEIVED BY THE FARMERS OF A PROGRESSIVE AND LESS PROGRESSIVE VILLAGE

Table - 5.44 shows the role expectations of key-communicators as perceived by the farmers of a progressive village.

TABLE - 5.44

ROLE EXPECTATIONS OF KEY-COMMUNICATORS AS PERCEIVED BY THE FARMERS OF A PROGRESSIVE AND LESS PROGRESSIVE VILLAGES

S.No.	R o l e	Progressive Village		Less Progressive Village	
		F	Per cent	F	Per cent
1.	Demonstrating improved practices.	78	100.00	104	99.04

Table - 5.44 (Contd.)

2. Providing information on new practices.	78	100.00	105	100.00
3. Supplying or helping in securing seeds.	0	-	10	9.52
4. Providing technical guidance.	77	98.71	87	82.85
5. Winning prizes for meritorious farming.	25	32.05	5	4.75
6. Persuading fellow farmers to adopt new practices.	61	78.20	58	55.23
7. Organising agricultural programmes.	0	-	0	-
8. Providing monetary help to fellow farmers.	2	2.56	0	-
9. Providing continuous guidance and interest in others' farming.	77	98.71	72	68.57
10. Speaking official quarter on behalf of fellow farmers.	75	96.15	67	63.80
11. Any others	0	-	0	-

Among the above mentioned roles, the majority agreed that the following role items were performed by the key-communicators in both the villages - Providing information on new practices; Demonstrating improved practices; Providing technical guidance; Providing continuous guidance and interest in others' farming; Speaking official quarter on behalf of fellow farmers and Persuading fellow farmers to adopt new practices.

**ROLE PERFORMANCE OF THE KEY-COMMUNICATORS IN A PROGRESSIVE
AND A LESS PROGRESSIVE VILLAGE AS PERCEIVED BY THE FARMERS**

However, it was found out that majority of the key-communicators were performing the following roles.

1. Demonstrating improved practices.
2. Communicating information on new practices and providing technical guidance.
3. Persuading fellow farmers to follow new practices.
4. Providing monetary help to fellow farmers.
5. Speaking with officials on behalf of fellow farmers.

There seems to be not much of a difference between role expectations and role performance of key-communicators as perceived by farmers in both the villages. From these findings, it is possible to know the roles which have to be played by key-communicators in view of new agricultural strategy which would help the Extension workers in identifying the roles for they can motivate the key-communicators to play some of the roles enumerated above for bringing in quick change in the rural areas. However, by observation, it was found out that "Concept of Self" is inhibiting the key-communicators from playing the roles effectively.

SUMMARY AND CONCLUSION

SUMMARY AND CONCLUSION

The emerging agricultural technology needs quicker communication to the millions of farmers who have to know, understand, accept and adopt the same. This needs a strong communication system, which means the extension workers should understand the existing patterns and net-works of communication in the interpersonal situation and build up appropriate strategies for popularizing the innovations in rural India.

Hence, keeping in view the increasing importance of interpersonal communication and the role of key-communicators in the sphere of agriculture, an attempt was made in the study to understand the communication pattern, net-works and to identify the key-communicators based on interpersonal communication behaviour including the different factors associated with it, with the following objectives.

1. To identify the communication patterns followed by farmers in different stages of adoption of selected agricultural innovations.
2. To examine the communication net-works among the farmers.

3. To identify the key-communicators and communicators with reference to adoption of selected agricultural innovations based on their interpersonal communication behaviour.
4. To understand the distribution of key-communicators and communicators with respect to their personal and socio-psychological variables.
5. To study the difference, if any, among the key-communicators and communicators with respect to their personal and socio-psychological variables.
6. To find out the association of selected independent variables with the interpersonal communication behaviour of the farmers.
7. To study the role expectation and role performance of key-communicators in view of the new strategy of agricultural production.

The present study was carried out in two selected villages (one agriculturally progressive - Narasingapuram and the other less progressive - Karakambadi) of Chandragiri Panchayat Samithi of Chittoor District of Andhra Pradesh. Multi-stage purposive sampling technique was used for the selection of the villages. All the heads of the farm families constituted the sample of the study. In all 183 farmers - 78 farmers from the progressive village and 105 farmers from less progressive village were interviewed.

An interview schedule containing the measurement of different variables coupled with mailed questionnaires were used as instruments of investigation. The design of the study was ex-post-facto.

The data collected were tabulated analysed and discussed with appropriate statistical procedures. Certain findings emerged from the present study have been summarized and presented below.

1. With special reference to agriculture, four types of communication patterns were identified in both villages namely - perceived best farmer pattern, relationship pattern, friendship pattern and neighbourhood pattern. But the order in which they were followed is different from a progressive village to a less progressive village. Nevertheless, the relationship pattern followed by perceived best farmer pattern in the progressive village and perceived best farmer pattern followed by relationship pattern in less progressive village in that order were considered to be the most preferred patterns followed by the farmers at different stages of adoption, namely - knowledge, persuasion, decision and confirmation stages, with respect to different agricultural innovations.

However, the absence of friendship pattern in most of the stages with respect to different innovations was noticed in the less progressive village.

2. From the analysis of the communication net-work sociograms, it is evident that the spoked-wheel pattern was most predominant with respect to different innovations in both the progressive and less progressive villages. However, number of clear cut cleavages were also noticed in the consultation patterns. Besides, in a progressive village a few communicators were instrumental in influencing the adoption behaviour of majority of the farmers.
3. Based on their intensity of interpersonal communication behaviour and with special reference to agricultural innovations among the farmers, 3 categories were identified namely - key-communicators, communicators and non-communicators. The percentage of key-communicators in the progressive village were more in number compared to less progressive village although the total number of communicators were more in a less progressive village.

4. Majority of the key-communicators were involved in interpersonal interaction with respect to different innovations in all the stages of adoption. In addition it is also clear that the interpersonal communication behaviour scores of the respondents were higher in a less progressive village compared to the progressive village.

5. Majority of the key-communicators belonged to old and middle age group, were literates, belonged to upper caste, operating small holdings with lesser social participation, extension contact and high urban contact, having low aspirations and gregariousness in a progressive village. However they were equally distributed with respect to their innovativeness and socio-economic status in the upper and lower groups.

However, majority of the key-communicators belonging to middle age group, middle and lower caste, operating small farms with low social participation, low extension contact and lesser innovativeness with high aspirations and low gregariousness, in a less progressive village. Nevertheless, they are equally distributed in high and low categories with respect to their mass media exposure, urban contact and socio-economic status.

6. The key-communicators and communicators were found to have significantly differed with respect to certain factors like socio-economic status and urban contact in a progressive village. However, there was no significant difference among the key-communicators and communicators with respect to the other variables.
7. The variables like age, socio-economic status, caste, occupation, farm size, social participation, urban contact, extension contact, innovativeness, mass media exposure, gregariousness and aspirations were found to be independent of the interpersonal communication behaviour of the farmers of progressive village. In case of the less progressive village, independent variables like age, education, caste, farm size, social participation, urban contact, innovativeness, mass media exposure and aspirations of farmers were found to be independent of their interpersonal communication behaviour, whereas, some independent variables like, gregariousness and occupation were found to be dependent on interpersonal communication behaviour of farmers.
8. Eleven roles expected to be performed by the key-communicators in order to meet the demands of new agricultural strategy were perceived by the experts

in the field of agricultural extension and communication. Out of them the majority agreed four roles namely - Acting as liason officer on behalf of the fellow farmers; Acting as guide to farmers by successfully communicating the new agricultural technology; Helping in credit requirements of farmers and Helping the farmers in getting the agricultural inputs.

9. Majority of the farmers in the progressive and less progressive villages felt that the key-communicators have to perform the following roles namely - Providing information on new practices; Demonstrating improved practices; Providing technical guidance; Providing continuous guidance and interest in others' farming; Speaking official quarter on behalf of fellow farmers and Persuading fellow farmers to adopt new practices.

10. It was also found out that majority of the key-communicators were performing the following roles namely - Demonstrating improved practices; Communicating information on new practices and providing technical guidance; Persuading fellow farmers to follow new practices; Providing monetary help to fellow farmers; and Speaking with officials on behalf of fellow farmers.

CONCLUSION

From the study it was realised that much in the direction of increased agricultural production could be achieved by proper understanding of communication patterns and key-communicators provided they are properly identified, trained and involved in the agricultural production programmes. Further, it may be added that the extension workers' ability to involve key-communicators in the programme of change could be improved if they know about the communication patterns, the factors associated with the key-communicators and the roles they could play in the adoption of agricultural innovations. Besides, the findings could be of great help in deciding upon separate, specific communication strategies for different villages which are at different stages of development (progressiveness).

IMPLICATIONS OF THE STUDY

The following implications emerged in the light of the findings of this study.

Among the different communication patterns identified in the study, the relationship pattern in a progressive village and perceived best farmer pattern in a less progressive village were found to have been adopted by the majority of the villagers and therefore, the developmental and extension personnel in the field may look for such a type of communication patterns for introducing agricultural innovations in rural areas, in order

to hasten the process of communication of agricultural information. The fact that differential patterns were identified in a progressive and less progressive villages could also serve as an effective indicators for building differential strategies of communication with the villages of different levels of programme.

The fact that the key-communicators have been contributing significantly towards the adoption of the agricultural innovations in the rural areas suggests the need for a proper identification and utilization of such persons for sponsoring the agricultural production programmes. Such a type of key-communicators would be of much use, if selected for the farmers' training, national demonstrations and allied programmes.

Further, it revealed that certain factors responsible for interpersonal communication behaviour of the farmers in the progressive village were not found to be associated with the same phenomenon in the less-progressive village. This implies that the strategy of locating and involving the key-communicators in dissemination of agricultural developmental programmes, differs from a progressive village to less-progressive village based on certain attributes. The finding of this study will be of immense use in the direction. Therefore, the extension workers should not go to villages with preconceived notion of some fixed characteristics of key-communicators.

Besides, it was found out that key-communicators and communicators differed significantly with respect to certain personal and socio-psychological variables in a progressive and less progressive village. The characteristics in which they differed significantly as well as the key-communicator characteristics themselves could be looked by the development personnel while identifying key-communicators and assigning different roles to them.

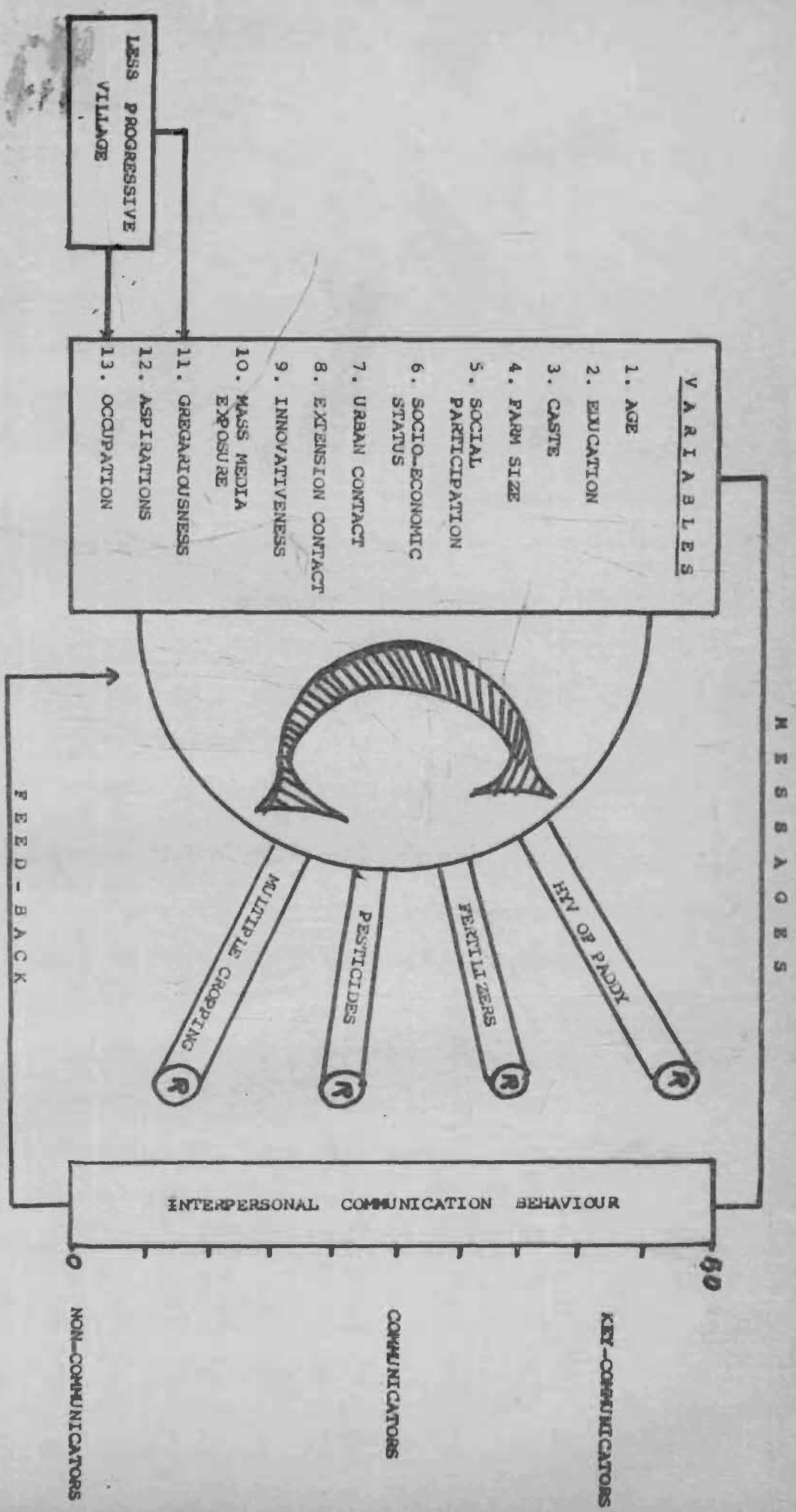
It has been revealed that there was a gap between roles expected and roles performed by the key-communicators in view of the new strategy of agricultural production. This shows that the extension workers should motivate the key-communicators to play their roles for rapid agricultural development in the rural areas.

Therefore, the developmental agencies and extension workers should identify such communication patterns and key-communicators through net-works for successful introduction of High Yielding Varieties in the rural areas. Thus, if the extension workers aware of the findings of the study and their implications, they may suitably employ them in formulating differential communication strategies for popularising the agricultural innovations in rural areas.

Thus, this study could be of greater use to the planners, researchers and extension personnel engaged in bringing out agricultural transformation in rural India.

POINTS FOR FUTURE RESEARCH

1. In order to assess the nature of communication by the key-communicators in different stages of adoption, only four innovations were considered for the purpose of this study namely - High Yielding Varieties of Paddy, Fertilizers, Pesticides and Multiple Cropping. Future studies, therefore, may extend to other agricultural innovations as well as for the critical practices identified under each innovation.
2. In the present study only 13 variables were studied, namely - age, education, caste, farm size, social participation, socio-economic status, urban contact, extension contact, innovativeness, mass media exposure, gregariousness, aspirations and occupation and only gregariousness and occupation had some association with interpersonal communication behaviour in a less progressive village. Some other variables which have not been covered in this study for finding out their association with the interpersonal communication behaviour of farmers could be included in the future studies. In addition, the future studies may extend to know the exact contribution of each variable in predicting interpersonal communication behaviour of farmers.



FINAL MODEL EXPLAINING THE PHENOMENON OF INTERPERSONAL COMMUNICATION BEHAVIOUR OF FARMERS AND THE SOCIO-PSYCHOLOGICAL VARIABLES ASSOCIATED WITH IT

3. In this study, only informal sources of communication were studied. The future studies may also extend to cover the formal sources of communication also.
4. The communication networks could be drawn based on the communication of key-communicators in different stages of adoption as well as on the basis of patterns identified for getting a detailed look and careful interpretation of data.

FINAL MODEL

This model has been drawn on the basis of the findings of this study. A close look at the model reveals that a communicator is communicating the messages relating to high yielding varieties of paddy, fertilizers, pesticides and multiple cropping through word-of-mouth channel to his receivers. Based on the degree or intensity of the interpersonal communication behaviour, they were grouped into three categories namely - key-communicators, communicators and non-communicators. Besides this, personal and socio-psychological variables associated with interpersonal communication behaviour of farmers in a progressive and less progressive village has been found out. Of the socio-psychological variables, gregariousness and occupation in less progressive village were associated and were indicated with an arrow mark. It is clear from the model that there was differential socio-psychological variables like gregariousness and occupation associated with interpersonal communication behaviour of farmers in less progressive village alone.

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* ORIGINAL NOT SEEN

APPENDICES

APPENDIX - I

INTERVIEW SCHEDULEI. BASIC INFORMATION

Village _____ Panchayat Samithi _____
 District _____

1. Name of the respondent ..
2. Age ..
3. Education ..
4. Caste ..
5. Number of houses owned ..
6. Type of House .. Katcha/Pacca/Mixed
7. Details of the family:

S.No.	Head and other members of the family	Relation-ship	Age	Sex	Marital status	Occupation Main Subsidiary	Remarks
-------	--------------------------------------	---------------	-----	-----	----------------	-------------------------------	---------

- a.
- b.
- c.
- d.
- e.
- f.
- g.
- h.

8. Which of the following items do you possess?

S.No.	Item	Number possessed
	a. Bullock cart	
	b. Cycle	
	c. Chairs	
	d. Furniture (specify)	
	e. Motor cycle/Scooter	
	f. Car	
	g. Improved implements	
	h. Telephone	
	i. Utencils (modern)	
	j. Watches	
	k. Crockeries	
	l. Any other (specify)	

9. Which of the following farm power do you possess?

S.No.	Details of farm power	Number	Remarks
	a. Bullocks		
	b. Tractor		
	c. Oil Engine/motor		
	d. Power sprayer/sprayer (Hand compressed)		
	e. Any other (specify)		

10. Farm size and tenure status

S.No.	Particulars of holdings	Area in acres		Total
		Irrigated	Unirrigated	
a.	Land owned			
b.	Land rented in			
c.	Land rented out			
d.	Total area cultivated:			
	i) Owned			
	ii) Rented in			
e.	Total area under HYV of paddy during 1980-81			
	i) Kharif			
	ii) Rabi			

11. Social participation

i) Are you a member/office bearer of any institution?

YES/NO

If yes, give the following details.

S.No.	Institution	Position held
a.		
b.		
c.		
d.		

ii) If you are also an M.L.A/M.P/Panchayat Sanithi President/Z.P.Chairman, please specify stating the year in which you held the office.

<u>Office held</u>	<u>Year of election</u>
.....
.....
.....

12. Urban Contact

Have you visited outside the village?
(Block, District, Town and Cities) YES/NO

If yes, give the following details:

S.No.	Name of the place visited	Frequency of visit	Purpose of visit
a.			
b.			
c.			
d.			

13. Contact with Extension Agency

How often did you visit and discuss matters related to farming with the following officials:

S.No.	Change agent	Frequency of meetings			
		Very frequent	Frequent	Often	Never
a.	Village Development Officer (V.D.O)				
b.	Agriculture Extension Officer (A.E.O)				
c.	Block Development Officer (B.D.O)				
d.	Subject Matter Specialist (S.M.S)				

14. Innovativeness

Give your opinion about the following statements:

S.No.	Statements	Agree	Undecided	Disagree
a.	Do you want to learn new ways to farming?			
b.	If the farm demonstrator gave a talk, would you attend?			
c.	If your Government would help you to establish 30 acre farm elsewhere, would you move?			
d.	Do you think it is wise to borrow money?			
e.	Do you think you will live better in future?			
f.	Do you want a change in your life?			
g.	Do you think HYV changed your status?			
h.	Do you want to adopt any new practice in your farming?			
i.	A man's future is in the hands of god?			

15. Mass Media Exposure:

- a) Do you listen to the Radio? YES/NO
- b) If yes, what programmes do you listen?
- i) Film songs, ii) News, iii) Local programmes,
iv) Market prices, v) Weather, vi) Agricultural
bulletins, vii) Any other programmes:

c) Did you receive any information from the radio from the following topics?

- | | |
|-----------------------|--------|
| i. HYV of paddy | YES/NO |
| ii. Fertilizers | YES/NO |
| iii. Pesticides | YES/NO |
| iv. Multiple Cropping | YES/NO |

d) Do you read newspapers or any other literature? YES/NO

e) If yes, did you receive any information from the newspapers or from any other literature on the topics?

- | | |
|-----------------------|--------|
| i. HYV of Paddy | YES/NO |
| ii. Fertilizers | YES/NO |
| iii. Pesticides | YES/NO |
| iv. Multiple Cropping | YES/NO |

f) Do you see films? YES/NO

g) If yes, did you receive any information from films on the following topics?

- | | |
|-----------------------|--------|
| i. HYV of Paddy | YES/NO |
| ii. Fertilizers | YES/NO |
| iii. Pesticides | YES/NO |
| iv. Multiple cropping | YES/NO |

16. Generousness:

a. How many people are there with whom you are friendly and talk with fairly often who are not and never have been your neighbour? _____

b. With whom did you often associate in your leisure hours?

- i)
- ii)
- iii)

c. What organisation(s)/club(s)/discussion group(s) you belong?

- | | <u>Organisation</u> | <u>Nature of association</u> |
|------|---------------------|------------------------------|
| i) | | |
| ii) | | |
| iii) | | |

4. If other farmers please state the names and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Others
a.						
b.						
c.						
d.						

5. As you came to know about the HYV of paddy, you might have gone to somebody for consultation to know the detailed information in addition to what you know about the varieties?

YES/NO

6. If yes, please mention, the source you have consulted?

- a) V.D.O., b) A.E.O., c) Salesmen and Commercial Dealers,
- d) Other farmers, e) Any others (Specify):

7. If other farmers, please state the names and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Others
a.						
b.						
c.						
d.						

8. Before adopting the HYV of Paddy as trial crop, you might have thought about the pros and cons of the variety and thereby favoured to adopt the same.

YES/NO

9. If yes, let me know whether any source is instrumental in mainly changing your attitude in favour of adoption of the variety.

YES/NO

10. If yes, please mention the source you have consulted.
 a) V.D.O., b) A.E.O., c) Salesman and Commercial dealers,
 d) Other farmers, e) Any other (Specify):

11. If other farmers, please state the names and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Others
a.						
b.						
c.						
d.						

12. Are you cultivating HYV of Paddy? YES/NO

13. Did anybody influence your decision to take up the variety? YES/NO

14. If yes, which source influenced you and also indicate the nature of influence.

S.No.	Source	Nature of influence
a.	V.D.O.	
b.	A.E.O.	
c.	Salesman and Commercial Dealers.	
d.	Other farmers.	
e.	Personal experience.	
f.	Any other (specify).	

15. If other farmers, please state the name and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Others
a.						
b.						
c.						
d.						

- a.
- b.
- c.
- d.
- e.
- f.

4. If other farmers, please state the names and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Other
-------	------	--------	----------	-------------	-----------	-----------

- a.
- b.
- c.
- d.

5. As you come to know about fertilizers, you might have gone to some body to know about detailed information about the type, method, quality and quantity of fertilizers to be used?

YES/NO

6. If yes, please mention the source you have consulted.

- a) V.D.O., b) A.E.O., c) Salesmen and Commercial dealers,
- d) Other farmers, e) Any other (specify):

7. If other farmers, please state the names and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Other
-------	------	--------	----------	-------------	-----------	-----------

- a.
- b.
- c.
- d.

xx

8. Before application of fertilizers as trial you might have thought about the pros and cons of using the fertilizers?

YES/NO

9. If yes, let me know whether any source is responsible for changing your attitude towards application of fertilizers?

YES/NO

10. If yes, please mention the source you have consulted?

- a) V.D.O., b) A.E.O., c) Salesmen and Commercial dealers,
- d) Other farmers, e) Any others (specify):

11. If other farmers, please state the names and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Others
-------	------	--------	----------	-------------	-----------	------------

- a.
- b.
- c.
- d.

12. Are you applying fertilizers to your crops? YES/NO

13. Did any body influence you in taking a decision to use the improved fertilizers on large scale? YES/NO

14. If yes, please mention the source and nature of influence.

S.No.	Source	Nature of influence
-------	--------	---------------------

- a. V.D.O.
- b. A.E.O.
- c. Salesmen and Commercial dealers.
- d. Other farmers.
- e. Personal experience.
- f. Any other (specify):

15. If other farmers, please state the names and also indicate the relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Others
-------	------	--------	----------	-------------	-----------	------------

- a.
- b.
- c.
- d.

16. Since how long you are applying the fertilizers?

17. Please indicate which source is instrumental to make you to apply these fertilizers since long?

S.No.	Source	Nature of influence
-------	--------	---------------------

- a. V.D.O.
- b. A.C.O.
- c. Salesmen and Commercial Dealers.
- d. Other farmers.
- e. Personal experience.
- f. Any others (specify).

18. If other farmers, mention the names and also indicate their relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any other
-------	------	--------	----------	-------------	-----------	-----------

- a.
- b.
- c.
- d.

19. You have mentioned several sources so far, which are instrumental in influencing you in taking up of fertilizers, please let me know which source do you perceive as credible source.

5. As you came to know about the pesticides, you might have consulted some body to know detailed information of the name of pesticides, method of application, quantity etc., in addition to what you know previously?

YES/NO

6. If yes, please mention the source you have consulted?

- a) V.D.O., b) A.E.O., c) Salesmen and Commercial Dealers,
- d) Other farmers, e) Any other (specify):

7. If other farmers, please state the names and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any other
-------	------	--------	----------	-------------	-----------	-----------

- a.
- b.
- c.
- d.

8. Before the use of pesticides as trial you might have thought about the pros and cons of using the pesticides and made up your mind to use them. YES/NO

9. If yes, please let me know whether any source is instrumental in influencing your attitude for the use. YES/NO

10. If yes, please mention the source you have consulted.

- a) V.D.O., b) A.E.O., c) Salesmen and Commercial dealers,
- d) Other farmers, e) Any other (specify):

11. If other farmers, please state the names and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any other
-------	------	--------	----------	-------------	-----------	-----------

- a.
- b.
- c.
- d.

12. Are you using pesticides on your crops? YES/NO

13. Did any body influence you in taking the decision to finally use the pesticides on large scale? YES/NO

14. If yes, please mention the source you have consulted.
 a) V.D.O., b) A.E.O., c) Salesmen and Commercial dealers,
 d) Other farmers, e) Any other (specify):

15. If other farmers, please mention the source instrumental in influencing the decision and also the relationship with them.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Others
-------	------	--------	----------	-------------	-----------	------------

- a.
- b.
- c.
- d.

16. Since how long, you are using the pesticides?

17. Please indicate which source is instrumental to make you to use these pesticides since long?

S.No.	Source	Nature of influence
-------	--------	---------------------

- a. V.D.O.
- b. A.E.O.
- c. Salesmen and Commercial Dealers.
- d. Other farmers.
- e. Personal experience.
- f. Any other (specify).

18. If other farmers, please mention the names and the nature of relationship.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Other
-------	------	--------	----------	-------------	-----------	-----------

- a.
- b.
- c.
- d.

19. You have mentioned several sources so far, which are instrumental in influencing you in using of pesticides. Please let me know which source do you perceive as credible source.

S.No.	VDO AEO Mass Media	Sales- men and Commercial dealers	Other far- mers	Personal experience	Any Other (specify)
-------	--------------------	-----------------------------------	-----------------	---------------------	---------------------

- 1. Trust worthiness
 - 2. Expertness
-

D) MULTIPLE CROPPING

- 1. Are you aware about multiple cropping? YES/NO
- 2. If yes, what cropping patterns you know?

3. Please state through which source did you first come to know about the multiple cropping and its patterns.

S.No.	Cropping Pattern	Aware	Not Aware	VDO AEO Mass Media	Sales- men and Commercial dealers	Personal experience	Other far- mers	Any other (specify)
-------	------------------	-------	-----------	--------------------	-----------------------------------	---------------------	-----------------	---------------------

- a.
 - b.
 - c.
 - d.
 - e.
 - f.
-

4. If other farmers, please state the names and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Other

- a.
b.
c.
d.

5. As you come to know about the multiple cropping, you might have consulted some body to know about the details of cropping patterns, cultivation practices etc., in addition to what you know about the multiple cropping previously.

YES/NO

6. If yes, please mention the source you have consulted?

- a) V.D.O., b) A.E.O., c) Salesmen and Commercial Dealers,
d) Other farmers, e) Any others (specify):

7. If other farmers, please state the names and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Other

- a.
b.
c.
d.

8. Before starting the multiple cropping as trial you might have thought about the pros and cons of the multiple cropping?

YES/NO

9. If yes, let us know which source has changed your attitude for adopting multiple cropping i.e., whether any source is instrumental in creating favourable attitude in your mind about multiple cropping?

YES/NO

10. Please mention the source you have consulted.

- a) V.D.O., b) A.E.O., c) Salesmen and Commercial dealers,
- d) Other farmers, e) Any others (specify):

11. If others farmers, please state the names and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Other
-----	-----	-----	-----	-----	-----	-----

- a.
- b.
- c.
- d.

12. Are you adopting multiple cropping?

YES/NO

14. Did anybody influence your decision to take up this Program ?

YES/NO

14. If yes, which source influenced you and also indicate the nature of influence.

S.No.	Source	Nature of influence
-----	-----	-----

- a. V.D.O.
- b. A.E.O.
- c. Salesmen and Commercial Dealers.
- d. Personal experience.
- e. Other farmers.
- f. Any others (specify)

15. If other farmers, please state the names and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Others
a.						
b.						
c.						
d.						

16. Since how long you are adopting multiple cropping.

17. Please indicate which source is instrumental to make you to adopt the same?

S.No.	Source	Nature of influence
a.	V.D.O.	
b.	A.E.O.	
c.	Salesmen and Commercial Dealers.	
d.	Other farmers.	
e.	Personal experience.	
f.	Any others (specify).	

18. If other farmers, please state the names and also indicate your relationship with them in order of preference.

S.No.	Name	Friend	Relative	Best Farmer	Neighbour	Any Others
a.						
b.						
c.						
d.						

19. You have mentioned several sources so far, which are instrumental in influencing you in adopting multiple cropping. Please let me know which source do you perceive as credible source.

S.No.	VDO AEO, Salesmen and commercial dealers	Other farmers	Personal experience	Any others (specify)
-------	--	---------------	---------------------	----------------------

1. Trust worthiness

2. Expertness

III. ROLE EXPECTATIONS AND ROLE PERFORMANCE OF KEY-COMMUNICATORS

1. In every village, you will come across some farmers who are instrumental in communicating the latest information to other farmers. To the extent one does this he is regarded as communicators, key-communicators. They in turn are expected to perform certain roles in view of the complexity of the new agricultural strategy. Now please let me know the roles they are expected to perform in view of new strategy of agricultural production.

- a.
- b.
- c.
- d.
- e.
- f.
- g.
- h.
- i.
- j.
- k.

2. In every village, you will come across some farmers who are instrumental in communicating the latest information to other farmers. To the extent one does this work he is regarded as key-communicator. They in turn perform certain roles in view of the complexity of the new agricultural strategy. Now please say what are the roles the key-communicator performing in your village.

S.No.	Role expected to be performed	Roles performed	Reasons for non-fulfilment of expected roles
1.	Demonstrating improved practices.		
2.	Providing information on new practices.		
3.	Supplying or helping in securing seeds.		
4.	Providing technical guidance.		
5.	Winning prizes for meritorious farming.		
6.	Persuading fellow farmers to adopt new practices.		
7.	Organising agricultural programmes.		
8.	Providing monetary help to fellow farmers.		
9.	Providing continuous guidance and interest in others' farming.		
10.	Speaking official quarter on behalf of fellow farmers.		
11.	Any others.		

3. So far you have consulted different farmers in your village at different stages of adoption. Now let me know whether any farmer in the village consulted you also for knowing the details of agricultural innovations and taking the decisions to adopt/use of the HYV of paddy, Fertilizers, Pesticides and Multiple Cropping.

S.No.	Stage	HYV of Paddy	Ferti- lizers	Pesti- cides	Multiple Cropping
a. Knowledge	i) ii) iii)				
b. Persuasion	i) ii) iii)				
c. Decision	i) ii) iii)				
d. Confirmation	i) ii) iii)				

PERSONAL OBSERVATIONS OF THE INTERVIEWER

- Were other persons present within ear shot.
 - Yes, throughout ()
 - Yes, at times ()
 - No ()
- Interviewer's estimate of frankness/
sincerity of respondent's replies.
 - Very frank ()
 - Frank ()
 - Not very frank ()
 - Very evasive ()
- Interviewer's estimate of general cooperativeness of
respondent throughout the interview.
 - Very Cooperative ()
 - Cooperative ()
 - Not very cooperative ()
 - Very un-cooperative ()
- Interviewer's general impressions of the respondents:

APPENDIX - II

JUDGEMENT SHEET

DR. S. VENKU REDDY
M.Sc., (Ag.), Ph.D.,
ASSOCIATE PROFESSOR

Extension Education Institute
College of Agriculture
A.P. Agricultural University
Rajendranagar : Hyderabad-500030

D.O.No. / EEI/80, dated 7th October, 1980

Dear Sir,

This is to invite your kind attention to a research project on "A STUDY OF THE COMMUNICATION PATTERNS, NET-WORKS AND KEY-COMMUNICATORS IN THE SEQUENTIAL ADOPTION OF SOME AGRICULTURAL INNOVATIONS". In this project we are also trying to develop an index to measure the interpersonal communication behaviour of the farmers taking into consideration the number of communication messages. All these messages may not carry equal weight. Some messages can be communicated easily while others prove difficult in communication. The main consideration in this regard, therefore, is the relative ease or difficulty of the messages in person to person communication.

Since, you have adequate experience and insight into the problems of communication, your expert judgement in getting a comparative weightage of different messages will prove very useful for this study. Your active cooperation and quick response would enable us to complete the study soon.

I shall be grateful if you kindly return the attached judgement sheets duly filled in latest by the 15th November, 1980.

With warm regards,

Encl: As stated.

Yours sincerely,

To

S.V. REDDY

WHAT YOU ARE REQUIRED TO DO?

Kindly consider each practice listed below and determine whether the practice (message) in your opinion lies to the left or right of the mid-point, or in the mid-point itself. The mid point suggests "no opinion" or "neither difficult nor easy position". Then, you decide the exact position and give a 'Tick mark' () in the appropriate column. As explained earlier this is to be done keeping in view the relative ease or difficulty of each message in person-to-person communication.

Easy to communi- cate	Mid Point	Difficult to communicate	REMARKS
Ex- tre- mely	Rather	Rather quite Ex- tre- mely	

General Messages

1. HYV of Paddy
2. Fertilizers
3. Pesticides
4. Multiple Cropping

Name:

Designation

Signature _____

APPENDIX - III

OPINION SHEET

DR. S. VENKU REDDY
M.Sc., (Ag.), Ph.D.,
ASSOCIATE PROFESSOR

Extension Education Institute
College of Agriculture
A.P. Agricultural University
Rajendranagar : Hyderabad-500030

D.O.Lr. /EEI/80, dated 7th October, 1980

Dear Sir,

This is to invite your kind attention to a research project on " A STUDY OF THE COMMUNICATION NETWORKS, PATTERNS AND KEY-COMMUNICATORS IN THE SEQUENTIAL ADOPTION OF SOME AGRICULTURAL INNOVATIONS ". In this project we are also trying to develop a Role expectation instrument to measure the role performance of the key-communicators.

Since you have adequate experience and insight in the role of key-communicators, your expert opinion will be greatly appreciated.

An opinion sheet to evaluate the expected roles of key-communicators from your view point is enclosed herewith. Kindly go through the statement and write down your opinion (in the space provided) regarding the roles that the key-communicators should play in the context of the demands of the new strategy of Agricultural production.

I shall be grateful if you kindly return the attached opinion sheet latest by the 15th November, 1980.

With warm regards,

Encl: As stated.

Yours sincerely,

To

S.V. REDDY

KEY-COMMUNICATORS AND THE INTERPERSONAL COMMUNICATION PROJECT

The complexity of the new strategy in Agricultural production demands additional roles to be performed by the key-communicators* in bringing about a rapid technological change in agriculture. Kindly mention, the roles that the key-communicators should play in view of this:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

Name:

Designation:

Signature _____

* Key-communicators here refers to the farmers in the village who scores above the mean number of preferences or communication acts in a particular situation (i.e., farmers through whom the fellow farmers seeks information on different agricultural innovations).

APPENDIX - IV

A SCALE TO MEASURE THE AGRICULTURAL PROGRESSIVENESS OF A VILLAGE

Operational Index	Scores
-------------------	--------

1. Extent of the cultivation of high yielding varieties (30)

a) Percentage coverage with high yielding varieties.

i) Upto 10%	3
ii) Upto 25%	6
iii) Upto 50%	9
iv) Upto 75%	12
v) Cent per cent	15

b) Percentage farm families cultivating high yielding varieties.

i) Upto 10%	3
ii) Upto 25%	6
iii) Upto 50%	9
iv) Upto 75%	12
v) Cent per cent	15

2. Extent of the use of plant nutrients(30)

a) Percentage of farm families applying plant nutrients.

i) Upto 10%	3
ii) Upto 25%	6
iii) Upto 50%	9
iv) Upto 75%	12
v) Upto Cent per cent	15

b) Annual consumption of the fertilizers per irrigated areas.

i) Upto 15 kg/acre	3
ii) Upto 25 kg/acre	6
iii) Upto 35 kg/acre	9
iv) Upto 40 kg/acre	12
v) More than 40 kg/acre	15

3. Intensity of land use (20)

i) Upto 100%	4
ii) Upto 150%	8
iii) Upto 200%	12
iv) Upto 250%	16
v) Upto 300% and more than that	20

4. Extent of area under assured irrigation (20)

i) Upto 25%	4
ii) Upto 50%	8
iii) Upto 70%	12
iv) Upto 85%	16
v) Upto cent per cent	20

5. Extent of the use of plant protection chemicals (20)

Percentage of farm families using the plant protection chemicals.

i) Upto 10%	4
ii) Upto 25%	8
iii) Upto 50%	12
iv) Upto 75%	16
v) Upto cent per cent	20

6. Extent of the use of improved agricultural implements (20)

Number of improved farm and implements per farm family.

i) Upto 2	2
ii) Upto 3	8
iii) Upto 4	12
iv) Upto 5	16
v) More than 5	20

7. Contact with the extension agency (20)

Degree frequency of contact with such categories of extension personnel as B.D.O., Pusa Workers, A.E.O., V.L.W.

i) Never	0
ii) Rarely	10
iii) Often	15
iv) Most often	20

8. Extent of the small farmers as adopters of improved practices (20)

i) Upto 10%	4
ii) Upto 25%	8
iii) Upto 50%	12
iv) Upto 75%	16
v) Upto cent per cent	20

9. An effective cooperative society (20)

a) Percentage of the farm families member of the cooperative society.

i) Upto 10%	2
ii) Upto 20%	4
iii) Upto 30%	6
iv) Upto 40%	8
v) Upto 50% and above	10

b) Amount of annual turn over of the business.

i) Upto Rs. 10,000/-	2
ii) Upto Rs. 25,000/-	4
iii) Upto Rs. 50,000/-	6
iv) Upto Rs. 75,000/-	8
v) Upto Rs. 1,00,000/- and above	10

10. Consumption of electricity for agricultural purposes (10)

Number of units consumed per farm family per year.

i) Upto 100 units	2
ii) Upto 150 units	4
iii) Upto 200 units	6
iv) Upto 250 units	8
v) More than 250 units	10

11. Transport Facilities (10)

a) Nearness to the highway.

i) upto 1.6 km	5
ii) Upto 3.2 km	4
iii) Upto 4.8 km	3
iv) Upto 6.4 km	2
v) Upto 8 km and above	1

b) Existence of feeder road (10)

i) Track	0
ii) Kacha road	3
iii) Pucca road	5

12. Educational status (10)

Percentage of literate farmers.

i) Upto 25%	2
ii) Upto 40%	4
iii) Upto 55%	6
iv) Upto 70%	8
v) More than 70%	10

13. Marketing facilities (10)

Degree of commercialization i.e.,
percentage of total produce of
the primary crops.

i) Upto 40%	2
ii) Upto 50%	4
iii) Upto 60%	6
iv) Upto 70%	8
v) Upto and more than 70%	10

14. Extent of farmers' participation (10)

i) Upto 5%	2
ii) Upto 10%	4
iii) Upto 15%	6
iv) Upto 20%	8
v) More than 20%	10

15. Percentage of farmers cultivating
their own land (10)

i) Upto 50%	0
ii) Upto 75%	6
iii) Upto cent per cent	10

16. Consolidation of land holdings (10)

i) Lands consolidated	10
ii) Lands partially consolidated	6
iii) Lands not consolidated	0

17. Means of mass communication (10)

No. of radio sets, newspapers, farm magazines,
journals etc., per farm family.

i) Upto 0.10	2
ii) Upto 0.25	4
iii) Upto 0.50	6
iv) Upto 0.75	8
v) More than 0.75	10

APPENDIX - VI

LIST OF THE COMMUNICATORS IDENTIFIED AND THEIR CODE NUMBER INA PROGRESSIVE VILLAGE

 S.No. Name of the Communicator Code No.

KEY-COMMUNICATORS

1.	SRI V. GOVINDA REDDY	78
2.	SRI O. CHENCHULAKSHMAIAH SETTY	60
3.	SRI R. NADAMUNI REDDY	15
4.	SRI G. N. SREENIVASULU SETTY	2
5.	SRI V. SRINIVASULU REDDY	46
6.	SRI M. VENKATARAMI REDDY	16

COMMUNICATORS

7.	SRI P. YERRA REDDY	5
8.	SRI P. CHENGA REDDY	24
9.	SRI N. NARAYANASWAMY REDDY	49
10.	SRI KANDATI MUNIRATNAM SETTY	6
11.	SRI N. MUNI REDDY	8

APPENDIX - VII

LIST OF THE COMMUNICATORS IDENTIFIED AND THEIR CODE NUMBER IN
A LESS PROGRESSIVE VILLAGE

 S.No. Name of the Communicator Code No.

KEY-COMMUNICATORS

1.	SRI KONDAMPATI MADHAYATHI	8
2.	SRI K. VENKATADRI	60
3.	SRI K. SUBBARATHI	82
4.	SRI VELEGANDLA PULLAM RAJU	12

COMMUNICATORS

5.	SRI K. SUBBATHI	38
6.	SRI VELIGALLE GURAVARAJU	100
7.	SRI K. VARADARAJULU	6
8.	SRI KONDAMPATI CHENGALARAYUDU	2
9.	SRI P. DI VENKATARATHI	40
10.	SRI T. APPAYYA	22
11.	SRI C. SUBBARAYUDU	13
12.	SRI CHITTOOR KATHI	1
13.	SRI GANDHAM SUBRAHMANYAM	10

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