TO STUDY THE EFFECTIVENESS OF FARM BROADCASTS THROUGH RADIO IN DISSEMINATING AGRICULTURAL INFORMATION TO THE FARMERS OF TRIVANDRUM DISTRICT

By

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THESIS

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VELLAYANI - TRIVANDRUM

1980

DEDICATED TO

MY BELOVED PARENTS

DECLARATION

I hereby declare that this thesis entitled "To Study the Effectiveness of Farm Broadcasts through Radio in Disseminating Agricultural Information to the Farmers of Trivandrum District" is a bonafide record of research work done by me during the course of research and that the thesis has not previously formed the basis for the award to me of any degree, diploma, associateship, fellowship or other similar title, of any University or Society.

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CERTIFICATE

Certified that this thesis, entitled "To Study the Effectiveness of Farm Broadcasts through Radio in Disseminating Agricultural Information to the Farmers of Trivandrum District" is a record of research work done independently by Shri.S. MOTHILAL NEHRU, under my guidance and supervision and that it has not previously formed the basis for the award of any degree, fellowship, or associateship to him.

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INTRODUCTION

INTRODUCTION

Agriculture, which accounts for about 48 per cent of the national income provides employment for more than 70 per cent of India's population. The planned efforts to increase the agricultural production in India have achieved great heights to the tune of 130 million tonnes of food production in 1979, from just 72 million tonnes a decade ago. Though this increase in production has been achieved, the fruits of green revolution could not be harvested due to the increase in population. To this effect Swaminathan (1977) cautioned that, "if we do not improve our crop yields, ours will be one of the most inefficient agricultural systems in the world by 1980's". It has given rise to the situation wherein the diffusion rate of innovations has to be tremendously increased among the vast clientele and their adoption promoted through a swift and systematic extension strategy.

Leagans (1961) visualised communication as the basic step in effecting change in any aspect of client system. There can be no two opinions regarding the vital role of communication media in extension education. Research results show that media participation is on the increase in the rural sides, thanks to the planned development of infrastructure like roads and transport links, rising literacy levels and the changing social

order. A swift and relentless effort, to meet the increasing need of the nation, tastes of people and vagaries of nature, is going on in our research wings. More and more specialized fields of investigation are coming up; research techniques of high sophistications involving not merely precision but speed and economy are being evolved. With the result, flow of innovations is ever on the increase. Conversely, the work load on the extension agency is rising at an increasing rate. The efficiency of the extension agency in meeting this tremendous task is enhanced by a judicial mixture of mass media and interpersonal communication channels.

Among mass media channels, Radio has become very popular with the people. In the last fifteen years, production of radio sets has increased nearly six times in the country and number of licensed radio receiving sets has increased seven-fold (DAVP, 1976) from what it was fifteen years ago. The rapid increase in the number of radio sets is viewed as a key to the modernisation of agricultural communication by extension experts.

The mass media, chiefly radio, prepare the ground for introducing innovations and also for reinforcing extension messages. The interpersonal communication at village level suffers from the three limitations of slow spread, message distortion and limited skills of village

level workers to communicate complex messages. So the farm broadcast support is extended to ensure swift, skilful and truthful transmission of messages, which helps the people as well as village level workers to get quick, correct and succinct information.

The Farm and Home Unit of AIR was started in Trichur (Kerala State) in 1966 to carry field based and problem oriented broadcasts to farmers. Radio Rural Forums and Farmers' Discussion Groups were also subsequently started under the Farmers Training Centres in the State. The AIR has also steadily expanded the variety and the extent of its farm programmes. Amongst the few are the morning farm news service, started in 1967 and the 'Farm School on the air' in 1974.

Need for the study:-

Effective dissemination of agricultural information is a pre-requisite for making farm broadcast useful to the farmer - listeners in the area. With the advancement in farm technology, farmers seek more and more information from different sources of which mass media are more important. The information needs to be presented to the farmers in the manner in which they prefer. The farmers' preference towards each programme also differs since each programme has its own special character. Hence mode

and programme preferences are to be studied in order to improve the efficacy of farm broadcasts.

The radio listening farmers vary in their personal and situational characteristics. It is, therefore, imperative to study the characteristics that are associated with their mass media exposure behaviour, listening behaviour, communication behaviour, source utilization behaviour as well as their adoption behaviour with respect to the farm programmes broadcast through radio. Such a study is likely to prove useful to extension workers, communication specialists and the planners to know how far radio is a powerful medium and how it actually is being used by the farming community. The study will also throw light on the important personal and situational factors influencing the listening habit of the farmers.

Objectives:-

1. To find out the preference of the listeners on the different modes of farm broadcasts.
2. To find out the preference of the listeners on the programmes put out through farm broadcasts.
3. To assess their preference on the duration and frequency of farm broadcasts.

4. To find out the relationship between mass media exposure behaviour, listening behaviour, communication behaviour, source utilization behaviour and adoption behaviour with the selected personal and situational variables of the listeners.
5. To study the relative influence of the personal and situational variables of the listeners on their mass media exposure behaviour, listening behaviour, communication behaviour, source utilization behaviour and adoption behaviour of the listeners of farm broadcasts.

Limitations:-

The study has been confined more towards the methods of broadcasts as well as the listening habits of the farmers. The study does not pertains to ary direct impact that has been produced by the farm broadcasts. More or less the sampling for the study has been purposive or selecting the radio listening farming community (charcha samithy members) rather than randomised farming population. The common limitations of time and resources faced by any student are applicable to this study also. Yet, sincere and devoted care has been taken to make this study as objective and systematic as possible.

THEORETICAL ORIENTATION

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The objective of this chapter is to discuss in broad outlines the conceptual frame of reference used for this study. This will provide a theoretical base for the empirical investigation. The discussion will be useful to select relevant variables and to develop a set up hypotheses against which the empirical evidences can be interpreted.

Farm Broadcasting:-

According to Chamber's Dictionary "Radio" means a Wireless receiving set.

To Hybels and Ulloth (1978) broadcasting was originally a farming term that meant spreading seeds all over the field. In radio and television, broadcasting means sending out programmes through the air to everyone within the reach of a station. Anyone who has the necessary equipment can listen to the programmes sent out.

According to Encyclopedia Britannica (1974) radio broadcasting is radio transmission intended for general public reception. In its commonest form, it may be described as the systematic diffusion of entertainment information, educational and other features

individually or in groups, with appropriate receiving apparatus.

Farm broadcasting means sending out programmes related mainly to agriculture and its allied branches of activities. Different broadcasting stations select convenient times everyday for such programmes intended chiefly to the agriculturists under different nomenclature. The purpose of this programme is not only disseminating information to the farmers but also in a way, instigating them to learn advanced scientific approach in the field of agriculture and also adoption of new techniques. In Kerala state the main farm broadcasts are 'Karshika Mekhala Varthakal', 'Vayalum Veedum', 'Karshika Rangam' and 'Radio Krama Rangam', through which information in the field of farming is being broadcast.

In 'Karshika Mekhala Varthakal', the farmers are given information regarding farm information and services of offered by the governmental agencies 'Vayalum Veedum' programme is aired at giving information chiefly to paddy cultivators The farmers are provided with detailed information regarding the new paddy varieties, their cultivation practices and performance. 'Karshika Rangam' provides information and experiences of farmers connected with various items of agriculture

adopted in the state The programme gives more attention to new avenues of agricultural development that can be profitably adopted in Kerala. 'Radio Grama Rangam' informs and educates the rural folk on the social and cultural developments taking place around them. Farmers being the prominent community within the rural population they are provided with information in all activities of human life. Hence information regarding public health, farming, family planning, animal husbandry, home science etc. are broadcast through this programme.

I Broadcasting Variables:-

The quality of broadcast depends mainly on the mode, nature, duration and the frequency of radio broadcasts.

1. Mode of Broadcasts:-

According to Chamber s Dictionary (1976) "mode" means way or manner of acting, doing, happening or existing.

Singh and Sandhu (1971) reported that in order of preference the modes of presentation were discussion, lecture, features and dramas, interview with farmers, question and answers, views and reviews, poetical symposium and farm news Singh (1972) in his study on

listeners and non-listeners of farm programme in Bihar found 54 per cent of the listeners wanted farm programmes to be delivered through discussion mode of delivery and 28 per cent were in favour of interview mode and only 12 per cent wanted lecture or straight talk type of presentation

Shakya (1973) while conducting a study on radio owning young and adult farmers in Nepal revealed that among the modes of presentation of the farm radio programmes, discussion mode secured the first rank, dramatic mode was second and straight talk or lecture was the least liked mode by both the young and adult farmers.

Alamgeer (1970) in his study on the impact of Farm Broadcast on the farmers of Coimbatore taluk in Tamil Nadu revealed that among the several techniques adopted in Farm Broadcast of the AIR Trichi, dialogue, interview with the progressive farmer, announcement and forecasts question and answers including quiz programme, farm news and success stories were the six techniques preferred by the farmers.

Crile et al. (1945) observed that a large majority of farmers preferred the interview style of presentation to the straight talk. Jenson (1946) in his research

study found that the interview type of presentation was the first choice, the second being one person talking to the listeners. Knight (1973) observed that interview with farmers, question and answer, dialogue, interview with scientist, straight talk, discussion, announcement and documentary were the order of listeners preference in respect of farm broadcasts. Sabarathnam and Rajaram (1973 a) observed that interview with farmers was ranked first by the respondents, followed by talks by farmers and dialogues

In a study on Radio Rural Forum, Parthasarathy (1971) found that among the several techniques adopted in the farm broadcasts talks by specialists was preferred as the first choice followed by dialogue, success stories narrated by the farmer, interview with progressive farmers and villupattu (folk song) in the descending order

Jalihal and Srinivasamurthy (1974) found that dramatic presentation and interview were preferred by listeners.

Presently, the usual methods one could see in such broadcasts are straight talk to the farmers by subject matter specialist, the narration of cultivation of some crop by farmer, an interview or dialogue and answering questions put forward by farmers. Sometimes some major topic is found to be discussed by personnels or experts

in this field. Each method has its own impact on popularising farming and its methods.

Accordingly, for the purpose of this study the type of broadcast has been operationally defined as the manner or form in which a farm programme is broadcast through radio.

2 Nature of Broadcasts:-

According to Chamber's Dictionary (1976) "Nature" means the qualities of anything which make it what it is.

Monson (1946) in his study found that timely farm advice, weather and market reports and the experience of local people were the preferred subjects.

Schmitz (1948) stated that farmers were interested in hearing about any new idea or development concerning any phase of farming. However, they particularly liked to hear market and weather reports and information on livestock, crops soil conservation, machinery and labour saving devices.

Knight (1965) in his study on Radio Rural Forums in Tamil Nadu found that the "topic for the day" broadcast during the radio rural forum days had been appreciated and viewed as very useful by 66 per cent and useful by 29 per cent and somewhat useful by 5 per cent of the respondents, while none claimed it to be useless.

Singh and Sandhu (1971) from the results of their study reported that the five most liked programme items were crop cultivation, daily farming hints, weather forecasts, market reports and plant protection measures.

For the purpose of this study nature of broadcast has been operationally defined as different types of farm programmes put through radio. The farm programmes included are Karshika Mekhela Varthakal, ... Vayalum Veedum and Radio Grama Rangam.

3 Frequency of Broadcasts:-

According to Chamber's Dictionary (1976) "frequency" means repeated occurence of anything.

Shakya (1973) found that his respondents favoured to have the frequency of thrice per week in respect of farm broadcasts.

For the purpose of this study frequency of broadcast has been operationally defined as the number of times a particular programme is broadcast per week through radio.

4. Duration of Broadcasts:-

According to Chamber's Dictionary (1976) "duration" means continuance in time.

Singh (1972) reported that 60 per cent of his listener - respondents desired an increase of 10 to 30

minutes over the existing 30 minutes duration. Shakya (1973) found that this respondents favoured 20 minutes duration and frequency of thrice a week in respect of farm broadcasts.

Sadrinarayanan (1977) reported that 50 per cent of his farm broadcast listeners listen to the entire farm broadcast at night. Among the rest about 43 per cent listen to most part of the programme, while a few 7 per cent listen only for some time.

For the purpose of this study duration of broadcast has been operationally defined as the extent of time taken for broadcasting a programme through radio

II Listening Habit Variables:-

1 Behaviour:-

According to Encyclopedic Britannica "behaviour" is the externally apparent activity of a whole organism. Wolman (1973) defines behaviour as the totality of intra and extra organismic actions and interactions of an organism with its physical and social environment. Sandeker (1976) defined behaviour as the expression of one's experience. It includes not only motor activities like jumping, running or writing but also such activities which give us knowledge and emotional activities.

According to Skinner (1952) behaviour is all forms of processes, adjustments, activities and experiences of the organism.

Drever (1952) termed behaviour as total responses, motor or glandular, which an organism makes to any situation with which it is faced Combs and Snygg (1958) pointed out that all the behaviour, without exception, is completely determined by and pertinent to the perceptual field of behaving organism.

Parsons and Shils (1965) pointed out that behaviour is oriented towards attaining ends or goals and other anticipated state of affairs, take place in situations by means of normatively regulated expenditure of effort or motivation.

2. Habit:-

As per the Encyclopedia Britannica "habit" is a customary or automatic way of acting, usually as a result of frequent usage rather than of inborn origin. Volman (1973) stated that habit is an acquired act that is practiced regularly and with a minimum of voluntary control. Otherwise habit means the tendency for a given stimulus to evoke a specific response on occasions subsequent to the original reaction.

Bhatia (1969) stated habitual actions as the final stage of the learning process. It is that mode of behaviour which through repetition has become so perfected that it neither requires nor undergoes any further adaptation. According to him habits may be said to have three characteristics namely, they are acquired through repetition; they are semi-mechanical and automatic, that is, they do not require any effort and attention once they are acquired and they can be performed only under similar circumstances. Dandekar (1976) also defined habit as a mechanical response. Further he stated that habit start as a natural response to some stimulus, constant repetition of the stimulus tends to rub it of its feeling content and render it more and more mechanical.

In general, behaviour is necessitated only when such behaviour, leads the individual to the fulfilment of a need. Behaviour emerges from the interplay of all needs. Thus needs can overlap and interact, to result in the performance of a behaviour.

The study of habit as well as the modification of habit requires a close observation of the pattern of behaviour which helps the individual to acquire a particular habit. Similarly, if that pattern of habit is any how modified that is also as a result of another set of other patterns of behaviour. Hence the study of habit is also

in a way study of behaviour. So the most prominent physiological activity or expression visible on a living organism is the behaviour produced by a stimulus.

Thus in this study the dependent variables namely, Mass Media Exposure Behaviour, Listening Behaviour, Communication Behaviour, Source Utilization Behaviour and Adoption Behaviour have been considered to be the habitual behavioural sequences of the listeners of the Farm Broadcasts.

A. Dependent Variables:-

1. Mass Media Exposure Behaviour:-

According to Schramm (1960) "mass" as the great body of the people of a nation, as constructed to some special body like a particular class. Lazarsfeld and Kendall (1948) opined that the term 'mass' is truly applicable to the medium of radio, for it - more than other media - reaches all groups of the population uniformly.

According to Wolman (1973) mass media of communication means the instruments of communication which disseminate information to large number of people at once such as newspaper, television and radio.

According to Wright (1975) mass communication is

a special kind of social communication involving distinctive operating conditions, primary among which are the nature of audience, of the communication experience and of the communicator. According to Tubbs and Moss (1977) the opportunities for feed back are severely limited, especially when compared with two person or small group communication. The events of mass communication involve media - radio, television, newspaper, books, film and so on.

Rogers and Shoemaker (1971) stated that mass media channels are those means of transmitting messages that involve a mass medium such as radio, television, film, newspaper, magazines and the like which enables a source of one or a few individuals to reach an audience of many.

Rogers and Svenning (1969) defined mass media exposure as the degree of exposure to mass communication channels which include newspaper, magazines, film, radio and television. The degree of exposure to each medium was measured in terms of the number of radio programmes listened per week, newspaper read per week, film seen per year and so on. Badrinarayanan (1977) defined mass media exposure as the degree to which different mass media sources were utilized by the respondent. It was measured based on the frequency of exposure as adopted by Singh (1972) with slight modifications. Singh and Sandhu (1971)

measured the mass media exposure as developed by Shankaria (1965). The respondents were categorised into three groups as low, medium and high.

Roffer (1942) stated that irrespective of casual relationships and of the conditions or circumstances that intervene between exposure to new ideas and the active use of them, number of source used or contacts with information sources was positively related to adoption rates.

Roy et al. (1968) and Rogers and Svenning (1969) have found that there will be a relationship between mass media exposure behaviour and adoption. Sandhu (1970) has found that listeners were significantly superior in their mass media exposure than non-listeners. Singh (1972) also reported the same finding.

Shakya (1973) has also recorded a significant positive association between mass media exposure and farm broadcast listening behaviour. According to Rogers and Svenning (1969) the exposure to mass media on the part of peasants leads them down the road to modernization.

All these former studies show that mass media exposure is fully effective if it is done in the proper way every where and not as an experimental process. For this sufficient time has to be provided in the programme

of radio station for Farm Broadcasting. Sufficient number of radio sets must be put up in the agricultural areas where mainly farmers reside. Even if the farmers are not intentionally listening to the broadcast at first, the increase in the frequency of such farm broadcasts will certainly bring them under its influence and they become regular listeners and the effect of such broadcasting can be seen in the form of enhanced adoption of innovations by them.

For the purpose of this study mass media exposure behaviour is operationally defined as the extent of utilization of mass media sources namely, radio, newspaper, magazines, film, exhibition and visits to demonstration plots.

2. Listening Behaviour:-

Barker (1971) stated "listening" as the selective process of attending to, hearing, understanding and remembering aural symbols. Here attention means the art of attending. The second element in the act of listening is hearing, the physiological process of receiving aural stimuli. Understanding - sometimes referred to as auding - is the process by which the communicatee assigns a meeting to the aural stimuli he or she receives. Remembering, the final element in the listening process, involves the storage of information for later retrieval.

Knight (1973) has taken two components of the listening behaviour for his study They were regularity with which programmes were listened and period of listening to the Farm Broadcasts. He defined listening behaviour as hearing with or without close attention, nevertheless making conscious effort to hear.

Singh and Sandhu (1971) reported that 40.77 per cent of farmers were listening regularly, 28.35 per cent several days a week, 8.46 per cent once a week, 16.15 per cent less than once a week while 5.77 per cent had seldom or never listened to them. Singh (1972) found that 44 per cent of listeners listened to farm programmes every day in a week, 39 per cent listened to them often and 17 per cent listened twice a week.

Knight (1973) found that majority of the farm broadcast listeners (45.64 per cent) listened to the programme daily and also found that a great majority (82.83 per cent) listened to agricultural programme for 20 to 30 minutes (total duration 30 minutes) in a day.

Subarathnam and Rajaram (1975 b) found that the age of the radio listening farmers ranged from the lowest of 20 years to the maximum of 60 years with a mean of 39.97 and a standard deviation of 8.47 and a majority (72.23 per cent) of the respondents belonged to middle

age group. They further found that 38.34 per cent had primary education and 24.45 per cent were only able to read and write.

Jalihal and Srinivasamurthy (1974) revealed that the radio owners generally had low to medium educational standard and read the newspapers but had not participated in extension activities and regular listening to farm broadcast was associated with the educational level of the radio owning farmer.

Sabarathnam and Rajaram (1975 b) found that a majority (67.78 per cent) of the listeners were small land holders. Only 19.33 per cent of respondents had 5 to 10 acres of land. More than 10 acres of land was possessed by nearly 14 per cent of the listeners. They further found that 75 per cent had membership in only one village organisation whereas 16.66 per cent of respondents were members of two village organisations.

Singh and Sandhu (1971) reported that 66.50 per cent and 69.62 per cent of the farmers were in the habit of discussing the contents of the programme after listening with family members and others respectively. However, only 58.14 per cent and 64.23 per cent were discussing from regularly to occasionally with their family members and other farmers respectively.

Singh (1972) in his study found that 84 per cent used to discuss the content of the topic broadcast with others after listening it, 16 per cent did not discuss at all. Out of the 84 per cent listeners only 24.52 per cent discussed with others regularly, 67.14 per cent did occasionally and 8.33 per cent rarely. In regard to the persons with whom the content of the broadcast was discussed. He further stated that, that 84.52 per cent used to discuss the topic with neighbours, 42.85 per cent with family members and 4.76 per cent with block extension workers.

Knight and Singh (1975) found that majority of the farm broadcast listeners (54.6 per cent) do not discuss at all after listening to the farm broadcast, while only very few (10.1 per cent) discuss with family members regularly.

For the purpose of this study listening behaviour has been operationally defined as, 'a process of hearing with preparedness and expectation, involving regular and attentive listening leading to make a decision about the programme'.

5. Communication Behaviour:-

Schramm (1960) stated that 'communication" comes from the Latin word 'communis', meaning 'common'. When

we communicate we are trying to establish a 'commonness' with someone.

Fliegel (1956) operationally defined communication behaviour as information contact. Berlo (1960) used the term communication behaviour to indicate communication in a personal context of the receiver. He also stated that communication behaviour explains how, why, when, with whom and with what consequences men behave.

Hobbs (1960) operationally defined communication behaviour as cosmopoliteness of information sources. Rogers (1960) defined communication behaviour as the degree to which an individual is willing to seek information and advice.

Murthy and Singh (1974) conceptualized communication behaviour as a composite measure of awareness of technologically competent information sources, comprehension attitudinal change and adoption of the referent (high yielding variety of paddy IR 8).

The term, communication behaviour was used by Schramm (1960) reporting the study of radio audience. He identified the behavioural components of the effects of communication in questions like: What does a given communication do to the people? By what persons, under what conditions it is likely to be attended to? By whom

it is likely to be understood? (understanding and comprehension). By whom favourably received? And, attitudes or action will it lead to? (attitude and action) He observed that, questions like this are in the mind of a communicator when he constructs and sends a message and they are in the minds of scholars and critics when they think about communication

Newcomb et al. (1965) considered communication behaviour manifested in sensitivity to information (awareness), the mental acceptance of the information, promotion of understanding of the message (understanding and comprehension) and appropriate action (adoption).

Nafziger and White (1966) also related communication behaviour to modifications in knowledge attitudes and overt action following attention given to a message

Hovland et al. (1953) analysed communication efforts or responsiveness to communication as: attention to the verbal content of the communication, comprehension and acceptance. Mares (1966) summarized the processing behaviour of communication speech as: intensive behaviour encoding behaviour and transmitting receiving behaviour. When the message has been received, the decoding behaviour interpretive behaviour leading to responses like action, thought, communication and storage of information may occur

Effective communication requires that the message is not only received but also understood.

For the purpose of this study, communication behaviour has been operationally defined as comprehension of the awareness, understanding and interpretation of the knowledge with attitudinal change leading to its acceptance by the individual.

4. Source Utilization Behaviour:-

Nair (1969) stated that behaviour of an individual will be a function of the sources of information. An individual gains knowledge through information from different sources. The influence of different sources of information varies. The preference and accessibility of sources of information will vary with different farmers. Past studies by Copp (1958), Lionberger (1960) and Singh and Jha (1965) have found relationship between sources of information and adoption of various practices. Nair (1969) studied three types of information sources. They were mass media use, interpersonal - cosmopolite source use and interpersonal - localite sources use.

Rai (1965) observed that adopters of the ... ideas had favourable attitude towards government programme and also said that greater the number of information sources sought, greater was the extent of adoption

adoption of new form practices. Rogers (1958) in his study on the importance of personal influence on [illegible] tion found that the personal sources, such as individual contact with the neighbours, proved effective in the adoption process. Sune (1969) found that the village level worker was the most sought out source of information followed by friends and neighbours

[illegible] (1967) [illegible] for effective agricultural development through the [illegible] of innovation the sources of information like the government agency and mass media have to be strengthened to play a much bigger part in future. [illegible] and Intodia (1970) observed that result demonstration acted as a useful sources of information. Patel and [illegible] (1970) revealed that the formal sources of information were extensively used by both adopters as well as non-adopters. The informal sources of information were found to be less conspicious, where as sources of mass communication were found to be effective to 68.33 per cent of adoption and 30.67 per cent of non-adoption.

Mathur et al (1974) studied the media utilization pattern of the respondents against the background of decision making for adoption. The media were categorised as interpersonal media and mass media. In the interpersonal media neighbours, friends and relatives

block personnel, IARI personnel and panchayat members were included. In the mass media radio, posters, newspapers and krishi vigjan mela were included They found out that use of mass media was much less than that of interpersonal media. Radio seems to be the most use media in the decision making process but, only in the initial stages. Manjaiyan et al (1977) observed that for the selection of variety and season, neighbours and friends were the most utilized sources followed by radio where as in the case of the practice of seed rate and spacing, radio ranked first

For the purpose of this study source utilization behaviour has been operationally defined as the extent of utilization of information sources available.

5. Adoption Behaviour:-

Rogers (1962) defined adoption process as the mental process through which an individual processes from first hearing about an innovation to its final adoption. Rogers and Shoemaker (1971) defined adoption as a decision to continue full use of an innovation as the best course of action

According to Ilkening (1951) adoption of an innovation is process composed of learning, deciding and acting over a period of time. The adoption of

decision to act has a series of actions and thought decisions. Copp et al. (1958) expressed adoption as an activity of the farmer taking place over a period of time.

Wilkening (1952) and Bose and Dasgupta (1962) have developed varying adoption models to explain the process of adoption. However, almost all the models give steps namely awareness, interest, evaluation, trial and adoption. Ryan an Gross (1950) recognised three stages in the adoption process as awareness, trial and adoption Here adoption was taken as hundred per cent use of a new idea.

The model advocated by Singh (1969) under Indian condition consists of seven stages. The stages are need awareness, interest, deliberation, trial, evaluation and adoption.

Adoption behaviour, according to Ramsey et al (1959) involves two components: behavioural which involves the actual use of the practice and cognitive which includes obtaining knowledge and critical evaluation of the practices in terms of the individual situations.

According to Singh and Singh (1970) adoption behaviour of a farmer is a special kind of action and is the function of the situation in which he lives, his socio

psychological system and his exposure to different sources of information. According to Chattopadhyay (1963) adoption is the stage in the adoption process where decision making is complete regarding the use of a practice and actions with regard to such decision commence. According to Mallal (1978) adoption is defined in terms of the overt behaviour of farmers.

Research workers have identified a number of variables associated with adoption behaviour. Education, farm size, social participation, age etc. were found to have relationship with the adoption behaviour of farmers.

Adoption behaviour is operationally defined as the extent of utilization of programme content of a broadcast pertaining to a farm practice based on the values and goals established by the individual. For the purpose of the present study, the effectiveness of farm broadcast was studied in terms of the influence of the rural farm programmes on the adoption behaviour of the listeners of farm broadcast.

b. Independent variables.-

1. Age:-

According to Wolman (1973), age means the length of time from birth to any given time in life of chronological age.

Sandhu (1970) reported that radio commanded a universal audience in terms of age. But majority of farmers who were decision makers in the families were in the age group of 31 to 50. Almgoer (1970) conclude that farm broadcast listening was independent of age. Singh (1972) found that listeners and non-listeners differed significantly in age. Listeners were of lesser age group than non-listeners. Shakya (1973) found no relationship between age and farm broadcast listening behaviour. Knight and Singh (1975) reported that majority of farm broadcast listeners listened to the agricultural programme at night irrespective of the age.

Wilkening (1962) found negative association between age and adoption behaviour. Hess and Miller (1954) and Copp (1959) have stated that elderly farmers seemed to be less inclined to adopt new farm practices than younger ones. Panlit (1964), Choudhary (1965) and Jaiswal and Singh (1968) revealed that farmers of middle age were better adopters than younger or older farmers. Rai (1966) and Rajendra (1968) observed that age was not found to play an important role in adoption. Shankariah (1965), Perumal and Duraiswamy (1972) and Ashere and Pandey (1975) observed that age of the farmers did not seem to have any association with adoption.

For the purpose of this study age was operationally

defined as the number of years an individual has completed since his birth to at the time of the study.

2. Education:-

According to Chamber's Dictionary (1976) "Education" is the bringing up or training, instructing, strengthening the power of body or mind or culture.

Wolman (1973) meant education as progressive changes of a person affecting knowledge, attitudes and behaviour as a result of formal institution and study and he further stated that it may be a development of a person resulting from experience rather than from maturation.

Formal education helps the individual to know the world better and he is prone to seek for information which will increase his knowledge. Beal and Sibley (1967) have pointed out that, the individuals ability to read and write and the amount of formal education he possess will affect the manner in which the individual gather data and relate himself to his environment.

Alamgeer (1970), Sandhu (1970), Singh (1972) and Jalihal and Srinivasamurthy (1974) found that education positively and significantly influenced farm radio listening behaviour. Sabarathnam and Rajaram (1975 b) observed that majority of radio listeners were educated upto primary level.

Rogers and Capener (1960) observed that farm operators who made greater use of extension agent were more educated Prasad and Sinha (1971) revealed that the farmers' education had significant relationship with the use of information sources at the final decision to adopt or not.

Several researchers have shown that the educational level of individuals was positively associated with their adoption behaviour. Wilkening (1952), Lionberger (1960), Reddy (1962), Pandit (1964), Dhaliwal and Sohal (1965), Rai (1965), Choudhary and Maharaja (1966), Rajendra (1968) and Patel and Singh (1970) also observed that farmers with higher education accepted improved practices more readily than farmers with lower education. Subramaniyan and Lakshmanna (1973) revealed that adoption increased with rise in educational level.

Singh and Singh (1970) expressed that educational status of the family significantly contributed to explain the adoption behaviour. Grewal and Sohal (1971) stated that the higher educational level of farmers and their family members coupled with much richer previous experience, contributed significantly in the adoption behaviour.

For the purpose of this study education was operationally defined as the ability to read and write or the extent of formal education possessed.

3. Occupation:-

According to Chamber's Dictionary, occupation means that which occupies or takes up one's attention.

According to Webster's New International Dictionary occupation means one's principal business, vocation or that which occupies or engages the time and attention.

Alamgeer (1970) found that full time agriculturists and part time agriculturists did not differ significantly, while they were exposed to mass media. Das and Sarkar (1970) observed direct relationship between primary occupation and adoption behaviour of farmers.

For the purpose of this study, main occupation was operationally defined as the vocation in which a respondent spends major part of his time and attention.

4. Radio ownership:-

Jalihal and Srinivasamurthy (1974) found that majority of the radio owning farmers were exposed to newspaper. Dhaliwal and Sohal (1965) observed that educational level was positively correlated with

possession of radio. Alamgeer (1970) found that radio ownership was significantly related with farm broadcast listening behaviour.

Dhaliwal and Sohal (1965) also observed that 64 per cent of radio set owners covered in their study reported about adoption of innovations after possession of a radio set.

In this study, radio ownership was operationally defined as the possession of radio set.

5 Farm size:-

Land is the primary resources in farming. In this study the farm size was identified on the basis of ownership of holdings.

Numerous studies were conducted on the relationship of farm size with the adoption behaviour. Studies by Pandit (1964), Rai (1965), Thakur (1966), Rao (1968) and Nair (1969) have revealed that size of holding had a positive relationship with adoption. Patel and Singh (1970) observed that with larger size of holding, the acceptance of new practices was greater than otherwise Rogers and Capener (1960) have found that farmers with large farm size were more frequently exposed to extension agencies.

Subramaniyan and Lekshmanna (1973) observed that farm size had positive and highly significant relationship with adoption.

For the purpose of this study how much area of cultivable land possessed by the person with whom interview sought is taken into consideration.

6. Crops grown:-

Alamgeer (1970) found that more percentage of garden land farmers listened to farm broadcasts than either wet land or dry land ryots. This he attributes to the fact that they cultivated a variety of crops throughout the year. Singh (1972) also recorded significant positive relationship of cropping pattern with farm broadcast listening.

The chief crops being paddy, tapioca, coconut and banana the farmers engaged in one or more of these crops has been subjected to interview.

7 Social participation:-

According to Rogers and Shoemaker (1971) participation is the degree to which members of social system are involved in the decision making process. Member satisfaction with and acceptance of collective innovation decision is positively related to the degree

of participation in the decision by members of a social system.

Participation in social activities does not start or stop at any specific age in the life of an individual. However, the intensity of social participation appears to influence the decision making of the individual. Membership in formal organisations help farmers to come into contact with different individuals, agencies and information sources. By this the individuals are likely to be more progressive and receptive to new ideas and practices.

Sandhu (1970) found that radio owning farmers had low social participation and medium exposure to mass media. Singh (1972) observed positive relationship between social participation and radio listening behaviour. Shakya (1973) stated that radio owning adult farmers had a high level of social participation and listening behaviour.

Roy et al (1963) found no relationship between social participation and mass media use. Jalihal and Srinivasamurthy (1974) found that the radio owning farmers had medium educational standard and read newspapers. Rahim (1960), Reddy (1962), Gupta (1965) and Nair (1969) reports that social participation had significant positive association with adoption of improved farm

practices. Das and Sarkar (1970) and Kasim and Mahboob (1974) stated that social participation influenced the adoption of farming practices.

For the purpose of this study, social participation was operationally defined as participation of farmers in the various organizations and institutions.

8. Discussion:-

According to Chamber's Dictionary (1976) discussion means debate or examination in detail.

Sandhu (1970) reported that 61 per cent of the respondents discussed the content after listening with family members or other farmers, but only about 37 per cent were doing it regularly. The purpose of discussion was to clear doubt, evaluate ideas, share information and arrange inputs.

Alamgeer (1970) observed that only 46 per cent discussed about what they heard in farm broadcast programme. Singh (1972) also found that 84 per cent of his respondents discussed the contents of farm broadcasts with family members and friends. But regular discussion was not common. Sandhu and Singh (1972) revealed that 66.16 per cent of radio owning farmers were in the habit of discussing the content after listening, 47.78 per cent discussed to clear doubts, 33.50 per cent evaluated ideas

and 33.41 per cent shared information after listening the farm broadcast.

Shakya (1973) observed that 61 per cent of the listeners discussed the content of farm broadcast programmes after hearing. But about 17 per cent alone were doing it regularly.

Parthasarathy (1971) reported that radio rural forum members established themselves as effective instruments in the process of education. Ratakrishnan (1974) also reported that farmers discussion group members were disseminating agricultural innovations received through the All India Radio to other fellow members of the locality.

Discussion has been taken as pre as well as post listening variable in this study. This variable has chosen since the organisation and functioning of the charcha samithies envisages pre and post discussion on the topic or programme broadcast through radio.

Hypotheses

Based on the theoretical orientation and the review of literature the following hypotheses were formulated to test the relationship of dependent variables with independent variables.

I. Mass Media Exposure Behaviour:

Hypotheses:

I : 1 . There will be a positive and significant relationship between age and mass media exposure behaviour of the listeners of farm broadcast

I : 2 : There will be a positive and significant relationship between educational level and mass media exposure behaviour of the listeners of farm broadcast

I : 3 . There will be a positive and significant relationship between occupation and mass media exposure behaviour of the listeners of farm broadcast.

I : 4 : There will be a positive and significant relationship between farm size and mass media exposure

behaviour of the listeners of farm broadcast.

I : 5 : There will be a positive and significant relationship between crops grown and mass media exposure behaviour of the listeners of farm broadcast.

I : 6 : There will be a positive and significant relationship between radio ownership and mass media exposure behaviour of the listeners of farm broadcast

I : 7 : There will be a positive and significant relationship between social participation and mass media exposure behaviour of the listeners of farm broadcast.

I : 8 : There will be a positive and significant relationship between discussion and mass media exposure behaviour of the listeners of farm broadcast.

II. Listening Behaviour.

Hypotheses: II : 1 : There will be a positive and significant relationship between

age and listening behaviour of the listeners of farm broadcast.

II : 2 : There will be a positive and significant relationship between educational level and listening behaviour of the listeners of farm broadcast

II . 3 . There will be a positive and significant relationship between occupation and listening behaviour of the listeners of farm broadcast

II : 4 . There will be a positive and significant relationship between farm size and listening behaviour of the listeners of farm broadcast.

II : 5 : There will be a positive and significant relationship between crops grown and listening behaviour of the listeners of farm broadcast.

II : 6 : There will be a positive and significant relationship between radio ownership and listening behaviour of the listeners of farm broadcast.

II : 7 : There will be a positive and significant relationship between social participation and listening behaviour of the listeners of farm broadcast.

II : 8 : There will be a positive and significant relationship between discussion and listening behaviour of the listeners of farm broadcast.

II : 9 : There will be a positive and significant relationship between mass media exposure behaviour and listening behaviour of the listeners of farm broadcast

III. Communication Behaviour:

Hypotheses: III . 1 : There will be a positive and significant relationship between age and communication behaviour of the listeners of farm broadcast.

III : 2 : There will be a positive and significant relationship between educational level and communication behaviour of the listeners of farm broadcast

III : 3 : There will be a positive and significant relationship between occupation and communication behaviour of the listeners of farm broadcast.

III : 4 There will be a positive and significant relationship between farm size and communication behaviour of the listeners of farm broadcast.

III : 5 : There will be a positive and significant relationship between crops grown and communication behaviour of the listeners of farm broadcast.

III : 6 : There will be a positive and significant relationship between radio ownership and communication behaviour of the listeners of farm broadcast.

III : 7 : There will be a positive and significant relationship between social participation and communication behaviour of listeners of farm broadcast.

III : 8 : There will be a positive and significant relationship between discussion and communication behaviour of the listeners of farm broadcast.

III : 9 : There will be a positive and significant relationship between mass media exposure behaviour and communication behaviour of the listeners of farm broadcast.

III :10 : There will be a positive and significant relationship between listening behaviour and communication behaviour of the listeners of farm broadcast

IV. Source Utilization Behaviour:

Hypothesis: IV : 1 : There will be a positive and significant relationship between age and source utilization behaviour of the listeners of farm broadcast.

IV : 2 : There will be a positive and significant relationship between educational level and source utilization behaviour of the listeners of farm broadcast.

IV : 3 : There will be a positive and significant relationship between occupation and source utilization behaviour of the listeners of farm broadcast.

IV : 4 : There will be a positive and significant relationship between farm size and source utilization behaviour of the listeners of farm broadcast.

IV : 5 : There will be a positive and significant relationship between crops grown and source utilization behaviour of the listeners of farm broadcast

IV . 6 : There will be a positive and significant relationship between radio ownership and source utilization behaviour of the listeners of farm broadcast

IV : 7 : There will be a positive and significant relationship between social participation and source utilization behaviour of the listeners of farm broadcast.

IV : 8 · There will be a positive and significant relationship between exposure and source utilization behaviour of the listeners of farm broadcast

IV : 9 : There will be a positive and significant relationship between mass media exposure behaviour and source utilization behaviour of the listeners of farm broadcast.

IV :10 : There will be a positive and significant relationship between listening behaviour and source utilization behaviour of the listeners of farm broadcast.

IV 11 : There will be a positive and significant relationship between communication behaviour and source utilization behaviour of the listeners of farm broadcast.

V. Adoption Behaviour:

Hypotheses V : 1 : There will be a positive and significant relationship between the adoption behaviour of the listeners of farm broadcast

V : 2 : There will be a positive and significant relationship between educational level and adoption behaviour of the listeners of farm broadcast.

V : 3 : There will be a positive and significant relationship between occupation and adoption behaviour of the listeners of farm broadcast.

V : 4 : There will be a positive and significant relationship between farm size and adoption behaviour of the listeners of farm broadcast

V : 5 : There will be a positive and significant relationship between crops grown and adoption behaviour of the listeners of farm broadcast.

V : 6 : There will be a positive and significant relationship between radio ownership and adoption behaviour of the listeners of farm broadcast.

V : 7 : There will be a positive and significant relationship between social participation and adoption behaviour of the listeners of farm broadcast.

V : 8 : There will be a positive and significant relationship between discussion and adoption behaviour of the listeners of farm broadcast

V : 9 : There will be a positive and significant relationship between mass media exposure behaviour and adoption behaviour of the listeners of farm broadcast.

V :10 : There will be a positive and significant relationship between listening behaviour and adoption behaviour of the listeners of farm broadcast

V :11 : There will be a positive and significant relationship between communication behaviour and adoption behaviour of the listeners of farm broadcast.

V :12 : There will be a positive and significant relationship between source utilization behaviour and adoption behaviour of the listeners of farm broadcast.

METHODOLOGY

METHODOLOGY

This chapter deals with the methodology used for this study. The procedure followed for the selection of the area, sample farmers and the empirical measures of the variables have been described in this chapter. The chapter also describes the procedure followed for collecting the data and the statistical measures used for measuring the variables.

Selection of the area:-

This study was confined to three N.E.S. blocks of Trivandrum district. The blocks selected were Nedumangad, Vellanad and Varkala. The distribution of charcha samithies organised by the Farmers Training Centre Trivandrum in each block was also obtained Based on the probability proportional to the size (total number of charcha samithies) the above mentioned blocks were selected.

Selection of respondents:-

Since the study pertained to farm broadcasting the members of charcha samithies were selected as the respondents who possessed radio sets supplied by the Farmers Training Centre for listening farm programme Five charcha samithies from each block were selected

by simple random sampling technique. From each sanithy ten respondents were randomly selected. Thus, one hundred and fifty radio listeners belonging to the chercha samithies were included in this study.

Empirical measures:-

The variables selected for this study were based on the review of literature. The hypotheses were developed to study the relationship between the personal and situational characteristics and the mass media exposure behaviour, listening behaviour, communication behaviour, source utilization behaviour and adoption behaviour of the listeners of farm broadcast.

A. MEASUREMENT OF DEPENDENT VARIABLES:-

1. Mass Media Exposure Behaviour:-

Nair (1969) and Laidu (1978) measured mass media use in terms of six media namely newspaper, radio, film, demonstration, posters and magazines. The responses were collected under four categories as more often, often, sometimes and never and the scores are 3, 2, 1 and 0 respectively. Badrinarayanan (1977) measured the mass media exposure based on the frequency of exposure as suggested by Singh (1972) with slight modification.

Rogers and Svenning (1969) reported a composite

mass media exposure index. Respondents' indications of degree of exposure to each medium in terms of number of radio programmes listened to per week and so on, were combined into a mass media exposure index.

In this study the media included were radio, newspapers, magazines, films, exhibition and visit to demonstration plots. Based on the pilot study eleven radio programmes were included and the responses were made under categories as daily, occasionally, rarely and never and with scores 3, 2, 1 and 0 respectively The number of newspapers included in this study were nine. Hence also the responses were scored according to the above method. Based on the pilot study, only four weekly magazines and three monthly magazines were included. The responses were made under four categories namely, weekly, occasionally, rarely and never and the scores were 3, 2, 1 and 0 respectively for weekly magazines. For monthly magazines the responses made were in the categories, as monthly, occasionally, rarely and never and the scores given as 3, 2, 1 and 0 respectively. The films, exhibition and visit to demonstration plots were grouped into one. The responses were made under four categories, namely, more than six per year, four to six per year, one to three per year and nil for which the scores assigned were 3, 2, 1 and 0 respectively.

The total scores were considered as the index for measurement of the mass media exposure behaviour of the listeners of farm broadcast.

2. Listening Behaviour:-

According to Singh and Sandhu (1971) hearing and attention are the two major components of listening. They operationally defined listening behaviour as regularity with which the farmers hear the four farm programmes together with the extent of attention paid to the programme. For determining the extent of regularity with which a farmer was hearing the farm radio programmes, he was asked to check in respect of each type of programme if he was listening to them (i) regularly (ii) several days a week (iii) once a week (iv) less than once a week and (v) seldom or never. The scores assigned to the above categories were 7, 4, 3, 2 and 0 respectively.

Knight and Singh (1975) measured listening behaviour in terms of regularity and duration of listening. Responses to regularity in listening were categorized as daily, more than twice a week, twice a week. once a week, rarely and not at all and scores 5, 4, 3, 2, 1 and 0 were given, respectively. Responses to the duration of listening to the programme fully for 30 minutes, for about 20 minutes, for about 10 minutes, for about 5 minutes and

scores of 4, 3, 2 and 1 were given respectively.

According to Badrinarayanan (1977) regularity, duration and intensity are the three major components of farm broadcast listening behaviour. Responses to intensity in listening behaviour were categorized as taking notes, silently listen, eat dress or engaged in silent works and reading chatting (least attention) and scores of 4, 3, 2 and 1 were given respectively

In this study, the listening behaviour was measured in terms of preparedness, expectations, hearing, attention, regularity, duration and intensity. To measure this components a set of statements were given and the responses were made under categories as mostly, sometimes rarely and never. The scores assigned were 3, 2, 1 and 0 respectively

The total scores were considered as the index for measurement of listening behaviour of the listeners of farm broadcast.

3. Communication Behaviour:-

Fliegel (1956) operationalized communication behaviour as information contact. Rogers (1958) operationalized communication behaviour as communication competence.

Murthy and Singh (1974) developed index of communication behaviour which involved four components namely awareness, comprehension, attitude and adoption.

For the purpose of this study communication behaviour was measured in terms of awareness, understanding, interpretation and attitudinal change. Awareness was measured as suggested by Murthy and Singh (1974) with slight modifications. To measure awareness the respondents were asked to state what sources of information were generally known to them. The sources of information included were friends, neighbours and relatives, salesman of farm inputs, radio farm broadcast, farm magazines, research journals, information bulletins, Kerala Agricultural University publications, farm information bureau publications, extension functionaries, mass media and scientists. Depending upon their competency level of the sources the scores were given. The scores assigned were 1, 1, 2, 3, 3, 3, 4, 4, 4, 4 and 5 respectively. For measuring other components of communication behaviour a set of statements were given and the responses were made under categories as mostly, some times, rarely and never and the scores assigned were 3, 2, 1 and 0 respectively.

The total scores were considered as the index for measurement of the communication behaviour of the

listeners of farm broadcast

4. Source Utilization Behaviour:-

Walkening (1962) while measuring use of information sources listed the sources of information for agricultural technology and grouped them into categories. The three categories were mass media inter-personal cosmopolite and inter-personal localite sources.

Nair (1963) Listed all the possible sources of information for agricultural technology and each respondent was asked to indicate as to how often he gets information regarding agricultural technology from each of the listed sources. Responses were categorised as most often, often, some times and never and the scores 3, 2, 1 and 0 were given respectively. The same scale was used in this study.

The total scores were considered as the index for measurement of the source utilization behaviour of the listeners of farm broadcast.

5. Adoption Behaviour:-

Several methods have been used to quantify the adoption behaviour by various research workers Notable among those who utilized a scale for measuring adoption

were Wilkening (1952), Duncan and Kreetlow (1954), Marsh and Coleman (1955), Fliegel (1956), Emery and Oeser (1958), Ramsey et al. (1959), Bose and Dasgupta (1962), Chattopadhyay (1963), Beal and Sibley (1967) and Supe (1969).

Wilkening (1952) used an index for measuring the adoption of improved farm practices. The index of adoption used was the percentage of practices adopted to the total number of practices applicable for that operator. Because of the differential nature of practices, he suggested differential weights in the adoption index.

Duncan and Kreetlow (1954) used a 25 item index of farm practice adoption, adopted from the index developed by Wilkening (1952). Each respondent was given a score based on the number of practices he had adopted from the list of 25.

Marsh and Coleman (1955) also used a practice adoption score computed as the percentage of applicable practices adopted.

Chattopadhyay (1963) has constructed an adoption quotient to measure farm practices adoption. He took into consideration the different variables like potentiality, extent, weightage and time in developing the adoption quotient with a formula as follows.

$$\text{Adoption Quotient} = \frac{\sum_{j=1}^{N} Yj\ Wj}{\sum_{j=1}^{N} Wj} \times 100$$

$$\text{Where } Yj \quad \frac{\sum_{1}^{tp-ti} 1}{tp - ti} \times (ej/pj)$$

N = Number of practices which the individual has the potentiality to adopt.

Wj = Weightage to be given to (j^{th}) practice based on its difficulty of adoption determined from a list of differential weights for the practices.

$\sum_{1}^{tp-ti}$ = Summation over each season from ti to tp.

tp = Time of investigation

ti = Time of introduction of (i^{th}) practice.

ej = Extent of adoption of any particular (j^{th}) practice in a particular season.

pj = Potentiality of any particular (j^{th}) practice in that season.

Adoption of paddy, coconut, tapioca and banana in this study were measured by the adoption quotient developed by Jaiswal and Dave (1972) with slight modifications. The data regarding the extent of adoption

of the selected practices in paddy, coconut, tapioca and banana have been taken as the sum total of adoption of various cultivation practices. The practices included were area, seed rate spacing, use of NPK fertilizers and plant protection chemicals.

The formula for calculation of adoption quotient used in this study was

$$\text{Adoption quotient} = \frac{\Sigma\, e/p}{N} \times 100$$

where Σ = is the summation,

e = extent of adoption of each practice,

p = potentiality of adoption of each practice and

N = total number of practices.

I Potentiality of adoption:-

Potentiality of adoption of package of practices for any one of the above mentioned crop or more than one was conceived as the maximum degree to which a farmer can extent its adoption, if he so wishes, depending on the maximum utilization of the resources he commands or can command.

1. Extent of holding:-

Cultivator was asked to indicate his area under each crops respectively paddy, coconut, tapioca and banana. This area in acres was taken as the potentiality for the use of High Yielding Varieties of crops.

2. Seed rate:-

The quantity of seed required as per the recommended rate for covering the area which the farmer has put under either High Yielding Varieties or local varieties was taken as the potentiality.

3. Spacing:-

The spacing in centimetres was taken as the potentiality for use of spacing recommended for either High Yielding Varieties or local varieties.

4. Fertilizers:-

The actual recommended dose of fertilizers in terms of Nitrogen, Phosphorous and Potash were taken here as the potentiality.

5. Plant protection:

The actual recommended dose of pesticide or fungicide is taken here as the potentiality.

II. Extent of adoption:-

Extent of adoption is the degree to which a farmer has actually adopted a practice. When the extent of adoption equals the potentiality, adoption is maximum. When the extent is nil adoption is nil.

1. Extent of holding:-

The area in which the farmer has cultivated High Yielding Varieties has been taken as extent of adoption.

2. Seed rate:-

The quantity of seeds or seedlings or cuttings or suckers used has been taken as the extent of adoption.

3. Spacing:-

Actual spacing adopted by the farmer has been taken as the extent of adoption.

4. Fertilizers:-

The quantity of fertilizers used in terms of Nitrogen, Phospherous and protection has been taken as the extent of adoption.

5. Plant protection.-

The amount of pesticide or fungicide used has been taken as the extent of adoption.

The total adoption quotient scores were considered as the index for measurement of the adoption behaviour of the listeners of farm broadcast.

B. MEASUREMENT OF INDEPENDENT VARIABLES:-

1. Age:-

Age of the respondent was calculated as the number of years completed since his birth at the time of interview.

2. Education:-

Education was measured by assigning scores for different educational level as per the scoring system followed in the socio economic status scale of Trivedi (1963). Nair (1969) have also used this scale. The scoring was as follows.

Illiterate	= 0
Can read only	= 1
Can read and write	= 2
Primary level	= 3
Middle school level	= 4
High school level	= 5
Graduate level	= 6
Above	= 7

3. Farm size:-

In this study farm size was measured in acres and cents. The number of acres cultivated by an individual was taken into consideration.

4. Occupation:-

The extent to which a family is agriculturally occupied is measured under this. Since farm broadcast listening should be expected to be influenced by how far one is agriculturally oriented by profession. The scoring adopted was as follows.

Non agricultural occupation as the main source of the respondent's income	= 1
Agriculture as the main source of income to the respondent with some non agricultural income	= 2
Agriculture as the sole occupation and source of income of the respondent	= 3

5. Crops grown:-

In this study crops grown was measured in terms of number of crops. The crops included were paddy, coconut, tapioca and banana. The scoring was as follows.

For each crop = 1

The maximum score will be four and the minimum will be one.

6. Radio ownership:-

Possession of one or more radio receiving set was recorded. The scoring given was as follows.

No receiving set = 0

for each receiving set owned = 1

7. Social participation:-

The social participation scores were calculated as per the scoring system followed in the socio economic status scale of Trivedi (1963) which was used by Murthy and Singh (1974), Naidu (1978) and Rajendran (1978). The scoring was as follows.

Membership in one organisation = 1

Membership in more than one organisation = 2

Office holder = 3

Distinctive features = 6

8. Discussion:-

It was considered that discussion by farm broadcast listeners after listening to the farm programme

will improve their knowledge. In this study the discussion was measured as follows. The response of farmers about their pre and post discussion with family members, friends, relatives, extension agency and farmers' discussion group was obtained seperately under three response categories such as regularly, some times and never and scores of 2, 1 and 0 were given respectively.

Data collection:-

The questionnaire was pretested by obtaining the responses from thirty non-sample charcha samithy members. Based upon their responses and remarks the questionnaire was modified wherever found necessary. The data were collected by personally interviewing the charcha samithy members individually.

Statistical measures:-

Parametric statistical methods are used to test the empirical hypotheses. The hypotheses were tested by using correlation analysis. The respondents' preference to mode and nature are tested by Thurstones paired comparison technique. Multiple correlation and regression analyses were also done to find out the contribution of independent variables to dependent variables. For making simple comparisons percentages were used.

1. Thurstone's Paired Comparison Technique:-

This is considered to be a fairly sensitive and sophisticated technique which would both rank the preferences as well as show the distance between the ranks. The five modes and four programmes were presented to the respondents in pairs in all possible combinations separately. The total number of pairs was determined by the formula $\frac{n(n-1)}{2}$. From the responses of the respondents, Γ, P and Z Matrices were constructed and scale values for each mode and programme were found out. The scale values of modes and programmes were placed on a least preferred to most preferred continuum separately to show the ranks and distance between the ranks.

2. Simple Correlation Analysis:-

This statistical technique was used to find out the type and intensity of relationship between two factors mainly for the selection of independent variables for multiple regression analysis.

3. Multiple Correlation and Regression Analyses:-

As mere relationship of the variables studied in isolation will not throw light as how much they actually contribute to dependent variable, particularly in the presence of one another, a multiple regression analysis was carried out.

The multiple correlation coefficient (R) represented the zero-order correlation between the actual dependent variable scores and predicted dependent variable scores obtained from the independent variables under consideration. If the predicted dependent variable score for each farmer would exactly correspond to his actual dependent variable score obtained in the study, the multiple correlation coefficient would be unity or 1.00.

The square of the multiple correlation coefficient (R^2) represented the proportion of the total variation explained by the independent variables in the regression equation taken together.

The significantly related variables were taken as the 'best subset' among the available independent variables. The variation due to regression was subjected to F - test. The F value was significant at 0.05 probability level indicating that the combined effect of the variables in the subset produce significant variance in the dependent variable.

When the multiple correlation was statistically significant, it was thought desirable to analyse the relative importance of each independent variable in order to determine which independent variable was most important. There are two methods. In the first method,

the statistical significance of each partial coefficients (partial bs') were determined. The formula used for testing the significance was:

$$t = \frac{bi}{Se\ (\ bi\ )}$$

Where, bi = partial coefficient

Se (bi) = standard error of the partial coefficient

In the present study, the significant R^2 values necessitated partial regression analysis to determine the relative importance of the variables. The partial regression coefficients were, therefore, obtained for the variables included in the regression equation of the respective groups. The partial bs' thus obtained were tested for significance with the help of 't' test.

In the second method, the independent variables which contributed most to the prediction of dependent variable were determined by comparing the standard partial regression coefficients (called beta weights) of the respective independent variables in the regression equation.

Partial coefficients or 'bs' could not be compared as such to their relative abilities to predict changes in the dependent variable, unless a correction was made. This became necessary, because in the measurement of

independent variables, different scales were used. For example, age was measured in years; farm size was measured in land units; listening behaviour was measured in some type of scale, etc. Therefore, comparison of a unit change in one variable with a unit change in another became meaningless without any correction. The correction was made by standardising each partial b' value which was done by utilizing the standard deviation of each variable. A standardized partial b was called the beta weight of the partial coefficient and was computed by the following formula.

$$\text{Beta Weight} = \frac{\text{S.D. of independent variable}}{\text{S.D. of dependent variable}} \times \text{partial b}$$

The absolute values of beta weights indicate the relative importance of the independent variables in influencing the dependent variable.

RESULTS

The results of this study, conducted according to the objectives and methodology detailed elsewhere, are presented in this chapter. They are presented in two major sections as follows.

I. Broadcasting Variables
II. Listening Habit Variables

I. Broadcasting Variables:-

1. Mode Preference:-

Mode preference was computed by using Paired comparison technique. The P, F and Z matrices were computed. The 'Z' matrix of various preferences thus arrived are presented in Table 1.

The 'Z' values under each column were summed up and means for each column were worked out. A positive number in absolute value equal to the lowest negative mean was added to all means. By this, the first column attained a zero value and the others obtaining corresponding positive values. The modes preferred were ranked on the basis of the scale values as portrayed in Figure 1.

Table 1:- 'Z' matrix of the Mode Preference

Modes of presentation	Talks	Success Stories	Question and answers	Discussions	Interviews
Talks	..	1.405	1.447	1.175	1.248
Success stories	-1.405	..	1.685	1.323	1.616
Question and answers	-1.447	-1.685	..	1.506	1.405
Discussions	-1.175	-1.323	-1.506	..	0.820
Interviews	-1.248	-1.616	-1.405	-0.820	..
Sum	-5.275	-3.219	0.221	3.184	5.089
Means	-1.055	-0.643	0.044	0.658	1.018
Mean + 1.055	0	0.412	1.099	1.713	2.073

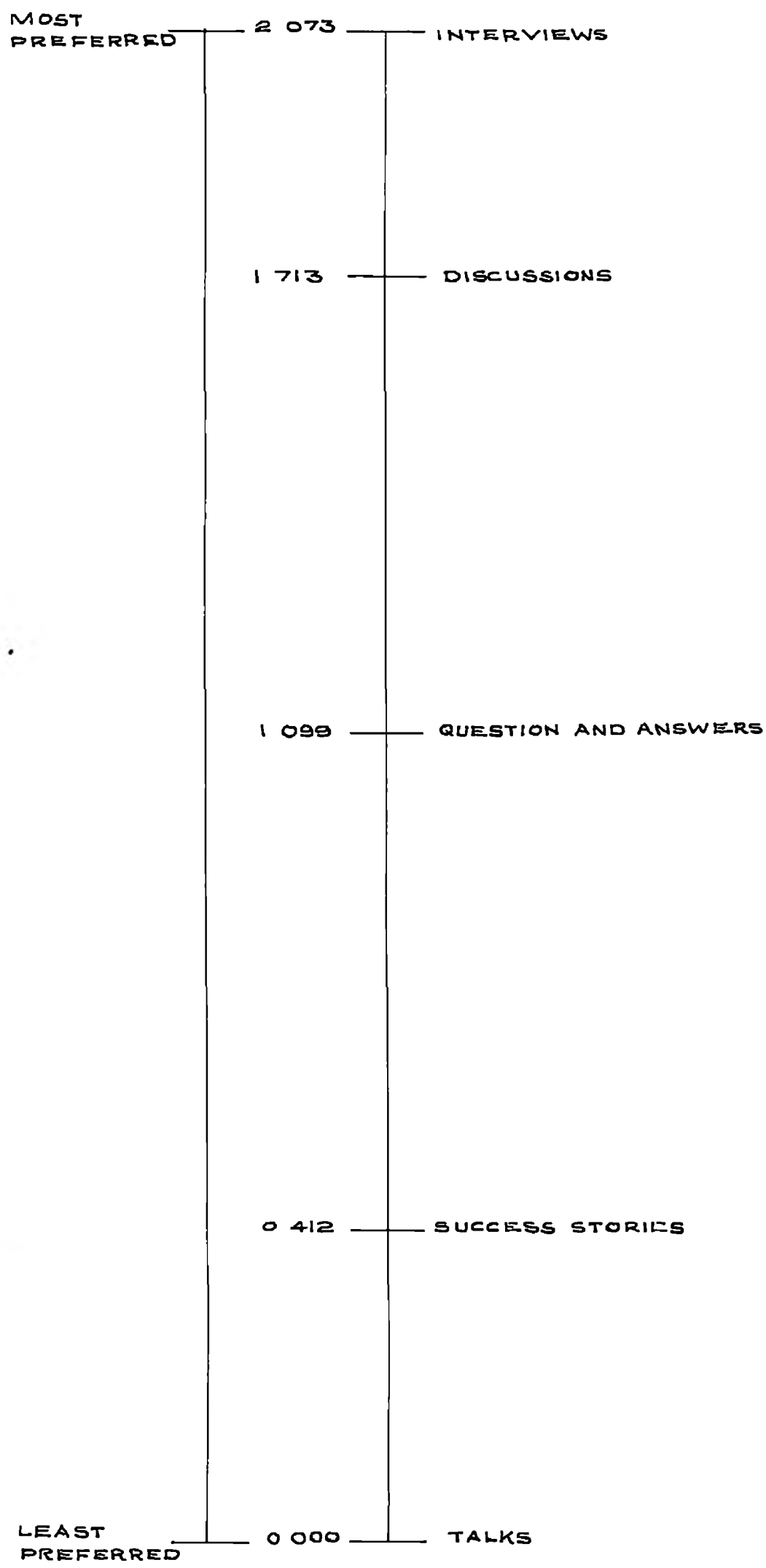

FIG 1 MODE PREFERENCE

From this ranking it can be inferred that the respondents, preferred interview as the best mode of farm broadcast. Interview was followed by discussion, question and answers, success stories and talks in descending order.

2. Programme Preference:-

To measure the Programme preference, paired comparison technique was employed. The four programmes were presented to the respondents in all the possible pairs. F, P and Z matrices were constructed from which the scale values for each programmes were calculated. The scale values thus obtained were placed on a continuum from least to most preferred as shown in Table 2 below.

The ranking was given as done for mode preference having the absolute value method. The programmes preferred ranked on the basis of the scale values are presented in Figure 2. It is inferred from this ranking that Karshika Mekhala Varthakal was most preferred by the respondents followed by Karshika Rangam and Radio Grama Rangam. Vayalum Veedum programme was found to be the least preferred farm broadcast.

3. Duration of Farm Broadcasts:-

Results in Table 3 reveals the preference of

Table 2:- 'Z' matrix of the Programme Preference

Farm Programmes	Vayalum Veedum	Radio Grama Rangam	Karshika Rangam	Karshika Mekhala Varthakal
Vayalum Veedum	..	0.176	0.844	0.954
Radio Grama Rangam	-0.176	..	0.840	0.643
Karshika Rangam	-0.842	-0.842	..	0.253
Karshika Mekhala Varthakal	-0.954	-0.643	-0.253	..
Sum	-1.972	-1.309	1.431	1.850
Means	-0.493	-0.328	0.357	0.462
Mean + 0.493	0	0.165	0.850	0.955

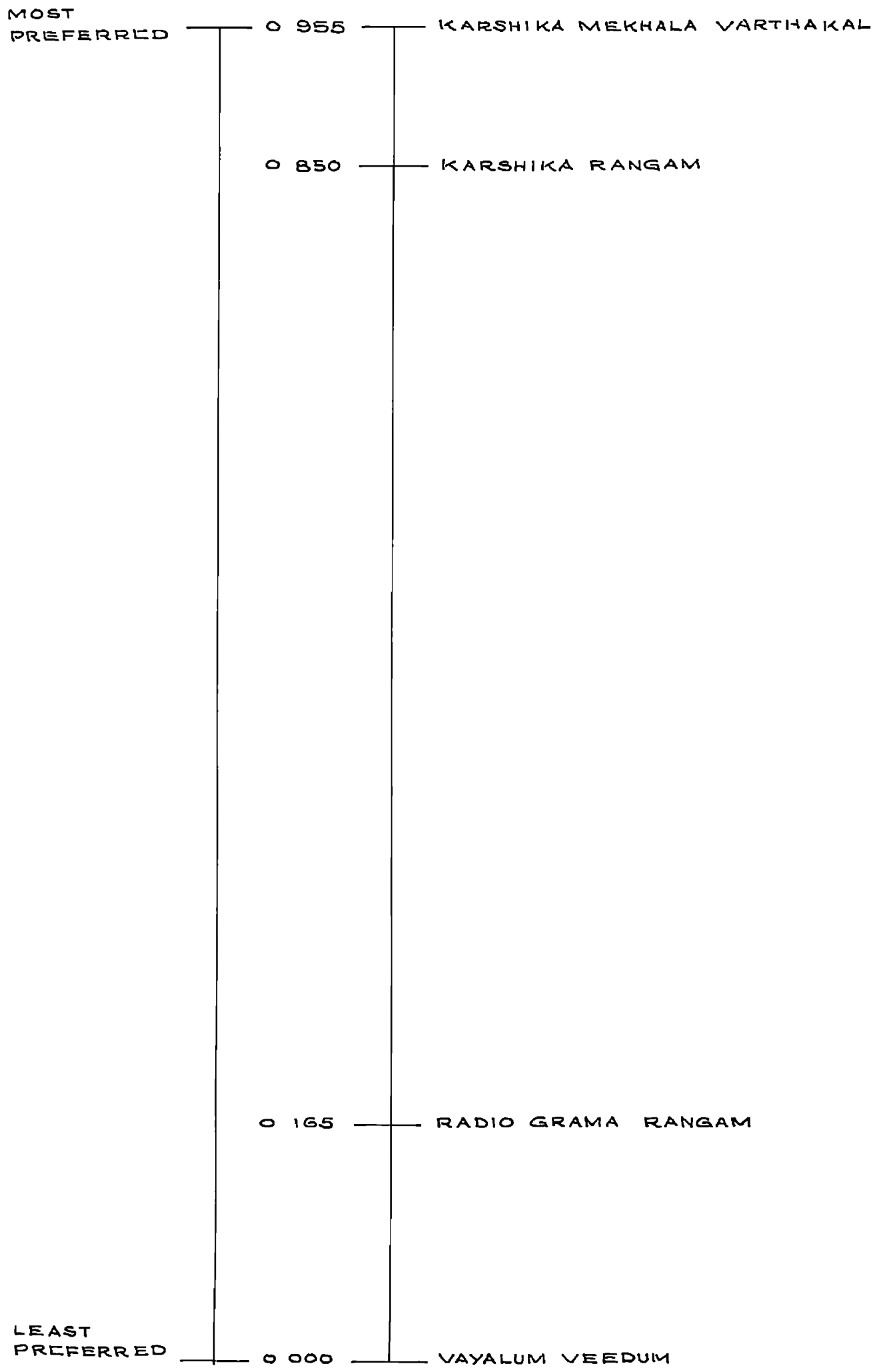

FIG 2 PROGRAMME PREFERENCE

Table 3:- Duration of broadcast as preferred by the listeners of farm broadcasts

Sl No.	Programme	Present duration (minutes)	Preference response in percentage (N = 150)			
			Sufficient	May be enhanced by 5 minutes	May be enhanced by 10 minutes	May be reduced by 5 minutes
1.	Karshika Mekhala Varthakal	5	30.00	55.33	14.67	0.00
2.	Karshika Rangam	30	79.33	16.67	3.33	0.67
3.	Radio Grama Rangam	30	78.67	18.66	2.67	0.00
4.	Vayalum Veedum	30	75.33	15.33	6.67	2.67

duration for the farm programmes expressed by the respondents. It is evident from Table 3 that with respect to Karshika Mekhala Varthakal majority of (70 per cent) the respondents suggested an increase in duration. Of them fifty five per cent of the respondents preferred a five minutes increase in duration. About 80 per cent of the listeners suggested that the broadcasting time allowed for the other three programmes is sufficient.

4. Frequency of Broadcasts:-

According to Table 4 majority of the respondents (90 per cent) expressed that the present frequency of presentation of the programme per week is sufficient with respect to Karshika Mekhala Varthakal, Radio Grama Rangam and Vayalum Veedum. Regarding Karshika Rangam about one fifth of (19.93 per cent) the listeners suggested an increase in its presentation to two times per week.

Table 4:- Frequency of broadcast as preferred by the listeners of farm broadcasts

Sl No.	Programme	Present frequency per week	Preference response in percentage (N = 150)		
			Sufficient	Should be more	Should be less
1.	Karshika Mekhala Vartnakal	7	91.33	8.67	0.00
2.	Karshika Rangam	1	80.67	19 33	0.00
3	Radio Grama Rangam	2	88.00	12 00	0.00
4.	Vayalum Veedum	4	92.67	7.33	0 00

II. Listening Habit Variables:-

1. Relationship between independent variables and Mass Media Exposure Behaviour of the Listeners of Farm Broadcasts:-

The results of the analysis of correlation between independent variables and mass media exposure behaviour are presented in Table 5. Among the eight independent variables, six variables namely, education, farm size, crops grown, radio ownership, social participation and discussion were found to be positively and significantly associated with mass media exposure behaviour. The variables age and occupation were not significantly related to mass media exposure behaviour of the listeners.

It can be inferred from the table that an increase in the five independent variables, namely, education, farm size, crops grown, radio ownership, social participation and discussion would also increase the mass media exposure behaviour of the farm broadcast listeners.

All the significant variables were subjected to regression analysis. The variation due to regression was tested by analysis of variance and the results are presented in Table 6. The F value was significant at 0.01 level of probability indicating that the selected

Table 5:- Correlation matrix for the dependent variable (Mass Media Exposure Behaviour) and independent variables

	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9
X_1	.0396	.0128	.1715	.0894	.1388	.0319	.1158	0947
X_2	1	3512**	.1531	.1622	4031**	.0710	.1606	3828**
X_3		1	.1599	.1621	.2610**	.2776 *	.2049*	0701
X_4			1	.5995**	.3909*	.2546*	.4430**	.3401*
X_5				1	.3711	.1914	.4265*	.3493**
X_6					1	.3335**	.4114**	5332**
X_7						1	.3617 *	.4093**
X_8							1	.4420**
X_9								1

* Significant at 0.05 level of probability

** Significant at 0.01 level of probability

X_1 = Age X_4 = Farm size X_7 = Social participation

X_2 = Education X_5 = Cropping pattern X_8 = Discussion

Table 6:- Analysis of Variance table showing the influence of six selected independent variables on Mass Media Exposure Behaviour of Listeners of Farm Broadcasts

	sum of square	Degrees of freedom	Mean Square	F Value
Total	50955.71	149		
Regression	21804.34	6	3634.05	17.82 *
Error	29151.37	143	203.85	

** Significant at 0.01 level of probability

Multiple correlation coefficient (R) = 0.6541

R^2 = 0.4277

independent variables significantly influenced the mass media exposure behaviour of listeners of farm broadcasts.

The R^2 value of the analysis was 0.4277. It indicates that all the independent variables taken for regression analysis contributed for about 43 per cent of variation in mass media exposure behaviour of farm broadcast listeners.

Partial b's, corresponding t values and their significance are shown in Table 7. All the six variables namely education, farm size, crops grown, radio ownership, social participation and discussion were found to be highly significant indicating that, these variables contributed effectively to the mass media exposure behaviour of the respondents.

The beta weights listed in the highest to the lowest order are presented in Table 8. The highest beta weight denotes the variable namely discussion, followed by social participation, farm size, crops grown, radio ownership and education. From Table 6 it is evident that the selected six variables were found to explain 43 per cent of variation in mass media exposure behaviour of farm broadcast listeners. The beta weights indicate that among these six variables discussion was the most influencing, followed by social participation, farm size

Table 7:- Partial Regression Coefficients for independent variables

(Mass Media Exposure Behaviour - dependent variable)

Sl No.	Variable No.	Variables (Xi)	Partial Regression Coefficient (bs)	S.E. (bi)	t Values
1.	X_1	Education	1.1492	0.2311	4.9714**
2.	X_2	Farm size	7.1432	1.6317	4.3777**
3.	X_3	Crops grown	5.6087	1.2561	4.4651**
4.	X_4	Radio ownership	6.1293	0.8119	7.5486**
5.	X_5	Social participation	7.9248	1.4772	5.3647**
6.	X_6	Discussion	2.6587	0.4511	5.8928**

** Significant at 0.01 level of probability

Table 8:- Standardised Partial Regression Coefficients for Mass Media Exposure Behaviour and independent variables (Ordered by beta weights)

Rank Order	Variable No.	Name of the Variables	Beta Weight
1	X_6	Discussion	1.599
2	X_5	Social Participation	1.533
3	X_2	Farm size	1.473
4	X_3	Crops grown	0 398
5	X_4	Radio ownership	0.704
6	X_1	Education	0 344

crops grown, radio ownership and education in that order.

2. Relationship between independent variables and Listening Behaviour of the listeners of Farm Broadcasts:-

Table 9 reveals the results of the analysis of correlation between independent variables and listening behaviour. Among the nine independent variables, the variables namely education, farm size, crops grown, radio ownership, social participation, discussion and mass media exposure behaviour were found to be positively and significantly associated with the listening behaviour of farm broadcast listeners. In this Table 9 age and occupation are not significantly related.

It can be inferred from the above table that an increase in the seven independent variables namely education, farm size, crops grown, radio ownership, social participation, discussion and mass media exposure behaviour would also increase the listening behaviour of the farm broadcast listeners.

All the significant variables were subjected to regression analysis. The variation due to regression was tested by analysis of variance and the results are presented in Table 10. The F value was significant at 0.01 level of probability indicating that the selected

Table 9:- Correlation matrix for the dependent variable (Listening Behaviour) and independent variables

(N = 150)

	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}
X_1	.0396	.0128	.1715	.3894	.1388	.0319	.1158	.0947	.0671
X_2	1	.3512**	.1531	.0622	.4031**	.0710	.1606	.3838**	.3096**
X_3		1	.1599	.1621	.2610**	.2776**	.2049*	.0701	.0557
X_4			1	.5995**	.3909**	.2546**	.4430**	.3461**	.2617**
X_5				1	.3711**	.1914	.4265**	.3498**	.2882**
X_6					1	.3335**	.4114**	.5332**	.5571**
X_7						1	.3617**	.4093**	.4625**
X_8							1	.4420**	.4382**
X_9								1	.5726**
X_{10}									1

* Significant at 0.05 level of probability ** Significant at 0.01 level of probability

X_1 = Age
X_2 = Education
X_3 = Occupation
X_5 = Crops grown
X_6 = Radio ownership
X_7 = Social participation
X_9 = Mass media exposure behaviour
X_{10} = Listening behaviour

Table 10.- Analysis of Variance table showing the influence of seven selected independent variables on listening behaviour of listeners of Farm Broadcasts

	Sum of square	Degrees of freedom	Mean Square	F Value
Total	7252.29	149		
Regression	3467.15	7	495.31	18.58**
Error	3785.13	142	26.66	

** Significant at 0.01 level of probability

Multiple correlation coefficient (R) = 0.691

R^2 = 0.477

independent variables significantly influence the listening behaviour of farm broadcast listeners.

The R^2 value of the analysis was 0.477. It indicates that all the independent variables taken for regression analysis contributed for 48 per cent of variation in listening behaviour of farm broadcast listeners.

Partial b's, corresponding t values and their significance are shown in Table 11. The variables radio ownership, social participation, discussion and mass media exposure behaviour were found to be highly significant indicating that, they were the effective contributors for the listening behaviour of farm broadcast listeners.

The beta weights listed in the highest to the lowest order are presented in Table 12. The ranking of beta weights denote the variables namely mass media exposure behaviour followed by social participation, discussion, radio ownership, farm size, education, crops grown and discussion in the descending order. From Table 10 it is evident that the selected seven variables were found to explain 48 per cent of variation in listening behaviour of farm broadcast listeners. The beta weights indicate that among these seven variables mass media exposure behaviour was the most influencing,

Table 11:- Partial Regression Coefficients for independent variables

(Listening Behaviour - dependent variable)

Sl. No.	Variable No.	Variables (Xi)	Partial Regression Coefficient (bi)	S.E. (bi)	t Value
1.	X_1	Education	0.3148	0.3337	0.9434
2.	X_2	Farm size	0.6083	0.5615	1.0833
3.	X_3	Crops grown	0.2762	0.7144	0.3867
4.	X_4	Radio ownership	3.5520	0.9973	3.5621**
5.	X_5	Social participation	1.6620	0.5205	3.1945**
6.	X_6	Discussion	0.3389	0.1015	3.3389**
7.	X_7	Mass media exposure behaviour	0.3347	0.1165	3.3013**

** Significant at 0.01 level of probability

Table 12:- Standardised Partial Regression Coefficients for Listening Behaviour and independent variables (Ordered by beta weights)

Rank Order	Variable No.	Name of the Variables	Beta Weight
1	X_7	Mass media exposure behaviour	0.862
2	X_5	Social participation	0.648
3	X_6	Discussion	0.304
4	X_4	Radio ownership	0.274
5	X_2	Farm size	0.264
6	X_1	Education	0.221
7	X_3	Crops grown	0.140

followed by social participation, discussion, radio ownership, farm size, education and crops grown in that order.

3. Relationship between independent variables and the communication behaviour of listeners of farm broadcasts.

The results of analysis of correlation between independent variables and the communication behaviour is shown in Table 13. Among the ten independent variables the variables namely education, farm size, radio ownership, social participation, discussion, mass media exposure behaviour and listening behaviour are significantly and positively related to the communication behaviour of listeners of farm broadcasts. The variables age, occupation and crops grown are not significantly related

It can be inferred from the above table that an increase in the seven independent variables namely education, farm size, radio ownership, social participation, discussion, mass media exposure behaviour and listening behaviour would also increase the communication behaviour of farm broadcast listeners.

All the significant variables were subjected to regression analysis. The variation due to regression was tested by analysis of variance and the results are

Table 13:- Correlation matrix for the dependent variable (Communication Behaviour) and independent variables

(N = 150)

	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}
X_1	.0396	.0128	.1715	.0894	.1388	.0319	.1158	.0947	.0671	.1362
X_2	1	.3512**	.1531	.1622	.4031**	.0710	.1606	.3838**	.3096**	.3233**
X_3		1	.1599	.1621	.2610**	.2776**	.2049*	.0701	.0557	.1136
X_4			1	.5995**	.3909**	.2546**	.4430**	.3461**	.2617**	.2738**
X_5				1	.3711**	.1914	.4265**	.3498**	.2882**	.1816
X_6					1	.3335**	.4114**	.5332**	.5571**	.4604**
X_7						1	.3617**	.4093**	.4625**	.2628**
X_8							1	.4420**	.4382**	.2543**
X_9								1	.5726**	.4716**
X_{10}									1	.4932**
X_{11}										1

* Significant at 0.05 level of probability ** Significant at 0.01 level of probability

X_1 = Age X_5 = Crops grown X_9 = Mass media exposure behaviour

X_2 = Education X_6 = Radio ownership X_{10} = Listening behaviour

X_3 = Occupation X_7 = Social participation X_{11} = Communication behaviour

presented in Table 14. The F value was significant at 0.01 level of probability indicating that the selected independent variables significantly influence the communication behaviour of listeners of farm broadcasts.

The R^2 value of the analysis was 0.367. It indicates that all the independent variables taken for regression analysis contributed for 37 per cent of variation in communication behaviour of farm broadcast listeners.

Partial b's, corresponding t values and their significance are shown in Table 15. All the variables namely education, farm size, radio ownership, social participation, discussion, mass media exposure behaviour and listening behaviour were found to be highly significant indicating that they were the effective contributors for the communication behaviour of farm broadcast listeners.

The beta weights listed in the highest to the lowest order are presented in Table 16. The ranking of beta weights denote the variables namely listening behaviour, followed by discussion, mass media exposure behaviour, education, farm size, social participation and radio ownership in the descending order. From Table 14 it is evident that the selected seven independent variables were found to explain 37 per cent

Table 14:- Analysis of Variance table showing the influence of seven selected independent variables on Communication Behaviour of listeners of farm broadcasts

	Sum of square	Degrees of freedom	Mean Square	F value
Total	26260.13	149		
Regression	96676.62	7	13810.94	11.31
Error	1659.24	142		

** Significant at 0.01 level of probability

Multiple correlation coefficient (R) = 0.6067

R^2 = 0.3672

Table 15:- Partial regression Coefficients for multiple dependent variables

(Communication Behaviour - dependent variable)

Sl. No.	Variable No.	Variables (Xi)	Partial Regression Coefficient (bi)	S.E. (bi)	t Value
1.	X_1	Education	7.3040	1.7935	4.0724 **
2.	X_2	Farm size	4.2647	1.2567	3.3936 **
3.	X_3	Radio ownership	3.9921	0.6460	6.1788 **
4.	X_4	Social participation	3.8399	1.1626	3.2169
5.	X_5	Discussion	7.0053	1.8164	3.8619
6.	X_6	Mass media exposure behaviour	3.5582	0.5582	6.3736 **
7.	X_7	Listening behaviour	5.4106	0.8007	6.7567 **

** Significant at 0.01 level of probability

Table 16:- Standardised Partial Regression Coefficients for Communication behaviour and independent variables (ordered by beta weights)

Rank order	Variable No	Name of the Variables	Beta weight
1	X_7	Listening behaviour	5.9342
2	X_5	Discussion	3.1177
3	X_6	Mass media exposure behaviour	2.6036
4	X_1	Education	1.6491
5	X_2	Farm size	0.6535
6	X_4	Social participation	0.5603
7	X_3	Radio ownership	0.3460

of variation in listening behaviour of farm broadcast listeners. The beta weights indicate that among these seven variables listening behaviour was the most influencing, followed by discussion, mass media exposure behaviour, education, farm size, social participation and radio ownership in that order.

4. Relationship between independent variables and Source Utilization Behaviour of the listeners of Farm Broadcasts:-

Table 17 shows the results of correlation analysis between independent variables and the source utilization behaviour. It is seen that there is significant relationship between seven personal characteristics and the source utilization behaviour. The independent variables significant at 0.01 level of probability are farm size, radio ownership, social participation, discussion, mass media exposure behaviour, listening behaviour and communication behaviour.

It can be inferred from Table 17 that an increase in the seven independent variables namely farm size, radio ownership, social participation, discussion, mass media exposure behaviour, listening behaviour and communication behaviour caused an increase in the source utilization behaviour of farm broadcast listeners.

Table 17:- Correlation matrix for the dependent variable (Source Utilization Behaviour) and independent variables

(N = 150)

	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}
X_1	.0396	.0128	.1715	.0894	.1388	.0319	.1158	.0947	.0671	.1362	.0211
X_2	1	.3512**	.1531	.1622	.4031**	.0710	.1606	.3838**	.3096**	.3233**	.1023
X_3		1	.1599	.1621	.2610**	.2776**	.2049*	.0701	.0557	.1136	.0149
X_4			1	.5995**	.3909**	.2546**	.4430**	.3461**	.2617**	2738**	.3317**
X_5				1	.3711**	.1914	.4265**	.3498**	.2882**	1816	.1235
X_6					1	.3335**	.4114**	.5332**	.5571**	.4604**	4974**
X_7						1	.3617**	.4093**	.4625**	.2628**	.4065**
X_8							1	.4420**	.4382**	.2543**	.2954**
X_9								1	.5726**	.4716**	.4787**
X_{10}									1	.4932**	.4531**
X_{11}										1	.6127**
X_{12}											1

* Significant at 0.05 level of probability ** Significant at 0.01 level of probability

X_1 = Age X_5 = Crops grown X_9 = Mass media exposure behaviour

The significantly related variables in Table 17 were subjected to regression analysis. The variation due to regression was tested by the analysis of variance and the results are presented in Table 18. The F value was significant at 0.01 level of probability indicating that the selected independent variables significantly influenced the source utilization behaviour of listeners of farm broadcasts.

The R^2 value of the analysis was 0.4850. It indicates that all the independent variables taken for regression analysis contributed for about 49 per cent of variation in source utilization behaviour of farm broadcast listeners.

Partial b's, corresponding 't' values and their significance are shown in Table 19. All the seven variables namely farm size, radio ownership, social participation, discussion, mass media exposure behaviour, listening behaviour and communication behaviour were found to be significant indicating that they exerted considerable influence on the source utilization behaviour of responderts.

The beta weights listed in the highest to the lowest order are being presented in Table 20. The highest beta weights denotes the variable namely listening behaviour followed by mass media exposure

Table 18:- Analysis of Variance table showing the influence of seven selected independent variables on source utilization behaviour of listeners of Farm Broadcasts

	Sum of square	Degrees of freedom	Mean Square	F Value
Total	87465.43	149		
Regression	42487.61	7	6069.65	19.15
Error	44980.81	142	316.76	

** Significant at 0.01 level of probability

Multiple correlation coefficient (R) = 0.6069

R^2 = 0.4856

Table 19:- Partial Regression Coefficients for independent variables

(Source Utilization Behaviour - dependent variable)

Sl. No.	Variable No.	Variables (Xi)	Partial Regression Coefficient (bi)	S.E. (bi)	t Value
1.	X_1	Farm size	0.8504	0.2029	4.1904**
2.	X_2	Radio ownership	0.7103	0.1039	6.8345**
3.	X_3	Social participation	0.9777	0.1843	5.3054**
4.	X_4	Discussion	2.2060	0.5990	3.6826**
5.	X_5	Mass media exposure behaviour	5.9469	0.9151	6.4930*
6.	X_6	Listening behaviour	3.2745	1.3472	6.1419**
7.	X_7	Communication behaviour	1.0088	0.1091	9.2389**

** significant at 0.01 level of probability

Table 20:- Standardised Partial Regression Coefficients for Source Utilization Behaviour and independent variables (Ordered by beta weights)

Rank Order	Variable No	Name of the Variables	Beta Weights
1	Y_6	Listening behaviour	14.3446
2	X_5	Mass media exposure behaviour	7.2360
3	X_7	Communication behaviour	1.6611
4	Y_4	Discussion	1.5014
5	X_3	Social participation	0.1349
6	X_1	Farm size	0.2178
7	X_2	Radio ownership	0.1017

behaviour, communication behaviour, discussion, social participation, farm size and radio ownership in the descending order From Table 18 it is evident that the selected seven variables were found to explain 49 per cent of variation in source utilization behaviour of farm broadcast listeners. The beta weights indicate that among these seven variables listening behaviour was the most influencing followed by mass media exposure behaviour, communication behaviour, discussion, social participation, farm size and radio ownership in that order.

5. Relationship between independent variables and Adoption Behaviour of the listeners of Farm Broadcasts:-

The results of the correlation analysis between the independent variables and adoption behaviour are presented in Table 21. It is seen that there is significant relationship between eight personal and situational characteristics of the respondents and their adoption behaviour. The independent variables significant at 0.01 level of probability were education, radio ownership, social participation, discussion, mass media exposure behaviour, listening behaviour, communication behaviour and source utilization behaviour.

Table 21:- Correlation matrix for the dependent variable (Adoption Behaviour) and other independent variables

(N = 150)

	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}	X_{13}
X_1	.0396	.0128	.1715	.0894	.1309	.0319	.1158	.0947	.0671	.1362	.0211	.0799
X_2	1	.3512**	.1531	.1622	.4031**	.0710	.1606	.3838**	.3096**	.3233	.1023	.2993
X_3		1	.1599	.1621	.2610**	.2776**	.2049*	.0701	.0557	.1136	.0149	.0345
X_4			1	.5995**	.3909**	.2546**	4430**	.3461**	.2617**	.2738**	.3317**	1278
X_5				1	.3711**	.1914	.4265**	.3498**	.2882**	.1816	.1235	.1592
X_6					1	.3335**	4114**	.5332**	.5571**	.4604**	.4974**	4398
X_7						1	.3617**	.4093**	.4625**	2628**	.4065	.4237
X_8							1	.4420**	.4382**	2543	.2954	3536
X_9								1	.5726	4716**	.4787	.5791
X_{10}									1	.4932**	.4581	.5923
X_{11}										1	.6127	.6618
X_{12}											1	.5973
X_{13}												1

* Significant at 0.05 level of probability
** Significant at 0.01 level of probability

X_1 = Age X_5 = Crops grown Y_y = Less media exposure behaviour

It can be inferred from the Table 21 that an increase in the eight independent variables namely education, radio ownership, social participation, discussion, mass media exposure behaviour, listening behaviour, communication behaviour and source utilization behaviour also enhanced the adoption behaviour of farm broadcast listeners.

The significantly related variables in the Table 21 were subjected to regression analysis. The variation due to regression was tested by analysis of variance and the results are presented in Table 22. The F value was significant at 0.01 level of probability indicating that the selected independent variables significantly influenced the adoption behaviour of farm broadcast listeners.

The R^2 value of the analysis was 0.5929 It indicates that all the independent variables taken for regression analysis contributed for 59 per cent of variation in adoption behaviour of farm broadcast listeners.

Partial b's corresponding t values and their significance are shown in Table 23. Five variables namely social participation, mass media exposure behaviour, listening behaviour, communication behaviour and source utilization behaviour were found to be significant

Table 22:- Analysis of Variance table showing the influence of eight selected independent variables on adoption behaviour of listeners of farm broadcasts

	Sum of square	Degrees of freedom	Mean Square	F Value
Total	24047.97	149		
Regression	14546 67	8	1818.33	26.93 **
Error	9501.29	141	67 33	

** Significant at 0.01 level of probability

Multiple correlation coefficient (R) = 0.7777

R^2 = 0.5929

Table 23:- Partial Regression Coefficients for independent variables

(Adoption Behaviour - dependent variable)

Sl. No.	Variable No.	Variables (Xi)	Partial Regression Coefficient (bi)	S.E. (bi)	t Value
1.	X_1	Education	0.5595	0.5527	1.0123
2.	X_2	Radio ownership	2.4696	1.6918	1.4597
3	X_3	Social participation	2.0737	0.8681	2.4819 *
4.	X_4	Discussion	0.3738	0.2810	1.3302
5	X_5	Mass media exposure behaviour	0.4938	0.1970	2.5093
6	X_6	Listening behaviour	0.3471	0.1371	2.5280 *
7	X_7	Communication behaviour	0.7271	0.1494	4.8668 *
8.	X_8	Source utilization behaviour	0.6330	0.2506	2.5259

* Significant at 0.01 level of probability

indicating that they were the effective contributors to the adoption behaviour of respondents

The beta weights listed in the highest to the lowest order are presented in Table 24. The highest beta weight denotes the variable namely communication behaviour followed by mass media exposure behaviour source utilization behaviour, social participation, listening behaviour, radio ownership, discussion and education in the descending order. From Table 22 it is evident that the selected eight variables were found to explain 59 per cent of variation in adoption behaviour of farm broadcast listeners. The beta weights indicated that among these eight variables communication behaviour was the most influencing, followed by mass media exposure behaviour, source utilization behaviour, social participation, listening behaviour, radio ownership discussion and education in that order.

Table 24.- Standardised Partial Regression Coefficients for Adoption Behaviour and Independent variables (Ordered by beta weights)

Rank Order	Variable No.	Name of the Variables	Beta Weight
1	X_7	Communication behaviour	0.390
2	X_5	Mass media exposure behaviour	0.320
3	X_8	Source utilization behaviour	0.640
4	X_3	Social participation	1.924
5	X_6	Listening behaviour	1.905
6	X_2	Radio ownership	1.347
7	X_4	Discussion	0.840
8	X_1	Education	0.162

DISCUSSION

DISCUSSION

The discussion of the results of this study has been furnished in this chapter under the following two heads.

I. Broadcasting Variables

II Listening Habit Variables

I Broadcasting Variables -

1. Mode Preference:-

Figure 1 revealed that farmers of chandra samithies preferred interview as the most effective mode of farm broadcast through radio followed by discussions, question and answers, success stories and talks in the field of agriculture. This finding is in consistent with that reported by Crile et al (1945) and Anon (1946) who reported that interview was the most preferred mode of broadcast by the farmers. Knight (1973) and Subramanyam and Rajaram (1975 a) also reported that interview with farmers is the most preferred mode of broadcast by the farm broadcast listeners. The process of interview being informative and by personal exposition on a subject matter the farm broadcast listener could perceive the contents of the subject better through the method of interview.

2 Programme Preference:-

Figure 2 revealed that 'Karshika Mekhala Varthakal' was the most preferred programme followed by Karshika Rangam, Radio Grama Rangam and Vayalum Veedum. This finding is in line with the results reported by Tampi (1979) who observed that farm news was the most preferred programme by the farm broadcast listeners.

Discussion with the members of chercha committee also revealed that Karshika Mekhala Varthakal programme presents mostly information pertaining to their regional condition and that it offered informations regarding farm services provided by the different input agencies Karshika Rangam was ranked second which may be because of the fact that, it provides detailed information and experiences of farmers involved in different farming enterprises. Even though Vayalum Veedum programme provided detailed information on new varieties of paddy and their cultivation practices, the programme seems to be least preferred by the respondent farmers because only one third of the respondent were mainly paddy growers.

3. Duration of Farm Broadcasts:-

The results in Table 5 depict that majority of (70 per cent) the radio listeners suggested an increase in the duration of Karshika Mekhala Varthakal programme

from five minutes to ten minutes Table 2 evinces that the farming community gives more attention to this programme which may be the reason for their suggestion for increasing the duration of this broadcast. Most of the chercha samithy members (77 per cent) were of the opinion that present duration of 30 minutes for Karshika Rangam, Radio Grama Rangam and Vayalum Veedum programmes is quite sufficient.

4 Frequency of Farm Broadcasts:-

The results presented in Table 4 revealed that majority (90 per cent) of the farm broadcast listeners opined that the present frequency of broadcast per week is sufficient in respect of Karshika Nekhala Varthakal, Radio Grama Rangam and Vayalum Veedum. This implies that the programme coverage of farm broadcasts suits the need of the farm broadcast listeners.

II. Listening Habit Variables:-

1. Relationship between independent variables and Mass Media Exposure Behaviour of the listeners of Farm Broadcasts:-

From Table 5 it could be evidenced that education, farm size, crops grown, radio ownership, social participation and discussion were found to be positively and significantly associated with the mass media exposure

behaviour of farmer listeners of the charcha samithies the hypotheses I : 2, I . 4, I : 5, I : 6, I : 7 and I . 8 are accepted as there was positive and significant relationship. The hypotheses I . 1 and I · 3 are rejected since the variables, namely age and occupation are having no significant relationship with the mass media exposure behaviour of the farmer listeners of charcha samithies.

The results in Table 5 evidenced that there was no significant relationship between mass media exposure behaviour and age and occupation of the charcha samithy listeners. The finding implies that farmers of all ages irrespective of their occupation get exposed to mass media which might be due to the timing of farm programmes - except Karshika Mekhala Varthakal - being fixed in the evening, a leisure time for almost all categories of radio listeners.

As an outcome of the results in Table 6 and 7 the regression analysis was undertaken. The data in Table 8 evidenced that discussion, social participation, farm size, crops grown, radio ownership and education as the most influencing variables in their order of importance as expressed by the farmers. This finding shows that irrespective of the ownership of radio or higher acreage of farm size the farmer - members of charcha samithies gave due importance to the proce-

of discussion which is the primary objective of the charcha samitnies. This also indicates that the objectives of the samithies are being fully met with the farmers' exposure to the mass media other than radio also.

2. Relationship between independent variables and Listening Behaviour of the Listeners of Farm Broadcasts:

The results of the correlation analysis (Table 9) showed that education, farm size, crops grown, radio ownership, social participation, discussion and mass media exposure behaviour are found to be positively and significantly associated with the listening behaviour of farm broadcast listeners. The hypotheses II : 2, II : 4, II : 5, II : 6, II : 7, II : 8 and II : 9 are accepted as there was positive and significant relationship. The hypotheses II : 1 and II : 3 are rejected since the variables age and occupation did not have any significant relationship with the listening behaviour of the farmers

Thus age and occupation did not affect the listening behaviour of the members of charcha samithies. This is in conformity with the findings of [illegible] (1970). The listening behaviour of farm broadcast listeners is significantly and positively related to education and radio ownership. These findings [illegible] also in

agreement with the findings of Alamgeer (1970) and Badrinarayanan (1977).

According to the findings presented in Table 10 and Table 11 regression analysis was undertaken. The beta weights listed in the Table 12 indicated that among the seven independent variables mass media exposure behaviour was the most influencing factor in the farmers' listening behaviour followed by social participation, discussion, radio ownership, farm size, education and crops grown in the descending order.

The finding that listening behaviour was influenced a greater extent by the mass media exposure behaviour of farmers is not beyond easy comprehension since these two are only different phases of one single process.

3. Relationship between independent variables and Communication Behaviour of the listeners of Farm Broadcasts:-

The data in Table 13 show the coefficients of correlation between independent variables and the communication behaviour of members of charcha samithies, Their level of education, farm size, radio ownership, social participation, discussion, mass media exposure behaviour as well as their listening behaviour as significantly and positively associated with communication

behaviour. Hence the hypotheses III 2, III : 4, III : 6, III : 7, III 8, III . 9 and III 10 are accepted. Since the three variables age, occupatio. and crops grown were found to have no positive and significant relationship with communication behaviour, the hypotheses III · 1, III : 3 and III : 5 are rejected.

According to the findings presented in Table 14 and 15 regression analysis was undertaken. The results presented in Table 16 indicate that listening behaviou is the most contributing variable for the communication behaviour followed by discussion, mass media exposure behaviour, education, farm size, social participation and radio ownership in that order. Their activity of listening is thus very high which might be due to the regular preparatory and follow u activities of Farmers Training Centre which is responsible to maintain the tempo of listening the farm broadcasts in the high order amongst the members of the chercha samithies

4. Relationship between Independent variables and Source Utilization Behaviour of the listeners of Farm Broadcasts -

It was evident from Table 17 that farm size, radio ownership, social participation, discussion, mass media exposure behaviour, listening behaviour and

communication behaviour were found to be positively and significantly related with the source utilization behaviour of listeners of charcha samithy members. Therefore the hypotheses IV : 4, IV : 6, IV : 7. IV : 8, IV : 9, IV : 10 and IV : 11 are accepted. The variables namely age, education, occupation and crops grown were having only non-significant relationship with the source utilization behaviour. Therefore the hypotheses IV : 1, IV : 2, IV : 3 and IV : 5 are rejected.

According to the findings presented in Table 18 and 19 regression analysis had been undertaken. The Table 20 indicates that listening behaviour is the most contributing variable for source utilization behaviour followed by mass media exposure behaviour, communication behaviour, discussion, social participation, farm size and radio ownership.

The results emit the important relation that radio was superior as an important source of farm information to the farmer - members of the charcha samithies. The reason may be due to the constant and continuous exposure to the farm programmes broadcast through radio.

5 Relationship between independent variables and Adoption Behaviour of the listeners of Farm Broadcasts:-

The results of the correlation analysis (Table 21) show that education, radio ownership, social participation, discussion, mass media exposure behaviour, listening behaviour, communication behaviour and source utilization behaviour were significantly and positively associated with the adoption behaviour of listeners of farm broadcasts Therefore the hypotheses V : 2, V · 6, V : 7, V . 8, V · 9, V : 10. V : 11 and V 12 are accepted since the variables are having positive and significant relationship with adoption behaviour. Age, occupation, farm size and crops grown are having no significant relationship with adoption behaviour. Therefore the hypotheses V : 1 V : 3, V : 4 and V : 5 are rejected

According to the findings presented in Table 22 and 23 regression analysis was carried out. The beta weights (Table 24) indicate that communication behaviour is the most influential variable in determining the adoption behaviour of the farmers followed by mass media exposure behaviour source utilization behaviour, social participation, listening behaviour, radio ownership, discussion and education.

This finding highlights the positive nature of conviction created amongst the farmer members of the charcha samithies through the process of communication achieved by different sources studied.

It is quite possible to reason out this particular phenomenon in the light of fundamental generalization made by social psychologists that human behaviour - in this case the adoption behaviour with reference to innovations - is a very important functional outcome of human communication behaviour. It also implies that the efficiency in one's communication behaviour may reflect on his adoption behaviour also.

SUMMARY

SUMMARY

With the advancement in farm technology farmers seek more information from different media of which mass media rank first. The mass media channels are radio, television, film, newspaper, magazine and the like which reach large number of audience spread over a large area within a short time. Among the mass media channels radio is the most popular and easily available The information needs to be presented to them in modes in which they prefer to listen. The farmers' preference towards programme also differs since each programme has its own special character. So, the programme preference and mode preference have to be studied in order to improve the efficiency of farm broadcast.

Many of the past studies have revealed that the radio listeners are varying in their personal and situational characteristics. It is therefore, imperative to study the characteristics that are associated with mass media exposure behaviour, listening behaviour, communication behaviour, source utilization behaviour and adoption behaviour of farm broadcast listeners, in order to find out how far this powerful medium is actually used by the farming community and and also how far the personal and situational characteristics influence the above mentioned variables.

Objectives:-

1. To find out the preference of the listeners on different modes of farm broadcasts.
2. To find out the preference of the listeners on the programmes put out through farm broadcasts.
3. To assess their preference on the duration and frequency of farm broadcasts
4. To find out the relationship between mass media exposure behaviour, listening behaviour, communication behaviour, source utilization behaviour and adoption behaviour with the selected personal and situational variables.
5. To study the relative influence of the personal and situational variables on mass media exposure behaviour, listening behaviour, communication behaviour, source utilization behaviour and adoption behaviour of the listeners of farm broadcasts

Past studies on mass media exposure behaviour, listening behaviour, communication behaviour, source utilization behaviour and adoption behaviour have brought to light innumerable variables that affect these behaviours. The following important variables were selected for the study.

Dependent Variables:-

Mass media exposure behaviour

Listening behaviour

Communication behaviour

Source utilization behaviour

Adoption behaviour

Independent Variables:-

Age

Education

Occupation

Farm size

Crops grown

Radio ownership

Social participation

Discussion

Based on the theoretical concepts the hypotheses were framed to test their significance.

This study was conducted in Trivandrum District of Kerala Three blocks namely, Varkala Nedumangad and Vellanad were selected based on the probability proportional sampling technique Five charcha sanghams from each block were selected randomly. From each samithy ten respondents were randomly selected. Totally one hundred and fifty farm broadcast listeners belonging

to the charcha samithies were included in this study.

Besides using the valid scales developed by earlier workers some instruments were also developed for this study. The available measurement techniques and scoring systems were used for independent variables such as education (Trivedi, 1963), social participation (Trivedi, 1963) and occupation (Badrinarayanan, 1977). Age was measured in terms of number of years the respondents had completed and the number of acres cultivated was taken as the measure of farm size. Radio ownership was measured in terms of possession of radio receiving set. Discussion was measured in terms of their pre and post discussion.

The instruments for measuring mass media exposure behaviour was developed on the lines of Rogers and Svenning (1969). The scales to measure communication behaviour (Murthy and Singh, 1974) and listening behaviour (Badrinarayanan, 1977) were used with slight modifications. The source utilization behaviour was measured by the scale developed by Nair (1969). The Adoption behaviour was measured by the Adoption Quotient as developed by Jaiswal and Dave (1972) with slight modifications.

A well constructed interview schedule was used in data collection after its pre-test. The statistical

tools used were percentage analysis, Thurstone's paired comparison technique, simple correlation, multiple correlation and regression analyses. The significance of tests were done at 0.05 level and 0.01 level of probability.

The salient findings of this study are presented below:-

Mode Preference:

1. The respondents preferred interviews as the best mode of farm broadcasts followed by discussions, question and answers, success stories and talks in descending order.

Programme Preference:

2. Karshika Mekhala Varthakal was the most preferred farm programme followed by Karshika Rangam, Radio Grama Rangam and Vayalum Veedum.

Duration of Farm Broadcasts:

3 a. Majority (70 per cent) of farmer listeners suggested an increase in the duration of Karshika Mekhala Varthakal.

3 b. Three fourth of the listeners of farm broadcast evidenced that the duration of

broadcast for Karshika Rangam, Radio Grama Rangam and Vayalum Veedum as sufficient.

Frequency of Farm Broadcasts:

4. Majority (90 per cent) of the farm broadcast listeners opined sufficiency in the present frequency of Karshika Mekhala Varthakal, Radio Grama Rangam and Vayalum Veedum per week.

Mass Media Exposure Behaviour.

5 a. Education, farm size, crops grown, radio ownership, social participation and discussion amongst the farmers were found to be positively and significantly associated with their mass media exposure behaviour.

5 b. In multiple regression analysis it was found that the selected six variables jointly and significantly contributed to 43 per cent of variation in mass media exposure behaviour of listeners of farm broadcasts.

5 c. Among the six independent variables discussion was the most contributing variable for mass media exposure behaviour amongst the farmer listeners followed by their social

participation, crops grown, radio ownership and education.

Listening Behaviour:

6 a. The factors found to be positively and significantly associated with the listening behaviour of the farmers were their education, farm size, crops grown, radio ownership, social participation, discussion and mass media exposure behaviour.

6 b. The multiple regression analysis revealed that the seven variables jointly and significantly contributed to 48 per cent of variation in the listening behaviour of farm broadcast listeners.

6 c. In the listening behaviour of farmers mass media exposure behaviour was the most contributing variable followed by social participation, discussion, radio ownership, farm size, education and crops grown.

Communication Behaviour:

7 a. Education, farm size, radio ownership, social participation, discussion, mass media exposure behaviour and listening behaviour of the

farmer listeners were found to be positively and significantly associated with their communication behaviour.

7 b. In multiple regression analysis it was found that the selected seven variables jointly and significantly contributed to 37 per cent of variation in communication behaviour of the farm broadcast listeners.

7 c. Listening behaviour was the most contributing variable followed by discussion, mass media exposure behaviour, education, farm size, social participation and radio ownership amongst the listeners.

Source Utilization Behaviour:

8 a. The independent variables, namely, farm size, radio ownership, social participation, discussion, mass media exposure behaviour, listening behaviour and communication behaviour were found to be positively and significantly associated with source utilization behaviour of the farmers.

8 b The multiple regression analysis revealed that the seven variables jointly and significantly contributed to 49 per cent of variation in source utilization behaviour

8 c. Listening behaviour of the farmer was the most contributing variable for their source utilization behaviour followed by their mass media exposure behaviour, communication behaviour, discussion, social participation, farm size as well as radio ownership.

Adoption Behaviour:

9 a. Education, radio ownership, social participation, discussion, mass media exposure behaviour, listening behaviour, communication behaviour and source utilization behaviour of the listeners of farm broadcasts were found to be positively and significantly associated with their adoption behaviour.

9 b. The multiple regression analysis revealed that the seven variables jointly and significantly contributed to 59 per cent of variation in their adoption behaviour.

9 c. Among the eight variables communication behaviour was the most contributing variable among the listener farmers followed by their mass media exposure behaviour, source utilization behaviour, social participation, listening behaviour, radio ownership, discussion and education.

REFERENCES

R E F E R E N C E S

Agarwal, D.C (1971). Institutional Credit for Agriculture in Malwa. Indian J. Agril. Econ., 26 (4): 565.

Alamgeer, M S (1979). Impact of Farm Broadcasts on the Farmers of Coimbatore Taluk M.Sc. (Agri) thesis (unpubl.) Agricultural College and Research Institute, Coimbatore.

Badrinarayanan, P. (1977). A study on Farm Broadcast listening behaviour of Small Farmers. M.Sc. (Agri) thesis (unpubl.) Agricultural College and Research Institute, Coimbatore.

*Barkar, Larry L. (1971). Listening Behaviour. Englewood Cliffs, N.J Prentice Hall.

*Beal, G.M., and Sibley, D.N. (1967). Adoption of agricultural technology by the Indians of Gautemala. Rural Sociology Report No.62 Amer Iowa; Department of Sociology and Anthropology, Iowa State University.

Behera, C., and Sahoo, M.S. (1975). Impact of National Demonstration as Adoption of Agricultural Practices. Indian J. Extn. Edun., 11 (1 & 2) 32 - 35.

Berlo, David K. (1960). The Process of Communication. Holt, Rinehart and Winston, New York.

Bhatia, H.R. (1969). General Psychology Oxford & IBH Publishing Co., New Delhi.

*Bose, S.P., and Dasgupta, S. (1962). The Adoption Process. Socio-Agro-Economic Research Organisation Extension Bulletin 1, Department of Agriculture, Govt. of West Bengal.

Chamber's Twentieth Century Dictionary. (1976). Macdonald, A.M. (Ed.) Allied Publishers Ltd., Bombay.

Charpawat, J.S., and Intodia, S.L. (1970). Sources of Information at the Various Stages of Adoption of the Weedicides. Ind. J Extn Edun., 6 (1 & 2): 116 - 118

Chattopadhyaya, S.N. (1963). A Study Some Psychological Correlations of Adoption of Innovations in farming. Ph.D. thesis (unpubl.) I.A.R.I., New Delhi.

Choudhary, K.P. (1965). Farmers' Response to Farm Planning Programme in an I.A.D.P. Block. Ind. J Extn. Edun., 1 (2): 143.

Choudhary, K.P., and Maharaja (1966). Acceptance of Improved Practices and their Diffusion among wheat growers in Pali District of Rajasthan. Indian J. Agril. Econ., 11 (1). 161.

*Combs and Snygg (1958) Individual Behaviour. Harper and Row Publishers, New York.

*Copp, J.H. (1958). Towards Generalization in Farm Practices Research. Rural Sociology, 23: 103 - 111.

*Copp, J.H., Sill, M.L., and Brown, B.T. (1958). The function of information sources in the Farm Practices Adoption Process Rural Sociology, 23 (June 1958)

*Crile, L., Morril, S.D., and Nasett, G. (1945). The Effectiveness of the World Country North Dakota, Extension Radio Programme, U.S. Fed. Extn. Serv. Entn. Serv. C.429. P. 21 Washington D.C.

Dandekar, W.N. (1976). The Psychological foundation of Education. The Mac Millan Company of India Ltd., New Delhi.

Das, K.K., and Sarkar, R.D. (1970). Economic Motivation and Adoption of Farm Practices. Ind. J. Extn. Edun., 6 (1 & 2): 103 - 107.

*Dasgupta, S. (1965). Communication and innovation in Indian Villages. Social Forces, 43: 330 - 337.

Deway, R., and Humber, W.J. (1956). An Introduction to Social Psychology. The Mac Millan Company, New York.

Dhaliwal, A.J.S., and Sohal, T.S. (1965). Preference of the Radio Programme by Rural Listeners. Ind. J. Extn. Edun., 1 (3): 164 - 169.

Directorate of Advertising and Visual Publicity (D.A.V.P.) 1976. "A Decade of Achievements 1965 - 75", D.A.V.P., Min. of Infor. and Broadcasting, New Delhi.

Drever, James. (1952). A Dictionary of Psychology. Penguin Books Inc., Baltimore.

Duncan, J.A., and Kreetlow, B.W. (1954). Selected Cultural Characteristics and Acceptance of Education Programme and Practices. Rural Sociology, 19: 349 - 357.

*Emery, F.E., and Oeser, O.A. (1958). Information, Decision and Action, Carolton, Melbourne University Press.

Encyclopedia Britannica (1974). Ashmore, Mary S. (Ed.) Encyclopedia Britannica Ltd., London.

Fliegel, F.C. (1956). A Multiple Correlation Analysis of Factors Associated with Adoption of Farm Practices. Rural Sociology, 21: 284 - 295.

Grewal, I.S., and Sohal, T.S. (1971). Comparative role of two Social Systems in the speed of Adoption of some Farm Practices. Ind. J. Extn. Edun., 7 (1 & 2): 1 - 6.

Gupta, D.D. (1965). Adoption of Agricultural Practices by Indian Farmers. M.Sc. (Agri) thesis (unpubl.) in Singh, K.N., Rao, C.S.S. and Sahay, B.N., (Eds.) Research in Extension Education: 351.

*Hanson, H.P. (1946). Radio Listening Analysis. Minnesota University Agril. Extn Service Circular No.503, USDA: 33.

*Hess, C.V., and Miller, L.F. (1954). Some Personal, Economic and Sociological Factors Influencing Dairy Men's Actions and Success. State College, Pensylvania Agril. Exp. Station. Bulletin 577.

*Hobbs, D.J. (1960). Factors related to the use of Agricultural Chemicals on Iowa Farms. M.Sc. thesis (unpubl.) Iowa State University, U.S.A.

*Hoffer, C.R. (1942). Acceptance of Improved Farming Practices Among Farmers of Dutch Discent. East

Lansing: Michigan Agricultural Experiment Station Special Bulletin. 316.

Hovland, Carl I., Janis, Irving L., and Kelly, Harold H. (1953). Communication and Persuasion Yale University Press, New Haven

Hybels and Ulloth (1978). Introduction to Broadcasting. D. Van Nostrand Company, New York.

Jaiswal, N.K., and Dave, A.P. (1972). Measurement of Progressiveness in Farming in Studies in Extension Education Sinha, A.R.P. (Ed.) N.I.C.D., Hyderabad

*Jaiswal, N.K., and Singh, N.P. (1968) Farmers Response to Innovation in Farming. A Study in Two East Bihar Villages, Journal of Agricultural Research, Bhagalpur University. 1 (1): 36 - 46.

Jalihal, K.A., and Srinivasamurthy, J. (1974). Some aspects of Farm Radio Programmes in Karnataka University of Agricultural Sciences, Hebbal, Bangalore.

Kalamegam, E.V., and Menon, K.R. (1977). Socio-Personal factors and Communication Behaviour of Small Farmers in a Progressive and Less Progressive Village. The Madras Agri. Journal, Coimbatore. 64 (11): 756 - 757.

Karim, A.S.M., and Mahboob, S.G (1974). Relationships of selected characteristic of transplanted rice growers with their adoption of fertilizers in a rural area in Bangladesh Ind. J. Extn. Edn., 10 (1 & 2) 16 - 22.

Knight, A.J. (1965). Radio for Scientific Farming in India. The Madras Agri. Journal, Coimbatore. 52 (3): 119 - 129.

Knight, A.J. (1973). A Study of Relative Effectiveness of three modes of Presentation, Preferences, Listening and Post-Listening Behaviour of Farm Broadcast Listeners. Ph.D. thesis (unpubl.) I.A.R.I., New Delhi.

Knight, A.J., and Singh, K.N. (1975). Listening and Post-Listening Behaviour of Farm Broadcast Listeners. The Madras Agri. Journal, Coimbatore. 62 (10 - 12): 673 - 677.

Lakshmanna, C., and Satyanarayana, M. (1967). Sources of Information in the Adoption of Improved Agricultural Practices. Ind. J. Extn. Edun., 3 (3): 122 - 126.

*Lazarsfeld, P.F., and Kendall, P.L. (1948). Radio Listening in America, Prentice Hall, New York

Leagans, J. Paul. (1961). The Communication Process in Extension Education in Community Development, Directorate of Extension, New Delhi.

*Lerner, Daniel. (1966). Communication System and Social Systems. A Statistical exploration in History and Policy, in Alfred G. Smith (Ed.) Communication and Culture. Holt, Rinehart & Winston, New York.

Lionberger, H.F. (1960). Adoption of new ideas and practices. Iowa State University Press, Iowa, America.

*Mares, C., (1966). Communication - Teach Yourself Books The English Universities Press Ltd., London

Marsh, C.P., and Coleman, A.L. (1955) The Relation of Farmer Characteristics to the Adoption of Recommended Farm Practices. Rural Sociology 20: 289 - 296

Mathur P.N., Singh, K.P., and Lokhande, M R. (1974) Source Utilization and rate of spread of information on high yielding varieties for wheat in a farming community. Ind. J. Extn. Edn., 10 (1 & 2). 23 - 29.

Menon, A.C.G., and Prema, L (1978). The credibility of various sources of information on human nutrition. Agri. Res. J. Kerala, 16 (2): 217 - 223.

Murthy, A.S. and Singh, A.N., (1974). Communication Behaviour of Farmers. New Heights Publishers and Distributors, New Delhi.

*Nafziger, R.O , and White, David Manning (1966). Introduction to Mass Communication Research. Louisiana State University Press, Baton Rouge.

Naidu, S. Koteswararao. (1978). To investigate the extent of Adoption of the package of practices recommended by Central Tobacco Research Institute Rajahmundry by the Tobacco growers in East Godavari District of Andhra Pradesh M.Sc. (Agri) thesis (unpubl.) College of Agriculture. Vellayani, Trivandrum.

Nair, G.T (1969). A multivariable Study on Adoption of High Yielding Paddy Varieties by the Farmers of Kerala State. Ph.D. thesis (unpubl.) I.A.R.I. New Delhi.

Nanjaiyan, K., Srinivasan, V., and Oliver, J (1977). Different Sources and Channels Utilized by the Farmers in the Adoption of Package of Practices for Sugarcane. The Madras Agri. Journal 64 (1): 64 - 66.

*New Comb, Theodore M. Ralph, H. Turner. and Philip E. Converse (1965). Social Psychology Holt Rinehart and Winston Inc., New York.

Padheria, M.M., and Patel, I.C. (1975). Adoption pattern of Recommended Farm Practices in Gujarat. Ind. J. Extn. Edn., 11 (1 & 2): 70 - 73.

*Pandey, L.R. (1967). A study in comparative effectiveness of Extension Teaching Methods in C.D. Blocks' Roberts Gang of Mirzapur Dist., M.Sc. thesis (unpubl.) Allahabad.

Pandit, S. (1964). Study of the Role of Age, Education and Size of Farm in Relation to Adoption of Improved Agricultural Practices. Reg. Foundation Bull., B.A.C., Sabour. 6: 69 - 70.

*Parsons. T., and Shils, E.A. (1965). Towards a General Theory of Action. Harvard University Press, Massachusetts, Cambridge.

Parthasarathy, G. (1971). "A study of Radio Rural Forums as effective Instruments of Information Transfer

system in Coimbatore District". M.Sc. (Agri.) thesis (unpubl.) Agricultural College and Research Institute. Coimbatore.

Patel, P.M., and Singh, K.N. (1970). Differential Characteristics of Adopters and Non-adopters of Farm Planning. Ind. J. Extn. Edn., 6 (1 & 2): 96 - 102.

Perumal G., and Duraiswamy, K.N. (1972). Influence of Personal and Situational Characters on the Adoption of Hybrid Maize Cultivation by farmers of Coimbatore District. The Madras Agri. Journal 59 (4): 209 - 213.

Pillai, G.B., (1978). A Study on Adoption of Soil Conservation Measures by farmers in Scheme areas of Trivandrum Dist., M.Sc (Agri) thesis (unpubl.) College of Agriculture, Vellayani, Trivandrum.

Prasad. R., Muraleedhara (1978). A Study on Farmers' Functional Literacy Programme. M.Sc. (Agri) thesis (unpubl.) College of Agriculture, Vellayani, Trivandrum.

Prasad. R., and Sinha, A.R.P. (1971). Farmers' characteristics Influencing the use of Various categories of Information Sources in the Adoption Process of Soil Stirring Plough. Ind. J. Extn. Edn., 7 (3 & 4): 99 - 105.

*Rahim, S.A. (1960). Diffusion and Adoption of Agricultural Practices in two villages of East Pakistan. Rural Sociology. 25.

Rai B.N. (1963). Diffusion of Information and Farmer's Response in Relation to an Improved Farm Practice (Hybrid Maize). Ind. J. Extn. Edn., 1 (2): 140.

Rajendra (1968). Distance Concept in Adoption Patterns. Ind. J. Extn. Edn., 4 (1 & 2): 83 - 88.

Rajendran (1978). A Study of factors affecting the adoption of selected Agricultural Practices. M.Sc. (Agri) thesis (unpubl.) College of Agriculture, Vellayani, Trivandrum

Ramakrishnan, C.V.K. (1974). Role of Farmers Discussion Group as Instruments of Information transfer system. M.Sc. (Agri) thesis (unpubl.) Agricultural College and Research Institute, Coimbatore.

*Ramsey, C.E., Polson, R.A., and Spencer, G.H. (1959). Values and Adoption of Practices. Rural Sociology, 24.

Rao, B.N. (1968). A Study on preferential adoption of package of practices for high yielding varieties of rice in Andhra Pradesh M.Sc. (Agri) thesis (unpubl.) I.A.R.I., New Delhi.

Reddy, D.S.K. (1962). A Study on Adoption of improved agricultural practices as a function of some socio-economic factors and sources of information. M.Sc. (Agri) thesis (unpubl.) I.A.R.I., New Delhi

Rogers, E.M. (1958). A Conceptual Variable Analysis of Technological Change. Rural Sociology, 23. 136 - 145

*Rogers E.M. (1960). Social Change in Rural Society. Appleton - Century - Crofts, Inc., New York.

Rogers, E.M. (1962). Diffusion of Innovations. The Free Press, New York.

*Rogers, E. M., and Capener, H.R. (1960). The county extension agent and his constituent. Agricultural Experiment Station, Research Bulletin, 858.

Rogers, E.M., and Shoemaker, F. . (1971). Communication of Innovations: A Cross-cultural Approach The Free Press, New York.

Rogers, E.M., and Svenning, L. (1969). Modernization Among Peasants: The Impact of Communication Holt, Rinehart and inston, Inc., New York.

Roy, P., Fliegel F.C., Kivlin, J.E., and Sen, L.K. (1968). Agricultural Innovation Among Indian Farmers. N.I.C.D., Hyderabad.

*Ryan, B., and Gross, N. (1950). Acceptance and Diffusion of Hybrid Seed Corn in Two Iowa Communities, Ames. Iowa Agricultural Experiment, Station Research Bulletin, 37.

Sabarathnam, V.E., and Rajaram, J. (1975 a). Preferences of Farmers in Agricultural Broadcasting Techniques The Madras Agri. Journal, 62 (10 - 12) 844 - 846.

Sabarathnam V.E., and Rajaram, J. (1975 b). Characteristics of Radio Listening Farmers - Madurai District. The Madras Agri. Journal. 62 (10 - 12): 695 - 697.

Sandhu, A.S. (1970). Characteristics, Listening behaviour and Programme Preferences of the Radio owning Farmers in Punjab". Ph.D. thesis (unpubl.) I.A.R.I., New Delhi.

Sandhu, A.S., and Singh, K.N. (1972). Listening habits of radio owning farmers in respect of farm programmes. Ind. J. Extn. Edn., 8 (1): 50 - 56.

*Schramm, W.J. (1949). What Farm People want from Radio. Lafayette, Indiana Purdue, University of Agricultural Extension Service Circular. 307.

Schramm, Wilbur (1960). Mass Communication. University of Illinois Press, Urbana.

Schramm, Wilbur (1973). Men, Messages and Media: A Look at Human Communication. Harper & Row, New York.

Schramm, Wilbur and Robert, Donald F. (1971). The Process and effect of Mass Communication University of Illinois Press, Urbana.

Shakya, S.K. (1973). A Study of the Farm Radio Listening characteristics of Radio owning young and adult farmers in Nepal. M.Sc. (Agri) thesis (unpubl.) I.A.R.I., New Delhi.

Shankariah, Ch. (1965). A study of differential characteristics of vegetable and non-vegetable growers and factors associated with adoption of improved practices of vegetable cultivation. M.Sc. (Agri) thesis (unpubl.) I.A.R.I., New Delhi.

Shankariah, Ch., and Singh, K.N. (1967). Predictive Analysis of factors associated with knowledge of improved practices of vegetable cultivation. Ind. J. Extn. Edn., 3 (1 & 2): 67 - 73.

*Singh, Ajmer (1973) Utility of Farm Broadcast from A.I.R. Jullundur to the farmers having radio set in C.D. Block, Ropar (Punjab). M.Sc. (Agri) thesis (unpubl.) Punjab Agricultural University, Ludhiana.

Singh, A.N. (1972). A study of characteristics, expectations and listening behaviour of the listeners and non-listeners of farm radio programmes and its impact on acquisition of knowledge. Ph.D. thesis (unpubl.) I.A.R.I., New Delhi.

Singh, B.N., and Jha, P.N. (1965). Utilization of Sources of Farm Information in Relation to Adoption of Improved Agricultural Practices. Ind. J. Extn. Edn., 1 (1): 34 - 42.

*Singh, K.N., and Sandhu, A.S. (1971). Listening habit of radio owning farmers in respect of farm programmes. Comp. of extension research on farm radio programmes, Punjab Agricultural University, Ludhiana.

Singh, S.N. (1969). A study on Adoption of High Yielding Varieties and Investment pattern of Additional Income by Farmers of Delhi Territory. Ph.D. thesis (unpubl.) I.A.R.I., New Delhi.

Singh, S.P., and Singh, P.N. (1970). A Multi-variate Analysis of Adoption Behaviour of Farmers. Ind. J. Extn Edn., 6 (3 & 4): 39 - 44.

*Skinner, B.F. (1952). Science of Human Behaviour. The Mac Millan Company, New York.

Subramaniyam, V.S., and Lekshmanna, C. (1973). Impact of Socio Economic Factors on the Adoption of Improved Farm Practices. The Madras Agri. Journal, Coimbatore. 60 (3): 187 - 191.

Supe, S.V. (1969). Factors related to different degree of Rationality in Decision Making among Farmers in Buldana District. Ph.D. thesis (unpubl.) I.A.R.I., New Delhi.

Supe, S.V. (1971). Farmers Information Source Credibility and its Relation to their Rational and Adoption Behaviour. Ind. J. Extn. Edn., 7 (1 & 2): 29 - 33.

Supe, S.V., and Salode, M.S. (1975). Impact of National Demonstration on Knowledge and Adoption Level of Farmer Participants. Ind. J. Extn. Edn., 9 (1 & 2): 36 - 39.

Swaminathan, M.S. (1977). Indian Express, 1st December 1977.

Tampi, A.M. (1979). The Impact of Farm Broadcast among farmers in Kerala. Agri. Res. J. Kerala, 17 (1): 71 - 75.

*Thakur, R.S. (1966). An Analysis of Package Programme with emphasis on Farm Production Plan. Review of Extension Research, 6: 21 - 23.

Trivedi, G. (1963). Measurement Analysis of Socio-economic Status of Rural Families. Ph.D. thesis (unpubl.) I.A.R.I., New Delhi.

Tubbs, L. Stewart, and Moss, Sylvia (1977). A model of Human Communication, Random House, New York.

Webster's New International Dictionary (1959). G & C Merriam Co., Publishers, Springfield, Mass, U.S.A.

Wilkening, E.A. (1951). Acceptance of Improved Farm Practices in Three Coastal Plain Countries. Agricultural Experiment Station Technical Bulletin 225. Chapel Hill, North Carolina, U.S.A.

Wilkening, E.A. (1952). Informal leaders and innovators in farm practice Rural Sociology, 17: 272 - 275.

Wilkening, E.A. (1962). Communication and acceptance of recommended farm practices among dairy farmers of Northern Victoria. Rural Sociology, 27: 116 - 117.

Wright, Charles R. (1975). Mass Communication: A Sociological perspective, Random House, New York.

Wolman, Benjamin, B. (1973). (Eds.) Dictionary of Behavioural Sciences. The Mac Millan Press Ltd., London.

* Original not seen

APPENDICES

APPENDIX I

Interview Schedule

To study the effectiveness of Farm Broadcasting in disseminating Agricultural Informations to the Farmers of Trivandrum District

PART I

1. Name and address of the farmer - member — Respondent No

2. Block

3. Age

4. Education — Illiterate/can read only/can read and write/primary school level/Middle school level/ High school level/Collegiate level

5. Occupation of the respondent — Agricultural Labour/Business/ Agriculture

   a. Main
   b. Subsidiary

6. Farm size (owned) — Dry Land/Wet land (Area)

7. Crops grown & Area

   Crops — Area & Varieties grown

   a. Paddy
   b. Coconut

c. Tapioca

d. Banana

8. Radio ownership

Do you own	i)	Radio	Yes/No
	ii)	Transistor	Yes/No

9. Social participation:

Institution	Member	Office holder	Other position
Panchayat			
Co-operative			
B.D.C./Ela Committee			
Farmers Club			
Farmers Discussion group			

10. Discussion:

a. i) Do you discuss with any one before listening to the farm broadcast?

Yes/No

ii) If yes, with when and how often?

Regularly/Sometimes/Rarely

i) Family members

ii) Friends

iii) Relatives

iv) Extension agents

v) Farmers Discussion group members

b. i) Do you discuss with any one after listening to the farm broadcast?

Yes/No

ii) If yes, with whom and how often?

Regularly/Sometimes/Rarely

i) Family members
ii) Friends
iii) Relatives
iv) Extension agents
v) Farmers Discussion group members

11. Mode of Broadcast

What mode of presentation of the programme you like to listen. (Select each mode in each pair comparison with the other by placing (√) mark).

Talk/Discussion
Talk/Interview
Talk/Question and Answer
Talk/Success stories
Discussion/Interview
Discussion/Question and Answer
Discussion/Success stories
Interview/Question and answer
Interview/Success stories
Question and Answer/Success stories

12. Nature of Broadcast:

What kind of programme you generally like to listen (select each programme in comparison with the other by placing (√) marks against your choice in each pair).

Karshika Rangam/Karshika Mekhala Varthakal
Karshika Rangam/Radio Grama Rangam
Karshika Rangam/Vayalum Veedum
Karshika Mekhala Varthakal/Radio Grama Rangam
Karshika Mekhala Varthakal/Vayalum Veedum
Radio Grama Rangam/Vayalum Veedum

13. Frequency of Broadcast

a. Do you find the present frequency of all the farm programms are sufficient — Yes/No

b. If no, specify the frequency

Sl. No.	Programme	Present frequency per week	Yes/No	Should be more (No of times)	Should be less (No. of times)
1.	Karshika Mekhala Varthakal	7			
2	Karshika Rangam	1			
3	Radio Grama Rangam	2			
4.	Vayalum Veedum	4			

14. Duration of Broadcast:

a. Do you find the present allotted time for all the farm programmes are sufficient — Yes/No

b. If no, specify the duration

Sl. No.	Programme	Present Duration	Sufficient	May be enhanced (by minutes)	May be reduced (by minutes)
1.	Karshika Mekhala Varthakal	5 minutes			
2.	Karshika Rangam	30 minutes			
3.	Radio Grama Rangam	30 minutes			
4.	Vayalum Veedum	30 minutes			

PART II

Mass Media Exposure Behaviour:

Media	Daily	Occasio-nally	Rarely	Never
1. How often do you hear the following programme(s) through Radio				
a. Regional Language News				
b. English News				
c. Hindi News				
d. Feature				
e. Play				
f. Music				
g. Women's programme				
h. Children's programme				
i. Youth programme				
j. Reports				
k. Rural Programme				
2. How often do you read the following leadin g Newspapers	Daily	"	"	"
a. Kerala Kaumudi				
b. Malayala Manorama				
c. Mathrubhoomi				
d. Janayugam				
e. Deepika				

f. Deshabimani	Daily	Occasio-nally	Rarely	Never
g. Thaniniram				
h. Indian Express				
i. Hindu				
	Weekly	"	"	"
a. Malayala Manorama				
b. Mathrubhoomi				
c Kerala Sabdam				
d. Kala Kaumudi				
e. Desnabhimani				
f. Janayugam				
g. Manorajyam				
h. Malayala Nadu				
	Monthly	"	"	"
a. Grama Deepam				
b. Kalpadhenu				
c. Kannimannu				
d. Kerala Karshakan				

3.

a. How many films you saw last year	More than Six	Four to Six	One to Three	Nil
b How many exhibition you saw last year	"	"	"	"
c. How many times you have visited demonstration plots during last year	"	"	"	"

Listening Behaviour:

1. Do you sit before the radio with some thinking or expectations about the programme before listening to the same — Mostly/Sometimes/Rarely/Never

2. Do you note the time of farm broadcast before listening a programme — Mostly/Sometimes/Rarely/Never

3. Do you tune the radio before/in time — Mostly/Sometimes/Rarely/Never

4. Do you keep the writing materials ready for listening the broadcast — Mostly/Sometimes/Rarely/Never

5. Are you able to listen the farm programme and its presentation without break — Mostly/Sometimes/Rarely/Never

6. Do you listen to the following programme, if yes, how often do you listen

Farm Broadcast	Mostly/Sometimes/Rarely	If not, why (Reasons)
Karshika Mekhala Varthakal		
Karshika Rangam		
Radio Grama Rangam		
Vayalum Veedum		

7. If so, what priority do you give to these programmes you listen — Most/More/Least/Never

8. To what extent do you listen the farm programme — Full/more than 75%/ more than 50%/ less than 50%

9. How intensively you listen the farm programme — Take down notes / Listen seriously / eat and listen / does something and listen

10. Do you follow the "Schedule of broadcast" of the farm programme — Mostly/Sometimes/Rarely/ Never

11. Will you compare your farming with the "Practice content" of the programme heard by you through radio — Mostly/Sometimes/Rarely/ Never

12. Do you make note of important and useful "Practice content" of the programme heard by you — Mostly/Sometimes/Rarely/ Never

13. Will you frame any opinion on the practice immediately after listening that programme — Mostly/Sometimes/Rarely/ Never

14. To what extent the knowledge gained by you through the farm broadcast is related to the knowledge already possessed by you on the same — Mostly/Sometimes/Rarely/ Never

Communication Behaviour:

1. What sources of information are generally known by you for farming (√)

Sources of information (Awareness)
Friends, neighbours & relatives
Salesman of Farm inputs
Radio Farm Broadcast
Farm Magazines
Research Journals
Information Boards
KAU/FIB Publication
Extension functionaries
Mass Media
Scientists

2. Is the practical aspects of the knowledge given through farm broadcasts understood by you	Mostly/Sometimes/Rarely/ Never
3. Suppose you have practically understood the "practice content" of the broadcasts, do you match your practice with the content of the broadcast	Mostly/Sometimes/Rarely/ Never
4. Do you assess the "programme content" with your actual practice	Mostly/Sometimes/Rarely/ Never

Source Utilization Behaviour:

1. What are the sources you will use after listening a farm broadcast?

Sources of information

Friends, neighbours & relatives
Salesman of Farm inputs
Radio - farm broadcast
Farm magazines
Research Journals
Information Boards
KAU/FIB Publication
Extension functionaries
Mass Media
Scientists

Adoption Behaviour:

Name of crops grown	Area
1.	
2.	
3.	
4.	

A. Paddy:

1. In how much area you have cultivated high yielding varieties of paddy?

2. What is the seed rate you have used?

3 If you have transplanted your crop what spacing you adopted?

4. How much fertilizers did you apply to the main crop?

Area	Name of Fertilizers	Quantity

5 Did you experience any pests/ diseases in your crop? If so what remedial measures you have taken?

Name of Chemical	Quantity

B. Coconut:

1. How much area you have cultivated high yielding variety of coconut?

2. How many seedlings you have used per acre?

3. What spacing you adopted?

4. How much fertilizer did you apply?

Area	Name of Fertilizers	Quantity

5. Did you experience any pests/ diseases in your crops? If yes, what remedial measures you have taken?

Name of Chemical	Quantity

C. Tapioca:

1. How much area you have cultivated high yielding varieties of Tapioca?

2. How many cuttings you have used per acre?

3. What spacing you have adopted?

4. How much fertilizers did you apply?

Area	Name of Fertilizers	Quantity

5. Did you experience any pests/ diseases in your crop? If yes, what remedial measures you have taken?

Name of Chemical	Quantity

D. Banana:

1. In how much area you have cultivate high yielding varieties of banana?

2. How many suckers you have used per acre?

3. What spacing you have adopted?

4. How much fertilizers did you apply.

Area	Name of Fertilizers	Quantity

5. Did you experience any pests/ disease in your crop? If yes, what remedial measures you have taken?

Name of Chemical	Quantity

TO STUDY THE EFFECTIVENESS OF FARM BROADCASTS THROUGH RADIO IN DISSEMINATING AGRICULTURAL INFORMATION TO THE FARMERS OF TRIVANDRUM DISTRICT

By

S. MOTHILAL NEHRU

ABSTRACT OF THE THESIS

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A B S T R A C T

The study was conducted in Trivandrum district of Kerala with the objective of identifying the preference of listeners with reference to mode, programme, duration and frequency of farm broadcasts. It was also decided to study the relationship between selected characteristics of the listeners and their mass media exposure behaviour, listening behaviour, communication behaviour, source utilization behaviour and adoption behaviour. The selected characteristics of the listeners were age, education, occupation, farm size, crops grown, radio ownership and discussion.

The available measurement techniques and scoring systems were used for independent variables such as education (Trivedi, 1963), social participation (Trivedi, 1963) and occupation (Badrinarayanan, 1977). Age was measured in terms of number of years the respondent had completed and the number of acres cultivated was taken as the measure of farm size. Radio ownership was measured in terms of possession of radio set.

The instruments for measuring mass media exposure behaviour was developed on the lines of Rogers and Svenning (1969). The scales to measure listening

behaviour (Badrinarayanan, 1977) and communication behaviour (Murthy and Singh, 1974) were used with slight modifications The source utilization behaviour was measured by the scale developed by Nair (1969). The adoption behaviour was measured by the Adoption Quotient as developed by Jalswal and Dave (1972). Data has been collected from 150 chercha samithy members using a pre-tested, valid interview schedule. Data statistically analysed using appropriate parametric techniques.

The results revealed that interview was perceived as the best mode of farm broadcasts and karshika mekhala varthakal was the most preferred farm programme. Among the selected independent variables discussion was the most contributed variable for mass media exposure behaviour. Listening behaviour was found to be influenced to a great extent by mass media exposure behaviour. Communication behaviour was influenced mostly by listening behaviour, discussion, mass media exposure behaviour etc. For source utilization behaviour listening behaviour of farmer was the most contributing variable. It was revealed that adoption behaviour of the listener was found to be determined by their communication behaviour.