

**A STUDY ON THE  
UTILIZATION OF THE FARM MAGAZINE 'RUBBER'  
AND ANALYSIS OF ITS MESSAGE CONSTRAINTS**

**By  
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**THESIS**

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## DECLARATION

I hereby declare that this thesis entitled, "A study on the utilization of farm magazine 'Rubber' and analysis of its message constraints", 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 other University or Society

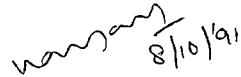
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## CERTIFICATE

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# *Introduction*

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## INTRODUCTION

In a developing nation like India, the major lacuna for development is the communication about advanced technology. Communication integrates knowledge, organization and power and runs as a thread linking the earliest memory of man to his noblest aspirations through constant striving for a better life. As the world has advanced, the task of communication has become ever more complex and subtle. Communication by itself cannot bring about development, but inadequate communication renders development slower and more difficult, as well as impeding popular participation. To secure a flow of messages and news which is not vertical, one-way and produced by a few for the public at large, structural changes designed to facilitate a horizontal flow or exchange involving the active participation of both individuals and communities are needed. Many a number of research findings remain unexposed to the intended class or they get a distorted version of message. The treasures of knowledge prevail unexploited, unless they are transferred to the ultimate users. The gist of all these reflects the role that communication of innovations has to play for the development of the nation.

The modern age of communication is generally considered to date from the invention of printing. Since the invention of the printing press, the world has been truly transformed. Messages of all kinds are continuously transmitted to a vast number of recipients. The advent

of the print medium and their presence in our daily life has been one of the major features of the contemporary world. The print medium is considered to be powerful in development communication. UNESCO (1982), in its report on communication and society, categorically stated that,

"While it is often said that we are entering 'the electronic age' there is, for instance, no sign of the demise of print media. Newspapers, magazines and books will continue for decades to be the major sources of information, knowledge and pleasure, efforts should be made to ensure their continuity, to increase their quantity and to improve their quality."

The concepts such as "freedom of information", "free flow of information", "balanced flow of information" and "free access to the media" are the natural outgrowth of the basic principle of freedom of speech and expression. In a State like Kerala, where the population is cent per cent literate, a free flow of information is smoothly achieved through print medium. Print, unlike utterance, can be accessed repeatedly.

The farm magazines which can cater to the needs of the farming population in divergent ways are of significant importance in transfer of technology. Farm magazines can give an indepth knowledge of the matter dealt with when compared to an agricultural article in a newspaper which is an alternate print medium source for the farmer. Moreover, the farm magazine can be used as reference material.

Since there is a periodicity for the publication of farm magazines, certain cultivation aspects can be given at the time of practices. If it is given earlier, the retrieval mechanism of farmer may fail and the technology remains without adoption.

The magazine 'Rubber' is having highest circulation among the farm magazines in Kerala and has been regularly publishing since 1965. The receivers of this magazine are highly innovative and the crop is highly remunerative. By and large, the rate of adoption of improved technology among the rubber growers is high for obvious reasons and information seeking is also considerably strong. Hence, the magazine 'Rubber', which caters to such information needs, gets wide circulation among the potential clients, as it has become so dear to an average rubber grower.

#### Statement of the problem

In a cent percent literate society, printed words are of great significance in development communication for obvious reasons. Naturally, in agricultural sector, the role of farm magazines in carrying advanced technology to the farmers and other potential readers cannot be overruled. But no empirical data on utilization of farm magazines are available for making alterations of the medium in terms of quantity as well as quality. The absence of such evidence limits the scope for a critical discussion on the utilization of farm magazines and for fixing necessary yardsticks to improve them. This

is particularly important in an era of communication revolution wherein various media compete with each other in carry information in the most efficient way along with their complementary interrelationships As UNESCO (1982) suggested

"All sorts of technological innovations have accompanied or had their roots in the explosion of mass media, which opened the doors to larger audiences, expanded sources and resources for information and entertainment and supported important cultural and social changes While it is obvious that mass media have wide spread positive effects, the phenomenon of their growth is of such importance that much more research is necessary fundamental research in all countries should provide the framework for future development of communication "

Needless to say that a clear understanding on how far the farm magazines are being utilized and the factors influencing the magazine utilization would have essential to initiate a dialogue on further improvement of farm magazine Here, a research study was planned to assess the extent of utilization of 'Rubber' magazine by its subscribers and its relationship with the selected personal characteristics as well as identification of major constraints in transferring the message and their relationship with the magazine utilization, to have a reliable information on present status of the farm magazine among its subscribers

#### Objectives of the study

The general objective of this study was to know the extent of utilization of 'Rubber' magazine by its subscribers. In that line,

the study was designed with following specific objectives

1. to measure the extent of utilization of the 'Rubber' magazine by its subscribers
2. to find out the influence of the selected personal characteristics of subscribers with their utilization of 'Rubber' magazine
- 3 to identify the constraints in transferring the message through 'Rubber' magazine at encoding, transmission and decoding levels, and
4. to identify the relationship between the constraints in transferring the message at encoding, transmission and decoding levels and the utilization of 'Rubber' magazine

#### Scope of the study

The study was, probably, the first of its kind to systematically analyses the level of utilization of a farm magazine. Further, it tried to make a relation analysis of utilization of 'Rubber' magazine with selected personal characteristics of the subscribers as well as the constraints in transferring the message at encoding, transmission and decoding levels. In addition to these efforts, contributions of different constraints in transferring the message in the utilization of the magazine were also identified. Though there is scope for further standardisation of the measurement technique used for the magazine utilization index, this study might form a basis for the scientific enquiries in the field of agricultural

journalism and invoke practical thoughts for further refinement of farm magazines to suit the readership profile

### Limitations of the study

Any human effort, how much earnest it may be, is not devoid of limitations. This research study was also no exception to this truth. One of the obvious limitations was that of the resources and time available at the disposal of the researcher\$ to conduct a student research project of this magnitude at the Master's degree level. Restriction of the sample size might also have become a limitation to make better generalisations based on the findings.

The ex post facto design used in this study was also inevitable due to inherent peculiarities of the research problem. To some extent, natural biases of the respondents might have cropped in, even though utmost care was taken to eliminate such extraneous factors.

In addition, this study being a pioneering effort in this line with several new variables with standardised or arbitrary measurement devices, though having generated several relevant results, might be inconclusive in deriving final judgements.

### Presentation of the study

The study is presented in six chapters. The first chapter deals with the introduction covering the statement of the problem,



objectives, scope and limitations of the study. The review of related literature and a conceptual framework are given in the second chapter. The third chapter contains the methodology of the conduct of the study. The results are presented in the fourth chapter, while the discussions on the findings are made in the fifth chapter, followed by the summary in the sixth.

# *Theoretical Orientation*

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## CHAPTER II

### THEORETICAL ORIENTATION

Knowledge accumulated through various efforts in the past forms the building blocks of any scientific inquiry. Review of all such efforts, either theoretical or empirical, would help to outline the new problem area and develop a conceptual framework for the study. Here, an attempt is made to review the available literature, directly or indirectly related to the study. In accordance with objective of the present study, the review of literature is furnished on the following lines.

1. Concept and importance of magazine utilization
2. Influence of personal characteristics of readers on magazine utilization
3. Influence of constraints in transfer of message on magazine utilization

#### 2.1 Concept and importance of magazine utilization

The success of print medium as a means for the transfer of technology is necessarily based on how it is being utilized. In this context, the concept of utilization of the medium should be viewed in a broad perspective to include the exposure of the audience to the medium, the mental set of the audience, the preservation of the message and follow-up. These dimensions are well applicable for the print, as it would be more durable at the hands of the receivers. But on the search to the treasure of past studies on mass media it was found that the utilization of a medium was not conceived in these lines and

hence there was an insufficiency of literature on utilization of print medium

For the better utilization of the print medium, the reader should opt to better reading habits. Reading process is highly creative. It involves all the complicated mental processes activated in the interpretation of concepts and meanings that are aroused by recognition of printed symbols. Tinker and McCullough (1962) defined reading as

'Reading involved the recognition of printed or written symbols which serve as stimuli for the recall of meanings built up through past experiences, and the construction of new meanings, through manipulation of concepts already possessed by the reader. The resulting meanings are organised into thought processes according to the purposes adopted by the reader. Such an organisation leads to modified thought and/or behaviour, or else leads to new behaviour which takes its place, either in personal or in social development'

The purpose of reading any matter is to comprehend it for further actions, or thinking on the subject. For better comprehension, better reading skills are required. Better reading skills lead to the maximum utilization of the printed matter.

In the case of magazine, the better reading skills involve its regularity of reading, promptness of reading, reader's preferences, style of reading, whether the matter is documented or not and the follow-up actions the reader undertakes for the better utilization of the magazine.

Delbert's study (1955) among Wisconsin farmers revealed that a good majority of the respondents received atleast one farm magazine and above half of them read thrice or more regularly

Winkelmann (1963) reported that farmers lacked time to read and most farmers paged through a magazine quickly and then went back and read those items that looked especially interesting

Perumal (1970) reported that 46.25 per cent of farmers became aware of the availability of certified seed and advantage of hybrid maize cultivation through the newspaper

Veerabhadraiah and Sethu Rao (1970) in their study on extent of mass media utility in rural community found that more than half of the respondent farmers read farm information regularly

Oliver (1971) found that agricultural news articles published in the newspaper had influenced the farmers in early stages of adoption viz awareness and interest stage to a greater extent

Zalaki (1973) in his study on the awareness, use and readability of agricultural publication by farmers in Bangalore district, found that majority of farmers spent half to two and a half hours per week in reading agricultural publications. The study also revealed that majority of farmers preserved all or some of their copies of all agricultural publications for future use

Zeiner (1977), while studying the use and comprehension of nutritional labelling, reported that shoppers read the information panel on food products

Dubey et al. (1977) in their study on opinion of 'Dairy Samachar' readers about its utility revealed that a good majority of the respondent readers found 'Dairy Samachar' as useful

Somasundaram and Singh (1978) reported that printed material was the most used channel for giving information by extension worker to paddy growing small farmers

Jayaram (1980) in his study on the evaluation of 'Krishi Vignana' a quarterly farm journal in Kannada, highlighted that the three features namely, 'Forthcoming research findings', 'Hints to farmers' and 'Questions and answers' which have different purposes proved useful and served the purposes for which they were intended

Khandekar and Mathur (1980) used various criteria such as suitability of the content, length, usefulness, reading ease, timeliness etc to assess the effectiveness of a farm magazine. Majority of the readers perceived the magazine as effective.

Duffy and Kabance (1982) described the usability of the text in terms of four dimensions access, accuracy, completeness and comprehensibility. They opined that the readers must be able to locate the

relevant information which must be accurate and be described in detail, matching the requirement and knowledge level of the readers.

Rajendran (1982) found that majority of the respondents utilized the information about the latest recommendation from newspaper, information about plant protection from magazine and handouts. He also opined that majority of the newspaper readers transferred the information to others whereas 44.33 and 32.5 per cent of magazine and handout utilisers transferred the information they read.

Sharma (1983) found out all the four types of articles namely 'Hints to farmers', 'Questions and answers', 'Series and 'others' were sufficiently covered as revealed by subscriber farmers were highly useful and were occassionally read by them

Rosebery (1985) suggested that the readers must be able to analyse, integrate and make inferences about the information presented in the text to be utilized to the maximum extent

Gill and Saini (1986) in their study on the reading behaviour of rural ladies of Punjab indicated that more than 80 per cent of the respondent read silently while sitting during night time

Nanjappa and Ganapathy (1986), while studying the newspaper reading habit of farmers of Bangalore district, revealed that only a low percentage of farmers subscribed to one newspaper. Among the

Jayaram (1980) in his study on the evaluation of 'Krishi Vignana', a quarterly farm journal in Kannada revealed that younger members of the community have benefited more by reading 'Krishi Vignana

Nehru (1980) reported that age was not significantly related to the communication behaviour of listeners of farm broadcasts

Singh (1981) pointed out that majority of the readers of the farm magazine, 'Changikheti' were young

Kaur (1982b), while studying the readers' reactions towards poultry advertisement opined that age was negatively and nonsignificantly related to the effectiveness of advertisements

Nagarajan (1982) found that age of the respondents showed a nonsignificant association with their degree of print media utilization

Nanjappa (1982) in his study on the content analysis of agricultural information in selected Kannada dailies and farmers reading habits, preferences and suggestions revealed that majority of the farmer respondents were young and there was no association for age with their reading habit

Rajan (1982) in his study of effectiveness of communication through farm news service found that younger farmer subscribers were not reading the farm columns as frequently as the older farmer subscribers.



readers, a high percentage of readers never subscribed to any newspaper. The data showed that majority of farmers read two newspapers for agricultural information. Above half of the respondents read all the items of agricultural information, while a considerable number of respondents read specific items. Farmers were also having the habit of referring to newspaper for information on agriculture. In respect of regularity of reading, approximately two-third of the farmers often read the agricultural items.

Channegowda and Gangadharappa (1987) reported that a large percentage of literate farmers used the leaflet. Considerable number of literate farmers and illiterate farmers had used the leaflet only once. Large percentage of literate farmers than illiterate farmers had preserved the leaflets.

Gupta et al (1987) in their study on reading ability in children related to home background, pointed out that personal attribute and academic performance encouraging loud reading at home and introduction of new words to children at home was seen positively influencing the reading ability in children.

Saini and Bedi (1990) found that the respondents depended on magazines and books for getting information on Yu Dal projects and organisational matters related to Yu Dal programmes. The respondents made use of different sources of information for seeking various types of reading materials. They consulted the different types of reading

material like magazines, books, newspaper and folk-lore in their descending order of use respectively

## 2.2 Influence of personal characteristics of readers on magazine utilization

### Age

Singh (1973) observed positive correlation of age of the farmer respondents with perceived utility of farm broadcasts.

Zalaki (1973), while conducting a study on the awareness, use and readability of agricultural publications, found that age of the farmers was not associated with the readership of publications

Khandekar and Mathur (1975) revealed in their study that age was negatively related to perceived effectiveness of the magazine which was assessed using the criteria such as suitability of the content, length, usefulness, reading ease and timeliness

Siddharamaiah et al (1976) in their study conducted in the villages of Karnataka found that 58.33 per cent of newspaper subscribers were below the age of 30 years, which indicated that most of the newspaper subscribers belonged to younger age group

Munegowda (1978) pointed out that there was no association for age with radio listening habit of farmers owning radios and with reading of the agricultural message of the newspaper subscribing farmers

Balachandran (1983), while studying the effectiveness of farm journals in disseminating agricultural information to farmers, ascertained that age had no significant association with reading habit of both 'Kerala Karshakan' and 'Kalpadhenu' readers

Sharma (1983) revealed that there was no relation between readership and age of subscriber farmers of 'Krishi Vignana'

Chindanandappa (1985) in his study on the mass media utilization by extension personnel pointed out that there was no significant association between age and the respondents' degree of mass media utilization.

Sherief (1985) reported that age was found to be negatively and significantly correlated with communication behaviour of non-contact farmers under training and visit system of agricultural extension in Kerala

Gill and Saini (1986) while studying the reading behaviour of rural ladies in Punjab revealed that two-third of the respondents with the reading habit belonged to the age group below 25 years

Subramoniam (1986) reported that age of the respondents was negatively correlated with their communication behaviour

Saha and Triikka (1989) in their study on contents and readers' characteristics of Indian Farmers' Digest reported that majority of the subscribers belonged to middle age group

Mahajan and Dhaliwal (1990) in their study on perceived utility and listening behaviour of farm women towards women's programme broadcasts of All India Radio opined that there was positive correlation of age of the farmer with perceived utility

In the light of above all reviews age was considered to have some influence on magazine utilization and thus it was taken as an independent variable for this study

### Education

Mishra (1969) reported that the use of publications was associated with level of education.

Zalaki (1973) found that there was association between farmers' readership of agricultural publications and their education

Oliver et al. (1975), in their study on impact of agricultural articles on the adoption of package of practices of rice, revealed that education had not influenced the farmers in reading agricultural articles in newspapers

Munegowda (1978) found that there was significant association for education of farmers with their radio listening habit among farmers who owned radios and with reading of the agricultural message by the newspaper subscribing farmers

Jayaram (1980) found that the educated farmers have benefitted more by reading the 'Krishi Vignana', a quarterly farm journal in Kannada

Karippai (1981) pointed out that educational status had significant association with the respondents' information source utilization pattern

Singh (1981) in his study revealed that majority of the readers of the farm magazine were matriculates

Kaur (1982a) reported that education of the respondents were positively and nonsignificantly related with the extent of use of information

Kaur (1982b) in her study on content analysis and readers' reactions towards poultry advertisements pointed out that education was positively and significantly related with the overall effectiveness of selected advertisements

Nagarajan (1982) reported that education of respondents had a positive and significant association with their print media utilization

Nanjappa (1982) in his study on the content analysis of agricultural information in selected Kannada dailies and farmer's reading habits, preferences and suggestions revealed that majority of the farmer respondents had higher education level and there was no relationship for their education level with their reading habit

Rajan (1982) in his study on effectiveness of communication through the farm news services of Kerala Agricultural University observed that education did not influence the reading of agricultural information by the farmer subscribers.

Balachandran (1983), in his study on effectiveness of farm journals in disseminating agricultural information to farmers of Kerala, pointed out that education had significant relationship with reading habit

Sharma (1983) revealed that there was no relationship between the level of education and readership of subscriber farmers of 'Krishi Vignana'.

Subramoniam's study (1986) showed education was positively associated with communication behaviour of tribal farmers

Saha and Triikka (1989) found in their study that a great majority of subscribers were graduate and above

Importance of education on the communication behaviour was clear from the above cited literature, and hence this variable was selected to be included in this study

### Farming Experience

Not much studies were reported depicting the relation of farming experience of the farmer and his print media utilization or

communication behaviour. Still, farming experience was taken for study purpose assuming that there might be some influence on utilization of the magazine.

Velumani (1988) reported that experience in cotton cultivation showed negative and significant relation with non-institutional information source utilization for cotton plant protection technology.

### Size of holding

Anderson and Ryan (1943) revealed in their study of reactions and effectiveness of extension leaflets that a majority of large farmers than small farmers received and used the publications.

Oliver (1971) revealed that the farm size had significantly influenced the learning attitude of the farmers through reading of agricultural news articles published in the daily 'Dinamani'.

Zalakı (1973), while studying the awareness, use and readability of agricultural publications by farmers, found that size of holding was not associated with readership of publications.

Munegowda (1978) pointed out significant association between size of farm owned by farmers having radios and subscribing to newspapers and their reading of agricultural message in newspaper. He also opined that there was no association between the size of farm of the radio owning and newspaper subscribing farmers and their listening of radio messages and reading newspaper messages.

Singh (1981) reported that majority of the readers of 'Changikheti' magazine were medium farmers

Sharma (1983) pointed out that there was no relation between readership and farm size of subscriber farmers of 'Krishi Vignana'

Saha and Triikka (1989) pointed out that maximum number of subscribers had medium size of holding in their study on contents and readers' characteristics of Indian Farmers' Digest

Various literature showed a relationship of size of holding on reading behaviour and hence the selection of the variable was made for the purpose of this study

#### Material possession

Annamalai (1979) revealed that socio-economics status of respondents showed positive and significant relation with the utilization of farm information source

Karippai (1981) found that material possession of farmers had significant association with their information source utilization pattern

Kareem (1984) reported that socio-economic status was positively and significantly related with interpersonal communication behaviour of contact farmers under Training and Visit system



Material possession was reported to have some relationship with utilization of farm information in the past studies and thus it was also selected as an independent variable for this study

### Annual Income

Lionberger (1951) indicated that the level of income of farmers in four counties of Missouri had same influence in using newspapers and farm journals as the most important sources by them

Alamgeer (1970) reported that income levels of farmers showed very high positive relationship with their radio listening habit

Oliver (1971) revealed that the farm income of respondents had not significantly influenced the reading of agricultural news articles published in newspaper 'Dinamani'. But farm income was found to have significant influence on the learning of package of practices of new varieties of paddy through agricultural news articles

Rajan (1982) observed that annual income had not influenced the reading of agricultural information by the farmer subscribers

Some of the studies pointed out that the annual income of farmers had some trend in relationship with utilization of information source and hence it was included as an independent variable in this study also

## Social participation

Singh (1981) in his study on the content analysis of 'Changikheti' pointed out that majority of life members of the magazine had low social participation.

Nanjappa (1982) revealed that majority of farmers respondents had low social participation and there was no association of their social participation with their reading habit

Sharma (1983) revealed that there was no relationship between readership and organisational participation of subscriber farmers of 'Krishi Vignana'

Subramoniam (1986) pointed out that social participation of the respondents was positively associated with their communication behaviour

In the reviews of past studies social participation was found to have contradictory relationships with reader behaviour, hence this variable was also included for this study

## Cosmopolitaness

Vijayaraghavan and Subramoniam (1981) found that farmers' cosmopolitaness had significant and positive correlation with information input and output, and that it had significant association with information processing by farmers.

Rajan (1982) in his study on effectiveness of communication through the farm news service of Kerala Agricultural University, observed that farmer subscribers who had contact with urban centres read agricultural information more often than who did not have contact with urban centres

Balachandran (1983) found that cosmopolitanism had significant relation with reading habit in his study on effectiveness of farm journals in disseminating agricultural information to farmers of Kerala

Siddaramaiah and Rajanna (1984) found that farmers with high cosmopolitanism had significantly higher gain on knowledge about agricultural aspects

Sherief (1985) reported a positive and significant correlation between cosmopolitanism and communication behaviour of non-contact farmers under Training and Visit system

Subramoniam (1986) also identified a positive association of cosmopolitanism of farmer respondents with their communication behaviour

From the above literature cosmopolitanism was found to have some influences on the communication behaviour. Thus this variable was included for this study.

## Innovativeness

Singh (1981) in his study on the content analysis of 'Changikheti' farm magazine pointed out that majority of life members of the magazine had a medium level of innovative proneness.

Subramoniam (1986) reported that innovative proneness was positively correlated with communication behaviour of respondents.

Velumanı (1988) pointed out that innovativeness was positively and significantly related to information source utilization and also institutional source utilization by cotton growers.

Innovativeness was included in this study based on the possible influence as an independent variable as evidenced in the above literature

## Management orientation

Bhaskaran (1979) found significant association between management orientation and interpersonal communication behaviour efficiency of farmers.

The study of Kareem (1984) also revealed that management orientation was positively and significantly related to interpersonal communication behaviour efficiency of farmers

In the light of the above studies, it was decided to include management orientation also as an independent variable in this study

### Level of knowledge

Oliver et al (1975) revealed that there was an influence of agricultural articles in the form of reinforcement of knowledge on rice farmers

The study of Dubey et al (1977) on the utility of 'Dairy Samachar' indicated that less than half of the respondents gained knowledge from the use of the farm magazine

Jayaram (1980) opined that the 'Krishi Vignana' has contributed to increased knowledge of the specific contents included in the journal and also promoted favourable opinion towards agricultural science

Balachandran (1983) in his study on effectiveness of farm journals in disseminating agricultural information revealed that the knowledge level of subscribers were found to be higher than that of the non-subscribers

Kieras (1983) found that the amount of prior knowledge was a significant predictor of the reading time for the sentence

Gill and Saini (1986) while studying the reading behaviour of rural ladies in Punjab revealed that most of the respondents (90 per cent) gained knowledge by reading

### 2.3 Influence of constraints in the transfer of message on magazine utilization

#### 2.3 1 Constraints in the encoding level

##### Improper selection of message

Patterson (1946) pointed out that the contents of the magazine must be timely when they are published.

Kamath (1969) stressed the need to overcome the message constraints for easy acceptance of the message while writing for farm families. He indicated the lack of timeliness and relevance as some of the message constraints.

Oliver (1971) stated that the timeliness, coverage of subject matter, practicability, readability, accuracy and terminology of the agricultural news articles were found to be highly satisfying to the farmers.

Dubey et al. (1977) found that with regard to the need for information desired by the subscribers, nearly half of the respondents felt that the information contained in 'Dairy Samachar' was according to their needs.

Gajapathy et al (1977) in their content analysis of 'Dinamani' and 'Malaimarasu' (Tamil Dailies) found that more than three-fourth of agricultural news published by these two papers were of importance to the entire state without any specificity to a particular district.

Jayaram (1980) pointed out that the coverage of crop production and animal husbandry were relatively more than the other areas of agricultural sciences such as horticulture, fisheries, sericulture etc

Nehiley and William (1980) reported that effectiveness of printed materials depend on a variety of factors including amount and type of information presented

Kaur and Mathur (1981) pointed out that the content of farm magazine was by far the most important determinant of its success and only an attractive cover page and format would not help if the content was not timely, need based and locally relevant

Singh (1981) revealed that majority of the respondents felt the 'Changi Kheti' magazine was fully practicable, useful, timely and always relevant

Duffy and Kabance (1982) opined that the readers must be able to locate the relevant information must be accurate and be described in detail matching the requirement and knowledge level of the readers

Nanjappa (1982) pointed out that majority of the farmers were having opinion that the agricultural information published are accurate, timely and practical

Rajendran (1982) found that majority of the respondents subscribed for the newspaper and magazines because of the reason that they published latest recommendations and need based items He also pointed out that majority of the respondents expressed that the published information were almost timely.

Sharma (1983) found out that majority of the subscriber farmers were of the opinion that the information presented in 'Krishi Vignana' was highly practicable

Jondhara et al (1989) in their study on the content analysis of the articles published in 'Shetkarı' and 'Shetıbhatı' pointed out that there was adequate subject matter coverage and the information published were timely, practical and accurate in both the magazines

Faculty perception of audience profile by the author as perceived by the reader

Patterson (1946) in her discussion on the different parts in an article opined that if the reader cannot see at a glance the relation of the parts, he cannot read rapidly and then he will lose interest



Serra (1953), while studying concept learning and verbal representations by school children, stated that failure of a child to acquire concepts through reading might arise of poor choice of expression by the author rather than from the weakness of the child

Winkelmann (1963) reported that there was a general feeling among the farmers that the farm publications favoured the large farmers

#### Defective identification of message units

Patterson (1946) opined that the connective idea between paragraphs should be in the first sentence of each paragraph so as to make a smooth transition

Moore (1965) stressed that readers understood better when the message was conveyed in logical order

Kamath (1969) pointed out that while communicating a message it was better to fix the boundary lines of the particular message so that one can concentrate on that message and communicate better

Duffy and Kabance (1982) revealed that even if the information was complete it might not be used if it was written in a convoluted manner and supported by inadequate graphics

Spyridakis (1986) found that the heading and previews in an article helped the readers to design the super ordinate level in the

hierarchical frame work of the memory and logical connectives helped the readers to fill in the lower levels, facilitating the acceptance of incoming information

### Confusing style of writing

Patterson (1946) pointed out that short paragraphs helped for variety and easy rapid reading. The prominent display of the paragraph topic aids in catching and holding reader's interest. Emphasis may be based on brevity. Short sentences are easily grasped and more emphatic than long sentences. She was of the opinion that variety in sentence length was necessary to prevent monotony. One should choose words that are familiar to the reader for whom he is writing. She argued for the need of vivid descriptions enlivening dry facts with human interest incidents, relating facts to the objects with which the reader to visualise the message

Fox (1952) emphasized the need for strong, simple language, without much technical jargons, and clarity to common man for making story understandable

Berlo (1960) viewed the linguistic facility of a communication source and its compatibility as an important factor in communication process to high fidelity

Moore (1965) reported that paragraphs enable the writer and reader to read with an idea in stages. Each paragraph should contain a topic sentence, with one central idea explicitly expressed. The length of sentence should be long enough to develop the topic sentence idea completely and clearly.

Morris (1965) while explaining the pre-requisites for text efficiency pointed out that style of writing was to be taken care of at the production which might influence the readers.

Kamath (1969) opined that the idea should be presented in simple style, clear, brief, specific, have a direct approach to the reader, should give accurate information, should be convincing with human elements and should avoid exaggeration. He also suggested to avoid writing very long sentences.

Ganapathy (1971), while writing for low level literates, opined that short, simple, familiar and understandable words should be used and technical words avoided. If it is very necessary to use a new word, introduce it with an explanation for the first time.

Somasundaram and Jaganathan (1974) found in a research study on 'Readability in newsletter', that personal words and personal sentences used adequately added 'Human interest'. To increase 'human interest' and 'reading ease' they suggested the following

- 1 Sentences must be so constructed that they contain as far as possible less number of words
- 2 Sentences must be so constructed that they contain personal words and sentences which make farmers' reading more interesting

Isakson (1979) while conducting study in cognitive processing in sentence comprehension opined that the product of the meaningful processing of a sentence is a cognitive structure. The sentence processing is somehow regulated by the identification and construction of the proposition which underlines a particular sentence.

Britton et al (1982) in their research on writing and revising persuasive documents revealed that in order to produce a persuasive document, writers must sequence their argument, place them into sentences and comply with rules of sentence mechanics. They also found that by editing out irrelevant content and using fewer words to communicate their arguments, writers can conserve both text space and readers' time.

Nanjappa (1982) in his study on the content analysis of agricultural information in selected Kannada dailies pointed out that majority of farmers were of the opinion that the agricultural information published are in sufficient quantum.

Sharma (1983) revealed that majority of subscriber farmers had opined that the subject matter content in 'Krishi Vignana' was highly descriptive.

Jondhara et al (1989) found that there was clarity in terminology used in both 'Shetikari' and 'Shetibhati' magazines.

#### Inappropriate title of the message

Garst and Bernstein (1968) reported that headline should be specific with few words to give a handy condensation of a news story. Headline should contain main highlights of the story.

Ganapathy (1971) opined that bold, simple and clearly worded subheads should be used wherever necessary while writing for low level literates.

Kaur (1982b) reported that majority of the respondents opined colour should be used in the headline to make it attractive

Balachandran (1983) revealed that the subscribers preferred medium and large sized letter for headings and all agreed that the headings were appropriate to the articles.

Hartley and Trueman (1985) found that headings facilitated searching a text for answer<sub>s</sub> to questions. It was certainly conceivable that even readers with low pre-existing knowledge would benefit from the inclusion of headings in performing such a search task in which the need to rely on prior knowledge would be minimised

Wessom (1989) in his study on headline length as a factor in magazine advertisement readership found no significant variation in headline readership within any of the headline length groupings

Wilhite (1989) showed that headings used highlighted the main topic of the following passage segments and thus might have served to emphasize differently the higher level information in the passage segments.

### 2 3.2 Constraints in the transmission level

#### Untimely reach to the audience

Morris (1966) while explaining the pre-requisites for text efficiency pointed out that timely reach of the message which might influence the readers, was to be taken care of at the transmission stage

#### Lack of clarity in printing

Tinker (1965) while enumerating the fundamental aspects of reading pointed out that legible printing is necessary for rapid and easy reading. The editor, publisher and printer have to take adequate care to use legible typographical arrangements for printing.

According to Ganapathy (1971) the column width should be such that it should not strain eyes, the normal width might be 40-45

letters. The letters must not be too small or too big. Any size between 12 to 16 points would be suitable for low level literates. Sufficient space should be left between the lines. Occasional white space should be introduced to help as breaks.

Jayaram (1980) opined that the respondents were satisfied with the size of type used in printing of 'Krishi Vignana'.

Regarding the letter size of the text, Balachandran (1983) reported that majority of subscribers of both 'Kerala Karshakan' and 'Kalpadhenu' preferred medium sized letters.

Samuels (1983) on discussion of factors influencing the reading process, emphasized the importance of size, style and legibility of print on reading speed.

#### Inadequate use of illustrations

Helbert (1953) found that pictorial illustrations increased the learning from verbal material.

Rao and Kherde (1968) in their study found out that good and colourful illustrations had a pleasing effect on the farmers and it increased the curiosity and interest in reading.

Ganapathy (1971) emphasised the need for use of colour to attract the attention to the publication and stress specific points in

the publication He also stressed the importance of using impressive illustrations while writing for low level literates

Jayaram (1980) pointed out that the respondents made valuable suggestions for improvement such as inclusion of picture depicting real farm situations and diagrammatic representations of ideas

Balachandran (1983) reported that pictures were found relevant and their quality good to majority of the respondents.

#### Improper layout and design

Winkelmann (1963) reported that the farmers generally said that they did not feel too much advertising in farm magazine

Balachandran (1983) revealed that majority of subscribers found advertisements useful, cover page attractive and preferred coloured cover page with photographs than drawings

Samuels (1983) pointed out that format design, which includes things like column width, page size and margin width influence reading

Bridges (1989) identified three news use patterns on the front pages of dailies across the United States such as hard-news, interpreter-news and prominence-news use Timeliness was identified as the most important factor influencing the use pattern in front page, followed by prominence and proximity.



### Incompleteness of the message

Morris (1966) while explaining the pre-requisites for text efficiency pointed out that completeness of message was to be taken care of while communicating a message.

Kamath (1969) opined that while writing for farm families, the text should contain complete information and should not leave any natural question unanswered

Duffy and Kabance (1982) stated that completeness was an important dimension for the usability of a text

Nanjappa (1982) in his study pointed out that majority of farmers opined that agricultural information published was not clear

In the study of Rajendran (1982), majority of the farmers reported the coverage of subject matter in the agricultural information published in newspapers, magazine and handouts was sufficient

### 2 3.3 Constraints in the decoding level

#### Irrelevance to attributes of innovation

Winkelmann (1963) reported that all the magazines contributed good ideas that farmers might be able to use in their operations. However, most of them did not expect the information to fit their own

specific operation. Instead, they looked upon it mainly as a stimulus to their own thinking or how they might adopt a given idea.

Zalaki (1973) found in his study on the awareness, use and readability of agricultural publications by farmers in Bangalore district, that majority of farmers did not adopt improved farm practices after reading farm publications.

In the study of Rajendran (1982), generally less than 50 per cent reported defects in the message. More complexity of the message was one of the main defects in the three media studied viz newspaper, magazine, handouts. Majority of the respondents informed that the agricultural information published in the newspaper must be location specific.

#### Lack of credibility of 'Rubber' magazine

Berlo (1960) defined credibility as the degree to which communicator is perceived as trustworthy and competent by the reader.

Morris (1966) while explaining the pre-requisites for text efficiency pointed out that credibility of medium, which might influence the readers was to be taken care of.

Singh and Prasad (1974) concluded that in non-progressive village, the most credible source was demonstration followed by village

level worker, friends and neighbours and others. The least mentioned sources were self-experience, magazines and newspapers.

Singh et al (1976) reported that the more credible and accessible media for small farmers were still the local sources and small farmers attached fairly high credibility to demonstrations.

Chole and Rahudkar (1978) reported that personal formal sources were ranked with high credibility by big farmers whereas, personal informal sources were accorded more trustworthiness by small farmers. Except demonstrations, all other media sources were ranked the least credible sources by big and small farmers.

Karippai (1981) reported that friends and relatives were found to be the most utilised sources of information followed by radio, newspaper, extension personnel and Agricultural Scientists in the descending order.

Athimuthu (1982) pointed out that the farmers considered the officials of the State Department of Agriculture as the most credible source followed by Agricultural Universities, progressive farmers, press correspondents and lastly the commercial agencies.

Varadaraju (1983) reported that contact farmers ranked Agricultural Assistants as most credible followed by other contact farmers, Assistant Agricultural Officer, radio, co-operative society and newspaper in that order.

Kareem (1984) opined that the least favoured mass medium by the farmers turned out to be the farm magazine.

In Subramoniam's study (1986) 'radio' and 'neighbours and relatives' emerged as the most credible sources of information, where as 'Junior Agricultural Officer' and 'Instructors of Functional Literacy Programme' were the least credible sources for agricultural communication

Grunig et al. (1988) pointed out that personal conversations, local specialized media and meetings were the most important sources of information for the agricultural publics. In general, the more local the information, the more relevant it was to farmers.

Saha and Triikka (1989) reported that a majority of the subscriber respondents got farm information from magazine followed by newspapers and radio. The other sources of information were television, leaflets, agricultural extension officers, farmer's fair, friends and others.

#### 2.4 Conceptual framework

The factors affecting conative or behavioural changes may be either related to the source or the receiver. According to De Fleur and Ball-Rokeach (1966), there are three important interpretive frameworks on how people encounter the media such as the individual

difference perspective, social category perspective and the social relations perspective. They further pointed out that the principles of selective attention and perception would work necessarily on these perspectives.

Blumler and Katz (1974) suggested that the most obvious contemporary expression of the role of the individual differences in the process of media exposure and effects is the "use and gratification approach". "Use and gratification" is a general label and, as yet, unsystematised set of specific theoretical view points tied together by a shade emphasis on an active media audience (Blumler, 1979). These researchers have portrayed the individuals that constitute any mass media audience as active selectors and interpreters of media messages who utilize the messages to gratify their individual needs. Moreover, the audience members, not the mass communicator, are said to determine the usefulness of the messages. In a sense, uses and gratifications theories have elevated the role of individual differences beyond the intervening variable role in modern S-R approaches.

Though the individual differences perspective implies that media messages contain particular stimulus attributes that have differential interaction with personality characteristics of the audience, the cost-effect conceptualization is rather complicated to extent to the media variables also. The interplay of these two dimensional factors are expected to result in the net utilization of a medium.

The conceptual frame work of this study assumes that the utilization of the farm magazine involves dimensions such as frequency of reading, promptness in reading, reading preference, style of reading, documentation, and follow-up while they are influenced by the selected personal characteristics of the audience as well as the perceived constraints of the medium at encoding, transmission and decoding levels. The theoretical frame work of the study is given in Fig 1

Based on the review of literature and conceptual frame work, the following hypotheses were derived for this study

- 1 There would be no variation in the utilisation of farm magazine 'Rubber' among its subscribers
- 2 There would be no significant relationship between the personal characteristics of the subscribers and their utilization of 'Rubber' magazine
- 3 There would be no significant influence of the constraints in transferring the message at encoding, transmission and decoding levels on the utilization of 'Rubber' magazine

PERSONAL CHARACTERISTICS  
OF RESPONDENTS

CONSTRAINTS IN TRANSFERING MESSAGE

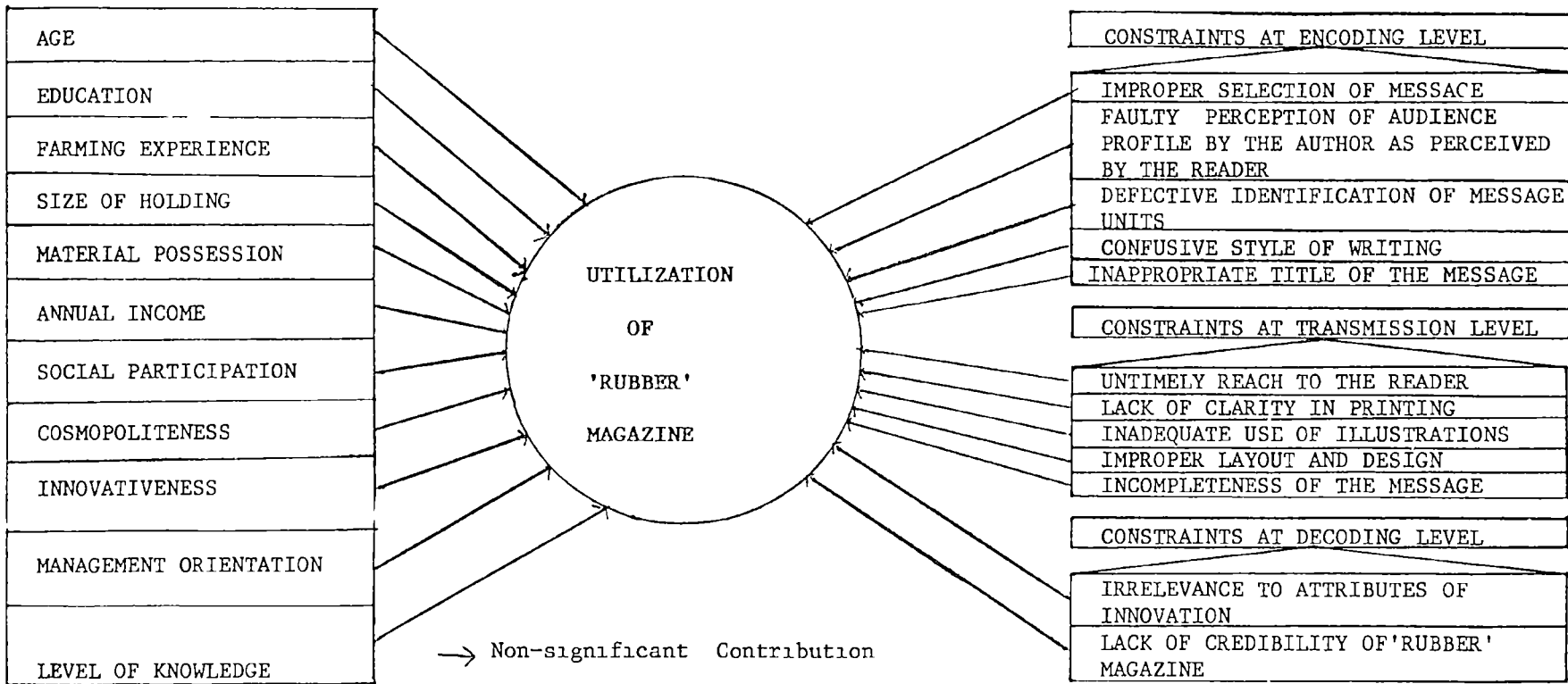


Fig 1 Conceptual framework of the study

# *Methodology*

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## CHAPTER-III

### METHODOLOGY

This chapter gives a general vision of the methods and procedures followed in conducting the study. This comprises of the research design, locale of the study, selection of respondents, operationalisation and measurement of variable, techniques of data collection and statistical tools used.

#### 3.1. Research design

For any scientific enquiry, there should be a research design. Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance. The research designs are developed to enable the researcher to answer research questions as validly, objectively, accurately and economically as possible. For this study, an ex post facto research design was adopted. According to Kerlinger (1978), ex post facto research is systematic enquiry in which the scientist does not have direct control of the independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables. In this research study, since the manifestations of the independent variables had already occurred and there was

no scope for manipulation of any variables, ex post facto research design was resorted to.

### 3.2 Locale of the study

The study was confined to three districts in Kerala namely Kottayam, Thiruvananthapuram and Thrissur, which were selected purposively. Kottayam district was purposively selected for the study to include the traditional and largest rubber growing area where the traditional subscribers of this magazine could be met with. It was assumed that Kottayam being the headquarters district of the Rubber Board, a large number of traditional subscribers would be available in the district due to the proximity to the publishing point. Thrissur district was selected as this place comprises of the new rubber growers and thus new subscribers also. In Thiruvananthapuram district, a mixture of both traditional and new subscribers could be obtained.

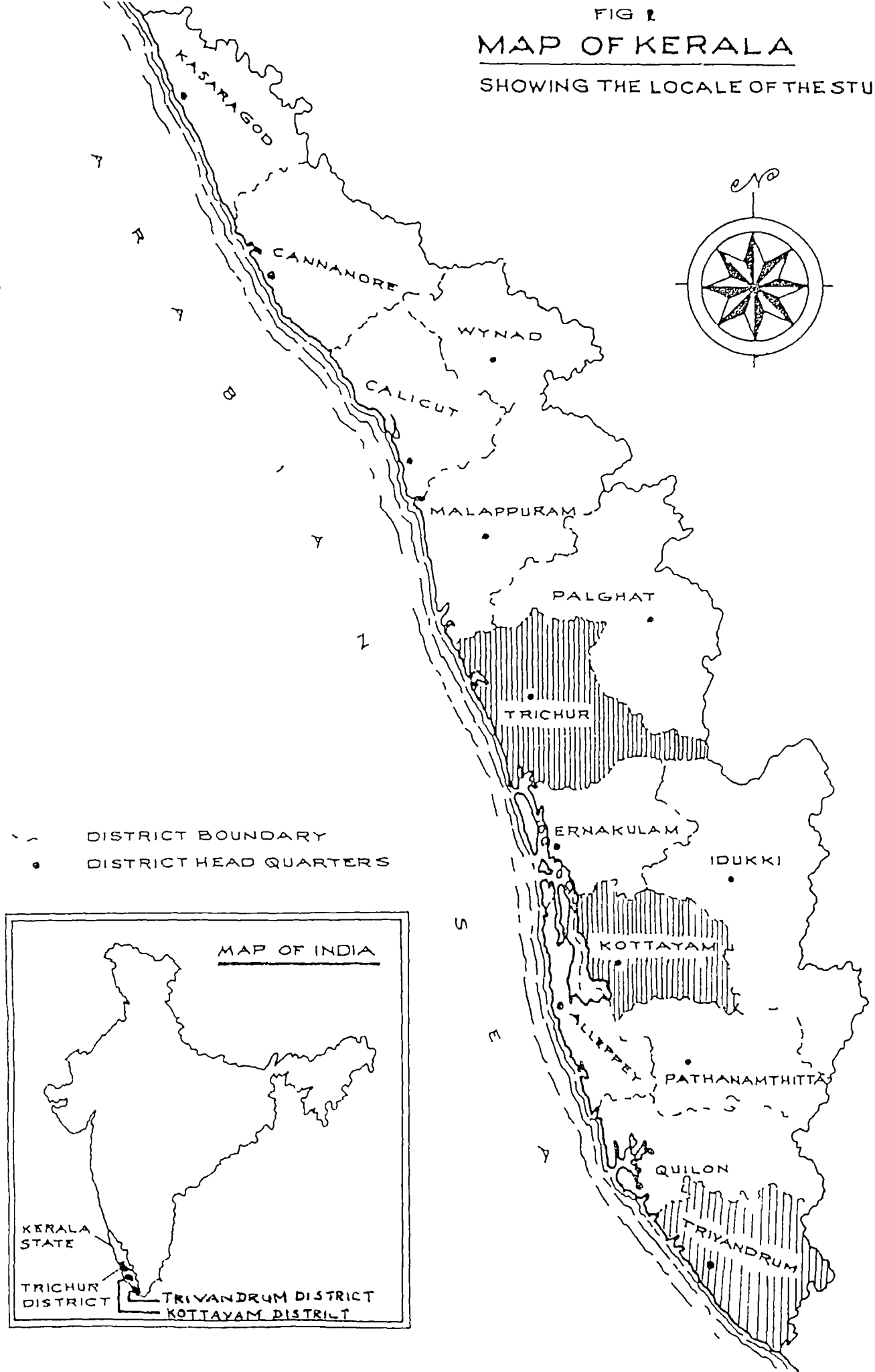
### 3.3 Selection of respondents

A list of subscribers of the 'Rubber' magazine was prepared for each district from the list of subscribers available with the publishers of the magazine i.e., Rubber Board. It was found from the address that the subscribers were generally distributed in rubber growing areas of all these three districts. From these lists, the respondents were randomly selected, using random number table. Responses were collected from a total of 200 respondents. Almost equal

FIG 1

# MAP OF KERALA

SHOWING THE LOCALE OF THE STUDY



number of respondents were selected from each district ie , 68 respondents were selected from Kottayam and 66 each from Thiruvananthapuram and Thrissur

### 3.4. Operationalisation and measurement of variables

#### 3.4 1. Operationalisation and measurement of dependent variable

Magazine utilization confines not to reading alone but also focusses on several other factors. The utilization of the magazine in the context of this study was operationally defined as the utilization pattern of the magazine as a medium of communication to get exposed to the farm messages by the subscribers, which need not necessarily result in the adoption of messages by readers. Frequency of reading was included in measuring the utilization of magazine because there can be differences between a regular reader and casual reader. An individual who is eager to read the magazine may wait for its arrival and read on the same day, and such a reader may utilize the magazine in a better way than one who opens the magazine leisurely. Reading preferences and style of reading can influence the extent of utilization of the magazine. Documentation is considered as another dimension in magazine utilization due to its innate quality of reuse. Follow-up activities which even include transferring the messages to other people. This needs a high level of comprehension which might be a function of better magazine utilization.

The items for the magazine utilization index were identified from the available literature on reading research, Agricultural Journalism research, communication theories and discussion with experts in Journalism. Fortyone items were listed under six subheads viz frequency of reading, promptness in reading, reading preference, style of reading, documentation and follow-up. These were then subjected to judges rating by sixty experts who were professional journalists, faculty members of Department of Journalism of University of Kerala, mediemen working in All India Radio and Doordarshan, regular freelance writers in agricultural columns, staff of Farm Information Bureau of the Kerala State Department of Agriculture, staff of the State Institute of Languages, leaders of the Kerala Association for Non-Formal Education and Development (KANFED), Sasthra Sahithya Parishat and Faculty members of the Kerala Agricultural University. They were asked to indicate the relevancy of these items as traits of the magazine utilization on a five point continuum. The scoring pattern was as follows

Relevancy	Score
Most relevant	4
More relevant	3
Relevant	2
Somewhat relevant	1
Irrelevant	0

The judges were also requested to modify the items, add or delete items, if necessary, to satisfy the criteria suggested by Guilford (1936) and Kerlinger (1964). These criteria were

- It should cover the universe of content,
- It should not contain any item which was not relevant to the variable in question, and
- There should not be any ambiguity in description of items

Out of the sixty experts, responses could be obtained from only 43. On analysis of these responses, three items were deleted. In order to assess the extent of agreement among the judges, the coefficient of Agreement for each item was worked out using the formula

$$C A = \frac{\text{Total score obtained}}{\text{The potential score that could have been obtained}}$$

The item which could obtain an agreement ratio of 0.4 or more only were selected to be included in the final magazine utilization index. The scoring pattern of items which was given seeing the weightage of each item was as follows

Items	Score
I <u>Frequency of reading</u>	
1 Regular reader of all issues of the magazine	2
2. Regular subscriber, but reads only some issues	1
3 Regular subscriber, but not a reader	0

## II. Promptness in reading

1. Reads the magazine on the same day of receiving. 4
2. Reads certain article immediately after getting the magazine and leaves others to be read later. 3
3. Reads the magazine sometime before the arrival of the next issue. 2
4. Reads the magazine only at the leisure time and sometimes even several issues together. 1

## III. Reading preference

- 1 Reads all the articles without any order of preference. 6
- 2 Reads all the articles, but only according to the order of preference after going through the list of contents. 5
- 3 Selects certain articles in every issue and reads only those articles. 4
4. Reads only the articles on current events. 3
5. Reads only the specific recommendations for the following month or general recommendations of the authority. 3
6. Reads only certain articles with preference to the format (only success stories, only process articles, only information features, only questions and answers etc ). 2
- 7 Avoid lengthy articles. 2
- 8 Reads the articles with author preference. 1
- 9 Reads only the articles with catchy captions. 1

## VI. Follow-up

- |    |   |   |
|----|---|---|
| 1  | Seeks further clarification on the message from the author or publisher immediately after reading | 1 |
| 2  | Refers to the preserved material of the magazine whenever a related practice is followed          | 1 |
| 3. | Tries to attempt on new recommendations given in the message through the magazine                 | 1 |
| 4  | Share the magazine with others after reading  | 1 |
| 5  | Direct others to read the magazine  | 1 |

Magazine utilization index for each respondent was calculated based on the formula

$$\text{Magazine utilization index} = \frac{\text{Obtained score}}{\text{Maximum obtainable score}} \times 100$$

### 3 4 2 Measurement of independent variable

Based on the information from available literature and discussion with experts, scales were selected and used for the measurement of each independent variable in this study

#### 3 4 2.1 Personal characteristics

##### Age

For this study, age was operationally defined as the number of years completed by the respondent at the time of investigation



IV Style of Reading

- A 1 Reads an article completely . 4
- 2 Reads an article partially 3
- 3 Skims only certain articles and others 2  
are read thoroughly .
- 4 Skims while reading all articles . 1
- B 1 While reading, goes back in search of some 1  
ideas .
- 2 Reads repeatedly certain paragraphs of an 1  
article .
- 3 Reads very slowly for better comprehension 1  
of the technical subject matter .
- 4 Reads silently . 1

V Documentation

- 1 Underlines important sentences 1
- 2 Prepares notes while reading 1
- 3 Takes cuttings of the needed message 1
- 4 Binds serialised articles 1
- 5 Keeps the whole magazine 1
- 6 Binds the volumes of magazine 1
- 7. Indexes the contents of the magazine 1
- 8 No documentation 0

Quantification was done by assigning a score of one to each year, which was rounded off to nearest number, as used by Karippai (1988)

### Education

Education of an individual is the level of non-formal or formal education. In this study it is operationalised as the level of non-formal or formal education of the respondent. The scoring pattern of Trivedi (1963) was modified and quantification of different levels of education was done as follows:

Level	Score
Can read only, without any schooling	1
Can read and write without any schooling	2
Lower Primary (upto 4th standard)	3
Upper Primary (upto 7th standard)	4
High School	5
Pre-Degree or equivalent	6
Graduation and above	7

### Farming experience

Farming experience was defined as the total number of years the farmer has been engaged in farming. It was operationalised as the total period the individual has been involved in rubber cultivation. This was quantified based on the scale used by Rajendran (1978) and

Seema (1986), as the number of years the subscriber respondent has been engaged in rubber cultivation.

#### Size of holding

Size of holding was defined as the extent of land possessed by the individual. Size of holding of the respondent was the total area in standard acres including both wet land and garden land possessed by the respondent. This scale was used by Kamarudeen (1981)

#### Material possession

The material possession was measured in terms of the money value of the materials possessed by the respondent. The money value was assigned to each material based on respondents' assessment and in the case of discrepancies, market values of the materials were assigned with enough depreciation. The scale developed for the purpose was assigned to measure the variable

#### Annual income

Annual income for this study was operationally defined as the total income in an year from both main and subsidiary occupation. Quantification was done in rupees as used by Kamarudeen (1981)

## Social participation

Sadamate (1978) defined social participation of the respondent as participation in social institutions as a member or as an office bearer

Social participation was operationalised in this study as the extent of involvement of an individual in any formal organisation in his community. The scale used by Karippai (1988) was used with modification to suit this study. The social participation was measured in terms of the membership of the individual in the organisations as well as his frequency of participation in its activities. The scoring pattern of this variable was done as follows.

### 1) Membership or official position in organisations

(Such as social, political, cultural organisations, Co-operative Societies, trade unions, recreation clubs, etc.)

	Score
Office bearer of more than one organisation	5
Member in more than one organisation and office bearer in any one organisation	4
Member and office bearer in one organisation	3
Member in more than one organisation	2
Member in one organisation	1
Not a member in any organisation	0

11) Frequency of participation in the activities

Participates in all meetings and other activities regularly	2
Participates occasionally in meetings and other activities	1
Does not participate in meetings and other activities	0

The scores of (1) and (11) were added to get the score of social participation of a respondent

Cosmopolitaness

Rogers and Svenning (1969) defined cosmopolitaness as the extent of contact with outside the village such as visiting nearest town and membership in organisations outside the village

Cosmopolitaness of a respondent was measured in terms of his frequency of visit to the nearest city or town during a month and the purpose of visit. The scoring pattern was follows

1) Frequency of visit to the nearest town in a month

Frequency	Score
Never	0
Once in a month	1
Once in a fortnight	2
Once in a week	3
Twice or more in a week	4

11) Purpose of visit to the town in a month

Purpose	Score
Agricultural	1
Personal or domestic matters	1
Entertainment	1

The respondent is allowed to indicate any number of purpose Hence the potential score varies from one to three The score of (1) and (11) added to get the score of cosmopolitaness of the respondent

Innovativeness

Innovativeness was defined as the inclination of a farmer to develop interest in and desire to seek change in the existing practices related to farm and home and to adopt such changes as an when practical and feasible

Shilaja (1981) measured innovativeness with respect to adoption of high yielding varieties She used a set of five statements on a three point continuum as always, sometimes and never to which the scores assigned were 2, 1 and 0 respectively

Moulik (1965) developed a self-rating scale to measure the innovative proneness of farmers The scale consisted of three

sets of statements and each set contained three separate statements with weightage 3, 2 and 1, indicating high, medium and low degree of innovativeness respectively. After obtaining the most to least choices for each of the three sets of statements, the scoring was done by summing up the ratios of the weights of the 'most like' statements to the weights of the 'least like' statements.

The self-rating scale developed by Moulík (1965) was used with suitable modifications to measure innovativeness of the respondent subscribers.

#### Management orientation

Management orientation was defined as the various steps undertaken in advance by the farmer in planning, production and marketing.

For measuring the subscribers' management orientation, the scale developed by Samantha (1977) was used with appropriate modification. The scale consisted of eighteen statements, six each for planning, production and marketing orientations. For this study, the scale items were slightly modified to suit the situation. In each group, positive and negative statements were mixed. In the case of positive statements, a score of one was given for agreement and zero for disagreement. For a negative statement, the scoring pattern was reversed. The sum of the scores obtained by a respondent was taken as his score for management orientation.

## Level of knowledge

Level of knowledge was defined as the knowledge of farmer with respect to his farming. For the purpose of this study the level of knowledge was operationalised as the knowledge status of the respondent subscriber in the cultivation of rubber. Certain items were prepared by going through various cultivation aspects as well as the difficulties in rubber cultivation which are supposed to measure the level of knowledge of the subscribers. These items were subjected for their rating of relevancy to measure the level of knowledge on a three point continuum to 30 experts consisting of Field Officers, Assistant Development Officers and Development Officers of Rubber Board. Looking into the coefficient of agreement on the items by these experts, the number of items were reduced from fourteen to twelve. Quantification was done in such a way that each main item and sub item carries a score of one if it is correct and zero if incorrect. This test was used to measure the level of knowledge of the respondents in this study.

## 3 4 2 2 Constraints in transferring the message

Constraints in transferring the message is defined as the various hindrances which get into in the course of transfer of message which can occur at three levels, namely the encoding, transmission and decoding levels. At encoding level, the major constraints identified



were improper selection of message, faulty perception of audience profile by the author as perceived by the reader, defective identification of message units, confusing style of writing, and inappropriate title of the message. At the transmission level, the major constraints were untimely reach to the audience, insufficient clarity in printing, inadequate use of illustrations, improper layout and design and incompleteness of message. Irrelevance to attributes of innovation and lack of credibility of 'Rubber' magazine were noted as the major constraints at decoding level.

#### Constraints at encoding level

##### Improper selection of message

Improper selection of message was operationally defined as the lack of suitability of the message to the farming situation, time, economic status of the farmer or the requirement, which became a constraint in utilizing the farm magazine. Certain items were identified as constraints and these were subjected to scoring. The items selected were

- 1 Messages selected are not important under our farming situation
- 2 Messages selected are not practicable
- 3 Messages are not suitable to the farmer's financial condition
- 4 Messages are not selected on the basis of the need of the readers
- 5 Messages are not timely
- 6 The messages conveyed cover general problems, not the special ones

The scoring pattern was as follows

Rating	Score
Very much true in the case of this magazine	2
True to some extent in the case of this magazine	1
Not at all true in the case of this magazine	0

The score of all the six items were added together to get the score for the constraints in the selection of the message by a respondent.

Faulty perception of audience profile by the author as perceived by the reader

This variable was operationalised as the wrong visualisation of the audience profile by the author which made them write inappropriate items in the magazine, in terms of their comprehensibility, financial status, size of holding etc Three items were selected to measure this variable and they are as follows

Item

- 1 The comprehensibility of the farmers is not taken into consideration by the author.
- 2 The authors do not consider all categories such as small, medium and large farmers
3. The authors do not consider farmers of different financial status .

Scoring pattern was same as in the case of Improper selection of message

The cumulative score of the above three items were taken as the score of this variable for a subscriber respondent

#### Defective identification of Message Units

This variable was operationalised in this study as the inadequate sequential arrangement of the message and improper clustering of message units in one paragraph. The items identified to measure this variable were as follows

##### Items

- 1 Many times, one paragraph carries more than one message unit .
- 2 The message units are not arranged in sequence to suit the frame of reference of the reader

Scoring pattern was as followed in the previous constraints. The total score obtained by adding up the individual score for these two items gave the score of this variable

#### Confusing style of writing

This was operationally defined as the constraints in style of writing which comes in the way as difficulties in utilizing the magazine. This includes those constraints which do not ensure maximum

clarity, brevity and colour for easiness and efficiency in reading  
This variable was measured in terms of three subdimensions such as  
constraints in clarity, constraints in brevity and constraints in colour  
The following items were included to depict the subdimensions of this  
qualitative variable

a) Clarity

- 1 The messages are full of technical terms and so they are not understandable many times
- 2 The words used are tough ones that can be used to carry the intended meaning
- 3 Each sentence is not a simple one carrying one idea each

b) Brevity

- 1 The magazine contains more than necessary words in each sentence
- 2 The messages are not written with minimum possible number of sentences to contain the message
- 3 There is unnecessary lagging in message presented in the magazine
- 4 There is unwanted narration in the magazine

c) Colour (variety)

- 1 The length of paragraphs do not vary
- 2 Sentence structure and length do not vary
- 3 Varied examples and illustrations are not used
- 4 Posing questions and answering them is not used

Each of these items were quantified using a three point continuum as in the previous cases. The score of all eleven items were added to get the score for style of writing of the magazine as a constraint in utilizing the magazine by a respondent.

#### Inappropriate title of the message

Inappropriate title of the message as a constraint was functionally defined for this study purpose when the headings and subheadings were confusing, were not attractive, not simple, not appropriate and not presented in bold types. Four items were considered to measure the title of the message as a constraint in the utilization of the farm magazine, as follows:

#### Item

- 1 Title is not appropriate to the message dealt in the article
- 2 The title is not attractive and not presented in bold types
- 3 Short, crisp and simple words are not used for titles in this magazine
- 4 The messages are not clear because confusing headings and subheadings are given

Here also the scores were assigned as in the previous cases, based on the applicability of the item to the magazine.

The scores of all the items were added together to get the score of title of message as a constraint in utilization of magazine by a respondent

#### Constraints at transmission level

Constraints at transmission level were functionally defined as the faults that get into the message at the transmission level which act as constraints in the utilization of the magazine. Five situations in transmission level were identified in which obstructions in utilization of farm magazine could occur. These situations were

- Untimely reach to the audience
- Lack of clarity in printing
- Inadequate use of illustrations
- Improper layout and design
- Incompleteness of the message

#### Untimely reach to the reader

This variable is operationalised as the obstacle in utilization of the magazine due to late reach of the magazine when the relevance of the message was over. Items identified to measure the variable were as follows

#### Item

- 1 The magazine of one month does not reach the farmers in the respective month itself
- 2 When the magazine reaches the farmers, the time of practising the technology will be over .

These two items were quantified using a three point continuum as followed in the earlier cases. The score of the constraint by a respondent obtained by adding the scores of both the items together

#### Lack of clarity in printing

Lack of clarity in printing is functionally defined as the difficulties faced by the subscriber in utilization of the magazine due to inadequacy of the size of letter and printing irregularities. Items formulated to measure this variable were as follows

#### Item

- 1 The letter size used in the magazine is not adequate
- 2 There is overlapping in printing which causes difficulty in reading
- 3 Some parts of message may not get clearly imprinted in the magazine

These items were scored on three point continuum as in the previous cases. Scores obtained for all the items were added up to get the score for the variable by a respondent

### Inadequate use of illustrations

Inadequate use of illustrations was operationalised as the obstacle in utilization of the magazine due to lack of sufficient illustrations and use of confusing illustrations. Some items were identified to measure this variable as follows:

#### Item

1. Illustrations used will lead to confusion rather than making it clear.
2. The information is not easily understandable because it is not supported with proper illustrations.

Scores were assigned to each item based on its applicability to the magazine as done in the previous cases. Scores of both the items were added together to get the score for the variable.

### Improper layout and design

Improper layout and design was operationalised for this study as the defective placement of items in the pages of the magazine, keeping up its importance, sequence, and attraction, which may become constraints in utilization of the magazine. These limitations include inappropriate arrangement of message, photographs, and inadequacy of advertisement related to rubber cultivation. The items formulated



to measure this variable are given below

- 1 The important messages are not presented in the first few pages
- 2 The regularly occurring columns are not presented in the same pages
- 3 The photographs are not placed in appropriate places with proper captions
- 4 Each page of the magazine is not impressive to make a temptation to read
- 5 Informative advertisements relating to rubber cultivation are not given in the magazine

Scores were assigned in the same way as done in earlier cases. Total score obtained for all the five items gave the score for the variable of a respondent.

#### Incompleteness of the message

Incompleteness of the message is operationally defined as the constraint which arises when the information conveyed through message is incomplete or insufficient to be practised in the field condition. Items identified for measuring this variable is as given below.

#### Item

- 1 Each article of the magazine does not give all background details for the benefit of a new reader who is blank on the topic
- 2 All the natural doubts of the reader are <sup>not</sup> answered in every article of the magazine

3 Some message contains only few steps and the farmer cannot put into practice in the field

Scores were assigned to each, and pattern was similar to the previous cases. Cumulative score of all the three items gave the score for the variable

#### Constraints at decoding level

Constraints at the decoding level was operationalised as the difficulties in utilization of the magazine due to the peculiarities of the attributes of innovation and credibility attached to the 'Rubber' magazine by the respondent

#### Irrelevance to attributes of innovation

Attributes of innovation can be defined as the characteristics of the innovation such as its relative advantage over the existing one, observability of results, compatibility with the farming situation, degree of complexity and extent of trialability, that determines the rate of adoption of the innovation

Irrelevance to attributes of innovation was operationalised as innate qualities of the innovation which act as restrictions in the utilization of the magazine. The items formulated to measure this variable are given below

### Item

- 1 The newer technology that are given in the magazine are not profitable than existing one
- 2 Adoption of the message given involves high initial cost
- 3 The newer technology given are of high risk
- 4 Adoption of the messages do not help to save time
- 5 The results of the innovations that are given through the magazine are not observable
- 6 The innovations suggested in the magazine are not compatible with the culture of the client
- 7 Material resources of the farmer are not taken into consideration while suggesting innovations in the magazine
- 8 Potential of the reader to adopt is not taken into consideration while suggesting innovations in the magazine
- 9 The innovations cannot be tried on smaller scale
- 10 The innovations are complex to practice

These items were scored as followed in the previous cases and the score obtained for each item was added upto give the score of the variable of a respondent

#### Lack of credibility of 'Rubber' magazine

Berlo (1960) defined credibility as the degree to which the communication is perceived as trustworthy and competent by the receiver. In this context, the variable is operationalised as the

constraints in utilising the magazine due to the inadequate credibility attached to the 'Rubber' magazine as a medium of communication in the transfer of technology related to the rubber cultivation for the rubber grower. To find out the extent of credibility attached to 'Rubber' magazine, initially seven possible sources which were supposed to be competent enough and frequently used to give information regarding rubber cultivation to rubber growers were identified. These seven sources include radio, newspaper, field officer of Rubber Board, 'Rubber' magazine, officials of State Department of Agriculture, President of Rubber Producers' Society and other rubber growers. The respondents were asked to rank these seven sources from one to seven according to the extent of credibility attached to each one of the items. The credibility of 'Rubber' magazine only was converted from rank order to scores. Whenever the magazine was rated as the most credible source, attaching the first rank, it was clear that the credibility factor was not coming as a constraint in utilisation of the magazine. Likewise, whenever the credibility attached to the magazine was perceived as the least, it was considered to be an important constraint. Accordingly, minimum constraint score was given to the magazine when it was the most credible source and maximum constraint score, when it was the least credible one. The scoring pattern was as follows

Rank Order	Score
1	1
2	2
3	3
4	4
5	5
6	6
7	7

Score obtained for each respondent gave the score for the variable

### 3 5 Techniques of data collection

The data for this study were collected using a distributed questionnaire<sup>s</sup>. The respondents were requested to mark their responses in presence of the investigator. The questionnaire was prepared in Malayalam for easiness in reading and answering the questions. Doubts were clarified in detail as and when required, by personally assisting each respondent to fill up the questionnaire.

### 3 6 Statistical methods used

Data collected from the farmer readers and expert respondents were coded, tabulated and analysed using the following statistical methods

### Pearson's product moment correlation

This coefficient was used to study the nature and degree of relationship between each of the personal characteristics of the respondents and the dependent variable. Analyses were also made between the constraints in transferring the message and the dependent variable. The computed value of  $t$  was tested for its significance using the table value of Student's ' $t$ ' at  $n-2$  degrees of freedom.

### Multiple regression analysis

Multiple regression analysis was used to determine the joint influence of the selected personal characteristics on the dependent variable. The joint influence of constraints in transferring the message on the dependent variable was also determined.

The percentage variation explained by the personal characteristics and the constraints in transferring the message on the dependent variable was estimated by calculating the coefficient of determination ( $R^2$ ). The multiple correlation coefficient ( $R$ ) which measures the degree of joint relationship between the predictor and predicted variables was also calculated and these were also tested for statistical significance.

### Multivariate path coefficient analysis

Path analysis originally developed by Wright (1921) was made use of to assess direct and indirect effect of the personal characteristics

on the dependent variable in the prediction model. The relative contribution of different personal characteristics on the dependent variable was also evaluated through path analysis.

### Path diagram

The results of path analysis were presented diagrammatically in a diagram called path diagram.

# *Results*

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## CHAPTER-IV

### RESULTS

This chapter deals with results obtained in this study. Keeping the objectives in view, the findings are presented in the following sequence:

1. Distribution of respondents based on their selected personal characteristics
2. Level of utilization of 'Rubber' magazine by the respondents
3. Relationship of utilization of 'Rubber' magazine by the respondents with their selected personal characteristics
4. Contribution of different constraints in transferring the message
5. Relationship of utilization of 'Rubber' magazine by the respondents with the constraints in transferring the message

#### Distribution of respondents based on their selected personal characteristics

An attempt was made to know the distribution of respondents based on their selected personal characteristics and the results are presented in Table 1.

A perusal of Table 1 revealed that majority of respondents were in high category in the case of four variables namely education, innovativeness, cosmopolitaness and level of knowledge. Maximum

number of respondents (69.5 per cent) in high category was observed for the variable education, which was followed by innovativeness (57 per cent) with regard to all other variables more than 50 per cent of respondents were found in low category. The variable farming experience had maximum number of respondents in low category (81.5 per cent) followed by size of holding (77 per cent), material possession (70.5 per cent), annual income (65.5 per cent), social participation (61.5 per cent), management orientation (55 per cent) and age (53.5 per cent) in the descending order.

#### Levels of utilization of 'Rubber' magazine by the respondents

An effort was made to know the distribution of the respondents with respect to their level of utilization of 'Rubber' magazine and the results are depicted in Table 2.

An overview of Table 2 revealed that the respondents varied to a considerable extent in their level of utilization of 'Rubber' magazine (28-79). On further classification of these respondents to low and high category, it was found that there was almost equal distribution of respondents in both the groups. The noticeable fact is that the respondents could reach only to a maximum level of 79 in the utilization of 'Rubber' magazine, even though theoretically they could have attained an index upto 100.

Table 1. Distribution of respondents based on their selected personal characteristics

(n = 200)

Sl No	Characteristics	Category	Score range	Number	Per cent
1	Age	Low	21-44	107	53.5
		High	45-75	93	46.5
2	Education	Low	2-4	61	30.5
		High	5-7	139	69.5
3	Innovativeness	Low	2-9	86	43.0
		High	10-18	114	57.0
4	Management orientation	Low	3-11	110	55.0
		High	12-13	90	45.00
5	Social participation	Low	0-3	123	61.5
		High	4-7	77	38.5
6	Cosmopolitaness	Low	0-3	97	48.5
		High	4-7	103	51.5
7	Farming experience (years)	Low	1-21	163	81.5
		High	22-42	37	18.5
8	Size of holding (acres)	Low	0.2-5.83	154	77.0
		High	5.84-112.5	46	23.0
9	Material possession (Rs )	Low	6000-437034.5	141	70.5
		High	437035-6000000	59	29.5
10	Annual income (Rs )	Low	1200-28113.5	131	65.5
		High	28114-420000	69	34.5
11	Level of knowledge	Low	4-11	87	43.5
		High	12-17	113	56.6

Table 2 Distribution of respondents based on their levels of utilization of 'Rubber' magazine

(n = 200)

Sl No	Category	Range*	Number	Per cent
1	High	52-79	98	49
2	Low	28-51	102	51

\*Total potential range = 0-100

Relationship of utilization of 'Rubber' magazine by the respondents with their selected personal characteristics

The results of the relationship of utilization of 'Rubber' magazine by the respondents with their personal characteristics are presented in Table 3

It was indicated that only three variables namely management orientation, social participation and cosmopolitaness showed significant relationship with the utilization of 'Rubber' magazine. The variables management orientation and social participation were having significant relationship at 0.05 level of significance while cosmopolitaness have significant relationship at 0.10 level of significance. The degree of relationship was maximum in the case of management orientation (r = 0.194) closely followed by social participation (r = 0.186). The relationship of other variables were found to be very low.

Table 3 Relationship between the utilization of 'Rubber' magazine by the respondents and their selected personal characteristics (n = 200)

Var No	Characteristic	Correlation coefficient (r)
X <sub>1</sub>	Age	0 105
X <sub>2</sub>	Education	0 119
X <sub>3</sub>	Innovativeness	0 108
X <sub>4</sub>	Management orientation	0 194
X <sub>5</sub>	Social participation	0 186
X <sub>6</sub>	Cosmopolitaness	0 166 <sup>+</sup>
X <sub>7</sub>	Farming experience	0 001
X <sub>8</sub>	Size of holding	-0 093
X <sub>9</sub>	Material possession	0 002
X <sub>10</sub>	Annual income	-0 019
X <sub>11</sub>	Level of knowledge	0 160

\*\* Significant at 0 05 level

+ Significant at 0 10 level

### Multiple regression analysis

The picture given by correlation coefficient showed that three of the personal characteristics such as management orientation, social participation and cosmopolitaness had some effect on utilization of 'Rubber' magazine by the respondents. However, the utilization of 'Rubber' magazine was not fully influenced by any one of these variables selected in isolation, but by all of them as a part of an interdependent system with reciprocal and interactive relationships. Hence, the joint influence of all the selected personal characteristics was determined through the multiple regression analysis. The variable, farming experience ( $X_7$ ) was deleted from multiple regression analysis since the correlation coefficient obtained for that variable was negligibly low. The results of multiple regression analysis of the rest selected personal characteristics is displayed in Table 4.

The findings of the analysis revealed that only three out of the ten selected personal characteristics namely education, management orientation and social participation were significant at 0.05 level in explaining the variation in utilization of 'Rubber' magazine by the respondents. The coefficient of determination ( $R^2$ ) was found to be 0.104. This showed that the variation in utilization of 'Rubber' magazine to an extent of 10.4 per cent was explained by the presence of all ten variables put together. This coefficient of determination was found to be significant at 0.01 level of probability.

Table 4 Results of multiple regression analysis of selected personal characteristics of respondents with their utilization of 'Rubber' magazine

(n = 200)

Var No.	Characteristic	Regression coefficient	t value
X <sub>1</sub>	Age	0.11015	1.852
X <sub>2</sub>	Education	1.3405	2.036 <sup>*</sup>
X <sub>3</sub>	Innovativeness	0.33078	1.076
X <sub>4</sub>	Management orientation	1.1698	2.3630
X <sub>5</sub>	Social participation	1.0032	2.462
X <sub>6</sub>	Cosmopolitaness	0.79646	1.705
X <sub>8</sub>	Size of holding	-0.06907	-1.111
X <sub>9</sub>	Material possession	-0.00000438	-0.334
X <sub>10</sub>	Annual income	0.00000868	0.084
X <sub>11</sub>	Level of knowledge	0.49154	1.677

R<sup>2</sup> (coefficient of determination) = 14.9 per cent

Adjusted R<sup>2</sup> = 10.4 per cent

F value = 3.32<sup>\*\*</sup>

<sup>\*</sup> Significant at 0.05 level

<sup>\*\*</sup> Significant at 0.01 level

## Path analysis

The simple correlation coefficients indicated the degree and nature of relationship of the selected personal characteristics with the utilization of 'Rubber' magazine by the respondents, while the multiple regression analysis revealed the combined influence of all selected personal characteristics on utilization of the magazine. It could be of interest to split the amount of relationship that a particular characteristics had with the utilization of this magazine into (i) its direct influence on the utilization of the magazine and (ii) the possible indirect effect on the utilization of the magazine. Since this sort of influence was not available in the earlier analysis, the data were subjected to the multivariate path analysis in order to get the desired information. The path analysis would empower one to estimate separately direct and indirect effects of each selected personal characteristics on the utilization of 'Rubber' magazine and the results are shown in Tables 5 and 6.

It was interesting to note that social participation had the highest direct effect on utilization of 'Rubber' magazine followed by management orientation. The remaining variables such as education, age, cosmopolitaness, level of knowledge, innovativeness, annual income, material possession and size of holding had comparatively smaller direct effects on utilization of magazine in that order. The Table further revealed that cosmopolitaness possessed highest total indirect effect followed by level of knowledge.



Table 5 Path analysis of selected personal characteristics of the respondents with their utilization of 'Rubber' magazine

	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	X <sub>6</sub>	X <sub>8</sub>	X <sub>9</sub>	X <sub>10</sub>	X <sub>11</sub>	Correlation coefficient
X <sub>1</sub>	<u>.1364</u>	-.0436	0056	- 0188	0214	.00587	- 0077	- 0061	0007	01143	0.105
X <sub>2</sub>	- 0403	<u>1477</u>	- 0003	.0215	- 0041	- 0071	.0008	- 0030	0001	0022	0.119
X <sub>3</sub>	0103	- 0005	<u>0737</u>	0134	.0064	0090	- 0018	0008	- 0007	-.0023	0.108
X <sub>4</sub>	-.0155	.0202	0059	<u>.16547</u>	- 01189	0063	0109	0049	-.00056	.0085	.194*
X <sub>5</sub>	0171	- 0035	0028	- 0115	<u>1699</u>	.0147	- 0094	- 0004	0004	0096	.186*
X <sub>6</sub>	0066	-.0088	00567	.00873	02124	<u>11766</u>	00778	-.0013	000337	0079	.166
X <sub>8</sub>	01255	-.00147	0016	- 0213	+ 01886	- 01082	<u>- 08461</u>	- 01120	0022	+ 001	-.093
X <sub>9</sub>	.030	0161	-.0021	- 0292	02549	0055	-.03482	<u>- 0278</u>	.0029	.0155	.002
X <sub>10</sub>	0158	0019	- 008	-.014	0112	0061	- 0297	- 0124	<u>0064</u>	0035	-.019
X <sub>11</sub>	.0135	0028	- 0015	.01224	014278	.0081	- 0008	-.0037	0002	<u>11509</u>	.160

X<sub>1</sub> = Age  
 X<sub>2</sub> = Education  
 X<sub>3</sub> = Innovativeness  
 X<sub>4</sub> = Management orientation  
 X<sub>5</sub> = Social participation

X<sub>6</sub> = Cosmopolitaness  
 X<sub>8</sub> = Size of holding  
 X<sub>9</sub> = Material possession  
 X<sub>10</sub> = Annual income  
 X<sub>11</sub> = Level of knowledge

Table 6 Rank order of selected personal characteristics of the respondents in path analysis  
(n = 200)

Var. No	Characteristics	Direct effect		Total indirect effect		Largest indirect effect	
		Effect	Rank	Effect	Rank	Effect	Through variable No.
X <sub>1</sub>	Age	0 1364	IV	-0 0314	IX	0 0214	X <sub>5</sub>
X <sub>2</sub>	Education	0 1477	III	-0 0287	VIII	0.0215	X <sub>4</sub>
X <sub>3</sub>	Innovativeness	0 0737	VII	0 0348	III	0 0134	X <sub>4</sub>
X <sub>4</sub>	Management orientation	0 1655	II	0.0285	V	0.0202	X <sub>2</sub>
X <sub>5</sub>	Social participation	0 1699	I	0 0161	VI	0 0171	X <sub>1</sub>
X <sub>6</sub>	Cosmopoliteness	0 1176	V	0 0484	I	0.0212	X <sub>5</sub>
X <sub>8</sub>	Size of holding	-0 0846	X	-0 0084	X	0 0188	X <sub>5</sub>
X <sub>9</sub>	Material possession	-0 0278	IX	0 0298	IV	0.030	X <sub>1</sub>
X <sub>10</sub>	Annual income	0 0064	VIII	-0 0254	VII	0 0158	X <sub>1</sub>
X <sub>11</sub>	Level of knowledge	0 11509	VI	0 0449	II	0.0142	X <sub>5</sub>

The Table also explained the variables such as age, cosmopolitaness, size of holding and level of knowledge had their largest indirect effect through social participation. Social participation in turn is having its largest indirect effect through age.

#### Contribution of different constraints in transferring the message

An effort was made to find out the contribution of different constraints in transferring the message and results are depicted in Table 7.

It was revealed from the Table that faulty perception of audience profile by the author as perceived by the reader was identified by most of the respondents as the major constraint at encoding level, followed by defective identification of message units.

At the transmission level, untimely reach to the audience followed by incompleteness of the message were projected as major constraints in utilising the 'Rubber' magazine.

The two constraints namely the irrelevance of attributes of innovation and lack of credibility of 'Rubber' magazine were ranked first and second in that order as the major constraints at decoding level in utilizing the 'Rubber' magazine.

Table 7. Contribution of different constraints in transferring the message  
(n = 200)

Var No.	Characteristics	Potential score	Obtained score	Index	Rank
<u>A Encoding level</u>					
X <sub>12</sub>	Improper selection of message	2400	640	26 92	III
X <sub>13</sub>	Faulty perception of audience profile by the author as perceived by the reader	1200	485	40 45	I
X <sub>14</sub>	Defective identification of message units	800	277	34 63	II
X <sub>15</sub>	Confusing style of writing	4400	1120	25 45	IV
X <sub>16</sub>	Inappropriate title of the message	1600	264	16 5	V
<u>B Transmission level</u>					
X <sub>17</sub>	Untimely reach to the audience	800	350	44 13	I
X <sub>18</sub>	Lack of clarity in printing	1200	375	31 25	IV
X <sub>19</sub>	Inadequate use of illustrations	800	257	32 13	III
X <sub>20</sub>	Improper layout and design	2000	535	26 75	V
X <sub>27</sub>	Incompleteness of message	1200	471	39 25	II
<u>C Decoding level</u>					
X <sub>22</sub>	Irrelevance to attributes of innovation	4000	1573	39 35	I
X <sub>23</sub>	Lack of credibility of 'Rubber' magazine	1400	537	38 35	II

Relationship of utilization of 'Rubber' magazine by the respondents with the constraints in transferring the message

The relationship between the utilization of 'Rubber' magazine by the respondents and the constraints in transferring the message is shown in Table 8

It was clear from these results that none of the constraints had any significant relation with the utilization of 'Rubber' magazine by the respondents. But there exists some relationship between these constraints and utilization of the magazine. At encoding level, defective identification of message units, confusing style of writing and inappropriate title of message had positive relationship with the utilization of 'Rubber' magazine by the respondents, while improper selection of message and faulty perception of audience profile by the author as perceived by the reader had a negative trend.

Lack of clarity in printing and inadequate use of illustrations showed positive trend in their relationship with utilization of 'Rubber' magazine at transmission level. Incompleteness of message, untimely reach to the reader and improper layout and design recorded a negative trend at transmission level.

Both the constraints at the decoding level namely irrelevance to attributes of innovation and lack of credibility of 'Rubber' magazine showed a positive trend.

Table 8. Relationship between the utilization of 'Rubber' magazine by the respondents and the constraints in transferring the message  
(n = 200)

Var No	Characteristic	Correlation coefficient (r)
<u>A Encoding level</u>		
X <sub>12</sub>	Improper selection of message	-0.005
X <sub>13</sub>	Faulty perception of audience profile by the author as perceived by the reader	-0.037
X <sub>14</sub>	Defective identification of message units	0.065
X <sub>15</sub>	Confusing style of writing	0.045
X <sub>16</sub>	Inappropriate title of the message	0.008
<u>B Transmission level</u>		
X <sub>17</sub>	Untimely reach to the reader	-0.071
X <sub>18</sub>	Lack of clarity in printing	0.046
X <sub>19</sub>	Inadequate use of illustrations	0.042
X <sub>20</sub>	Improper layout and design	-0.150
X <sub>21</sub>	Incompleteness of the message	-0.005
<u>C Decoding level</u>		
X <sub>22</sub>	Irrelevance to attribute of innovation	0.039
X <sub>23</sub>	Lack of credibility of 'Rubber' magazine	0.064

## Multiple regression analysis

The results of multiple regression analysis are given in Table 9

It is evident from Table 9 that only faulty perception of audience profile by the author as perceived by the reader had significant contribution to the utilization of 'Rubber' magazine by the respondents at 0.1 level of probability. No other variable showed any significant contribution to the utilization of the magazine.

Table 9 Results of multiple regression analysis of constraints in transferring the message with the utilization of 'Rubber' magazine

Var. No	Characteristic	Regression coefficient	't' value
<u>A Encoding level</u>			
X <sub>12</sub>	Improper selection of message	-0 17737	-0 449
X <sub>13</sub>	Faulty perception of audience profile by the author as perceived by the author	-1 0109	-1 748 <sup>+</sup>
X <sub>14</sub>	Defective identification of message units	0 33976	0 417
X <sub>15</sub>	Confusing style of writing	0 29775	1 286
<u>B Transmission level</u>			
X <sub>17</sub>	Untimely reach to the reader	-0 42143	-0 551
X <sub>18</sub>	Lack of clarity in printing	0 29977	1 162
X <sub>19</sub>	Inadequate use of illustrations	1 3294	1 485
X <sub>20</sub>	Improper layout and design	-0 54482	-0 923
X <sub>21</sub>	Incompleteness of message	0 33766	0 586
<u>D Decoding level</u>			
X <sub>22</sub>	Irrelevance to attributes of innovation	-0 00394	-0 161
X <sub>23</sub>	Lack of credibility of 'Rubber' magazine	0 25975	0 408

<sup>+</sup> Significant at 0.1 level

R<sup>2</sup> (coefficient of determination) = 9 per cent

Adjusted R<sup>2</sup> = 2.1 per cent

F value = 1.30



## *Discussion*

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## CHAPTER-V

### DISCUSSION

This chapter presents the discussion on the results obtained in this study. It is arranged in the sequence as that of the results, such as the distribution of respondents based on their selected personal characteristics, level of utilization of 'Rubber' magazine by the respondents, relationship of utilization of 'Rubber' magazine by the respondents with their selected personal characteristics, contribution of different constraints in transferring the message, and the relationship of utilization of 'Rubber' magazine by the respondents with the constraints in transferring the message.

#### 4.1 Distribution of respondents based on their selected personal characteristics

A close observation of the profile of the sample presented in Table 1, indicated that the sample was more or less following an even distribution, except for a few variables.

Further it could be observed from the results that education was fairly high for the entire sample as indicated by the good number of respondents in the high group. This might be due to the higher literacy level of the state in toto and of the higher levels of formal education of the farming population particularly in this

commercial crop which is more or less remunerative enterprise Unlike other crops in Kerala, there was a tremendous increase in the area of rubber during the recent past and more number of educated youth has entered this enterprise prompted by its high returns, and adopted this as an area of self-employment. There was increase in area under rubber cultivation in the State from 23770 ha in 1981-82 to 379670 ha in 1988-89 (Government of Kerala, 1991).

Similarly, the sample also showed a good standing in the case of innovativeness It is only natural to get this result as the publishers of 'Rubber' magazine, Rubber Board, has been constantly motivating the farmers to adopt new technology, particularly trying to bring all innovative farmers under the fold of their umbrella High innovativeness among rubber growers has got a backing of history as this is an introduced crop in Kerala which was originally adopted by the highly innovative farming section, and later by other progressive farmers Above all, this crop is highly remunerative and less risky compared to other agricultural crops of the state, making more adoption of the advanced technology out of their innovativeness

Likewise, the sample showed that most of the respondents were in the high category in the case of cosmopolitanism and level of knowledge By nature, the home consumption of the agricultural produce of this crop is negligible and for the smooth marketing of the produce one had to have a net work of contacts outside his social

system So, for the rubber grower, high cosmopolitaness turned to be an inevitable requirement.

As noted elsewhere, this introduced crop had a good establishment in this part due to thorough transfer of technology geared by the 'Rubber Board' A good net work of Rubber Producers' Societies were established recently with the objectives of strengthening the system of transfer of technology to small farmers and to make small farmers aware of the advanced processing and marketing of the produce Again, the Rubber Producers' Societies might also have played a good role in improving the level of knowledge of the rubber growers with the constant extension contact built in its system Moreover, the high information seeking behaviour of the rubber growers, encouraged by the high payments of the crop is also to be taken into consideration as a reason for the high level of knowledge

It is to be noted that for the variable farming experience, most of the respondents were found accumulated in low category The probable reason might be that younger age group might have been included more in the sample since it was random sample of the subscribers of 'Rubber' magazine and the younger age group might be utilizing the print medium more than the older age group. It is natural to see less farming experience for younger age group This was supported by a good number of respondents falling in low category for the variable age also

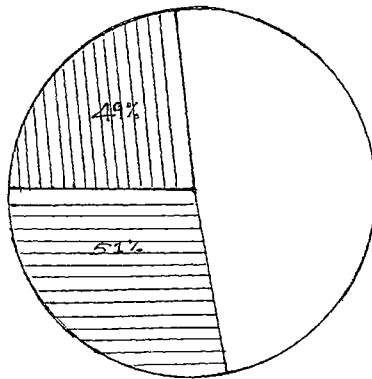
The variables size of holding, material possession and annual income had their respondents more in the low group. The low category of size of holding was confined to within five acres, so all the low category respondents could be called as small farmers. There was an upswing in the number of small farmers adopting rubber cultivation probably due to its higher returns. The Land Reforms Act introduced in Kerala two decades back, which was a pioneer attempt in the country, has also led to fragmentation of holdings, which created of more number of small farmers. This also might have contributed in getting the present results with more small farmers in the sample.



In the case of material possession and also for annual income, a good number of respondents were found in the low category. The intercorrelation (Appendix-I) between size of holding and material possession as well as size of holding and annual income showed strong significant relationships. So, it is logical to have majority of respondents in low category for these two variables as the size of holding was also having the majority in low category.

#### 4.2 Level of utilization of 'Rubber' magazine by the respondents

The results in Table 2 revealed that there was a considerable variation in the utilization of 'Rubber' magazine though almost equal number of respondents have been found in low and high category. The respondents could not attain the full potential in utilization of the magazine (The maximum potential score being 100).

Fig 3 Pie diagram showing the distribution of respondents based on their level or utilization of 'Rubber' magazine



 - LOW CATEGORY  
 - HIGH CATEGORY

These findings point to certain reading habits of a highly literate society. As Klare (1963) pointed out that perpetual habits in reading, once they are firmly established, become rather mechanical in nature. In such cases reading achievements become less, unless there is a set to learn which is a specific kind of motivation. Nevertheless, this 'set to learn' would always be influenced by the felt needs of the individual also. The variation in felt needs might have contributed to the differential utilization of the magazine.

The principle of 'selectivity in attention' of the readers might be another plausible reason for the variation in utilization of the magazine and their inability to attain the full potential. This principle suggests that at any given moment, the receiver attends to only a small portion of the sensory information provided by his environment, and he organises it in certain ways (Secord and Backman, 1964). While reading the magazine, this selective attention might have worked leading the reader to concentrate on certain aspects and attend well only to them resulting in differential utilization of the 'Rubber' magazine.

Another rationale that could be attributed to these findings related to the style of reading of respondents, in particular the skimming behaviour, as Wainwright (1972) put it, wherein the reader seeks out the important information that the writer is trying to communicate and discarding everything that is of secondary or

minor importance, through quick eye movements across and down the page. Skimming may not lead to full utilization, particularly for a technical write up like in the farm magazine 'Rubber'.

These apart, the deficiencies in storage and follow-up of the magazine, influenced by inherent personal characteristics might also have influenced the variation in utilization index.

Above all, the innate inadequacies of the magazine in transferring the message also might have contributed to the lack of attainment of the full potential in utilization of 'Rubber' magazine.

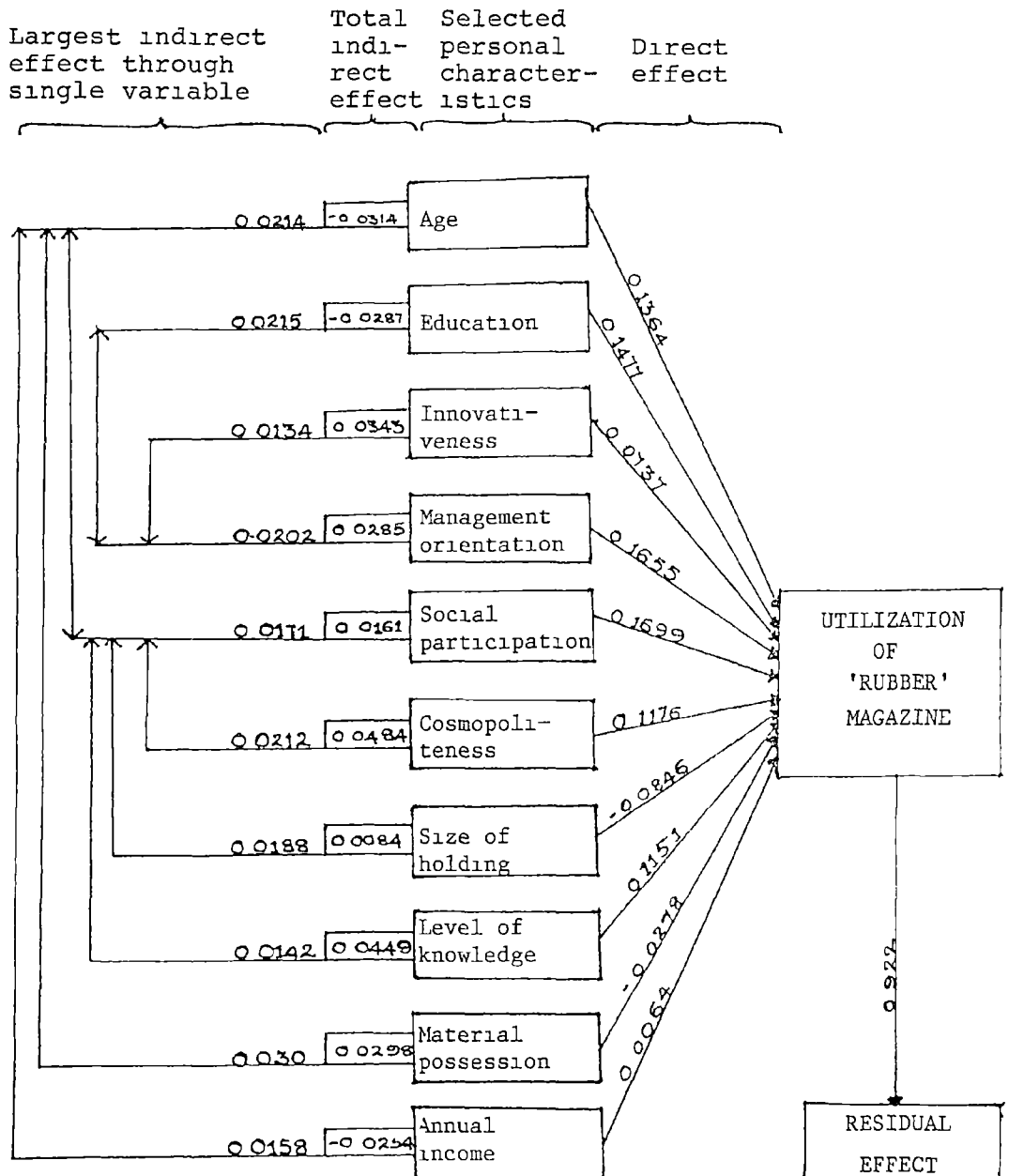
Based on the above finding the hypothesis there would no variation in the utilization of farm magazine 'Rubber' among its subscribers was rejected.

#### 4.3 Relationship of utilization of 'Rubber' magazine by the respondents with selected personal characteristics

The results obtained from simple correlation coefficients, multiple regression analysis and path analysis were taken into consideration for discussing the relationship of various selected personal characteristics with the utilization of 'Rubber' magazine by the respondents. It would be seen from Table 3 that management orientation, social participation and cosmopolitanism were significantly related to the utilization of the magazine with the highest degree of relationship for management orientation. Later, regression coefficients (Table 4) pointed to the variables social participation, management orientation and education, which contributed significantly in utilizing the magazine, with a maximum regression coefficient for social participation.



Fig.4. PATH DIAGRAM SHOWING THE DIRECT AND INDIRECT EFFECT OF SELECTED PERSONAL CHARACTERISTICS OF THE RESPONDENT ON THEIR UTILIZATION OF 'RUBBER' MAGAZINE.



From Table 5 the significant correlation coefficient of management orientation obtained was due to its high direct effect on utilization of 'Rubber' magazine which was supplemented by a good contribution of indirect effect of the variables education and size of holding. The reason for the significant correlation of social participation with the utilization of 'Rubber' magazine can be attributed to the high direct effect of the variable which was supplemented by a fairly high indirect effect of age and cosmopolitaness. Cosmopolitaness of the respondents had significant correlation with the utilization of 'Rubber' magazine. This was probably due to high direct effect of the variable and a high indirect effect of social participation.

Table 5 also revealed that although age had got a high direct effect, the correlation coefficient found to be low which was due to negative indirect effect of the variables education, management orientation, size of holding and material possession on age. Likewise, education also got a nonsignificant correlation coefficient though the direct effect of education on the utilization of 'Rubber' magazine was high. The probable reason was the negative indirect effect of the variables age, innovativeness, social participation, cosmopolitaness and material possession. The variable level of knowledge did not possess a significant correlation with the utilization of 'Rubber' magazine though it had a relatively high direct effect. This might be due to the negative indirect effect of innovativeness, size of holding and material possession.

Further Table 6, social participation and cosmopolitaness turned out to be the important variables in terms of their direct and indirect effects respectively

Social participation emerged as the most important personal characteristic among the selected personal characteristics due to its significant correlation coefficient, maximum regression coefficient and maximum direct effect on the utilization of 'Rubber' magazine

It is only logical to assume that an individual who was having high social participation was to be well acquainted with technical subject matter in order to act as a link in the transfer of technology to his immediate surrounding masses. For that, he had to utilize the 'Rubber' magazine to a higher extent. So it is quite reasonable to have a strong relationship between social participation and utilization of 'Rubber' magazine. Moreover, the Rubber Producers' Societies working well with the transfer of technology functions also envisage rubber growers to utilize the magazine and improve the cultivation of rubber.

This result is in contradiction with Singh (1981) and Nanjappa (1982)

Management orientation was found to be the next important variable in explaining the utilization of 'Rubber' magazine owing to highest significant relationship with the utilization of the magazine and with a significant regression coefficient.

The probable reason for the significant relationship of management orientation and utilization of magazine could be attributed to the quest of the respondent for thorough knowledge of the farm practices in advance towards a perfect management of his plantation. Thus, the respondent was put in a position of better utilization of 'Rubber' magazine in order to meet the requirement for the same. Rubber, being a highly remunerative commercial crop, demands good management to yield the desired income, which is often focussed in the articles of the magazine. This might be another reason for the significant relationship of management orientation with the utilization of the magazine.

This result is in line with the findings of Bhaskaran (1979) and Kareem (1984).

Cosmopolitaness was indicated as another important variable as evident from significant relationship with the utilization of 'Rubber' magazine and possess the maximum indirect effect in explaining the variation in utilization of the magazine.

It is to be noticed that one who is highly cosmopolite had more chance of getting awareness about the advanced technology than one who is less cosmopolite. In order to get a clear picture of the technology for proceeding from the awareness stage to the adoption stage, the individual had to acquire sufficient information regarding it. Cosmopolitaness would expose the individual to the world of

changing know-how and create a desire to learn the innovations which are aptly served in the pages of the magazine

The result was in line with the findings of Rajan (1982), Sherief (1985) and Subramoniam (1986)

An overview of Table 4 revealed education also had significant influence in the utilization of 'Rubber' magazine as explained by the regression coefficients. It is quite natural that people who had higher educational status might have trusted the printed word more to satisfy their cognitive needs.

The negative trend in intercorrelation of education with the constraints in transferring the message is also a clear indication for the easiness in utilizing the 'Rubber' magazine for highly educated group.

The result was in line with the findings of Nagarajan (1982), Nanjappa (1982) and Subramoniam (1986)

A cursory look of Table 4 pointed out a positive trend in relationship of age with the utilization of 'Rubber' magazine.

As the age increases there could be a trend to have more involvement in the farming enterprise and consolidation of their span of attention to their vocation. At this juncture, the magazine 'Rubber'

100

might have functioned as an agent to satisfy the cognitive needs in farming, leading to more utilization of the magazine

This finding was in agreement with the results of Munegowda (1978), Sharma (1983), Chindanandappa (1985), Mahajan and Dhaliwal (1990)

A glance of Table 4 also revealed that the level of knowledge had a positive trend in relationship with the utilization of 'Rubber' magazine. As the level of knowledge of an individual increases, there could have been a tendency to adopt more of modern practices. Accuracy is an important factor in the adoption of modern practice. To gain an accurate information for the implementation of the modern practice to one's plantation, he might have utilized the 'Rubber' magazine as the source of information.

It should be noted that material possession had a negative trend in relationship with the utilization of 'Rubber' magazine as indicated in Table 4.

An individual with high material possession might be possessing larger holding. This could be justified by the significant inter-correlation (Appendix-I) between material possession and size of holding. To be on the safer side, while adopting a farm practice for a larger holding, the individual might have depended more on word of mouth rather than print medium. Moreover, such information

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would appear to be more valid to him as the message might be transferred in an interpersonal communication situation where feedback was instantaneous and clarification quicker. This might be the probable reason for this trend in results.

An overview of Table 3 and Table 4 revealed a negative trend in relationship of size of holding with the utilization of 'Rubber' magazine.

The small farmer, who cultivates a countable number of rubber trees in his Orchard, will always be cautious about the management of the crop as he cannot afford to take a risk of any crop failure. This will in turn increase the information seeking behaviour of the small farmer, which might have contributed in yielding the results obtained here.

Based on the results the hypothesis there would be no significant relationship between the personal characteristics of the subscribers and their utilization of 'Rubber' magazine was accepted except for the variables education, social participation and management orientation.

#### 4.4 Contribution of different constraints in transferring the message

Table 7 gave a picture of the contributions of different constraints in transferring the message of encoding, transmission and decoding levels.

##### 4.4.1 Encoding level

Faulty perception of audience profile by the author as perceived by the reader was identified as the most important constraint in the utilization of 'Rubber' magazine by less than half of the sample at

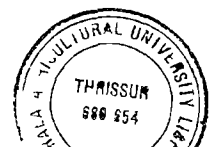
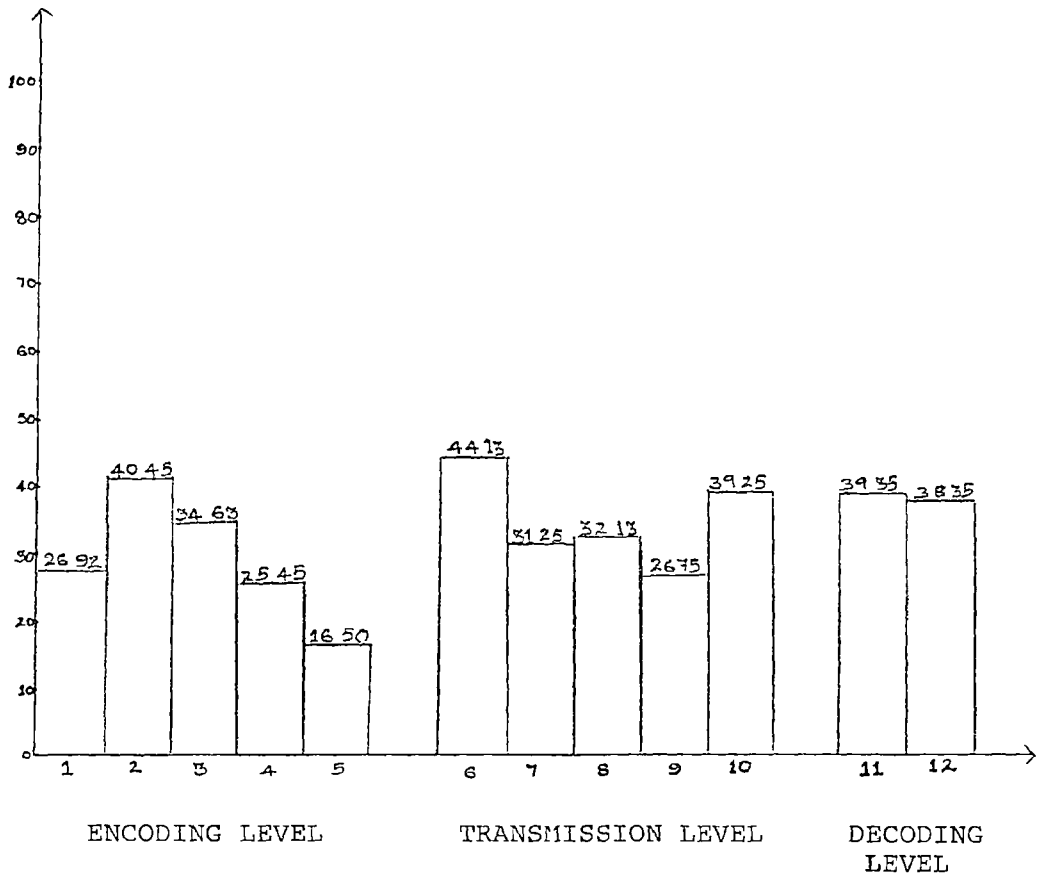


Fig.5. BAR DIAGRAM SHOWING THE CONTRIBUTION OF CONSTRAINTS IN TRANSFERRING THE MESSAGE IN THE UTILIZATION OF 'RUBBER' MAGAZINE.



1. IMPROPER SELECTION OF MESSAGE.
2. FAULTY PERCEPTION OF AUDIENCE PROFILE BY THE AUTHOR AS PERCEIVED BY THE READER.
3. DEFECTIVE IDENTIFICATION OF MESSAGE UNITS.
4. CONFUSING STYLE OF WRITING.
5. INAPPROPRIATE TITLE OF THE MESSAGE.
6. UNTIMELY REACH TO THE AUDIENCE.
7. LACK OF CLARITY IN PRINTING.
8. INADEQUATE USE OF ILLUSTRATIONS.
9. IMPROPER LAYOUT AND DESIGN.
10. INCOMPLETENESS OF MESSAGE.
11. IRRELEVANCE TO ATTRIBUTES OF INNOVATION.
12. LACK OF CREDIBILITY OF 'RUBBER' MAGAZINE.



encoding level. As this is a mass medium, it cannot cater to the needs of each and every individual receiver, who is a member of the heterogeneous mass audience. So it is quite natural to get this result.

Next major constraint according to the respondents was the defective identification of message units. In a discussion on the different parts in an agricultural article, Patterson (1946) stressed that if the reader cannot see at a glance the relation of the parts and logical sequence of the message, he cannot read it rapidly. The connective idea between paragraphs should be in the first sentence of each paragraph so as to make a smooth transition. The absence of these requirements felt by some of the receivers would certainly affect the magazine utilization index.

Improper selection of message was identified and ranked third in the order of constraints at encoding level. There might be presence of less relevant message to the varied audience which might have led to perceive this as a constraint. This is always an inherent limitation of the mass media as the audience is heterogeneous and they are unable to have blanket messages and treatments to suit individual needs.

The variables such as confusing style of writing and improper title of the message were not much important as constraints probably due to the functioning of a good editorial section working with the publishers of the magazine.

#### 4.4 2 Transmission level

An overview of Table 7 revealed that untimely reach to the audience was the major constraint at the transmission level. This might be probably due to the untimely modulation of the messages which might not coincide with the cultural operations, also coupled with the delay in delivery of the magazine in the past as expressed by some of the respondents.

Incompleteness of message ranked second in the constraints at transmission level. The usability of a text can be described in terms of four dimensions such as access, accuracy, completeness and comprehensibility (Duffy and Kabance, 1982). Since 'Rubber' magazine has been publishing for the last 26 years, some of the authors might have taken for granted that the readers knew many of the pieces of information which were provided earlier and omitted those from the latest articles, and for the new readers those articles seemed to be incomplete. It is envisaged that every article should be complete in the message and should not leave any room for clarification of doubts.

Lack of clarity in printing and improper layout and design were not of much importance as constraints in utilization of 'Rubber' magazine by the respondents. It could be assumed that the magazine was fulfilling the minimum requirements for clarity in printing and to have a proper layout and design, again as an indication of an effective editorial desk and production system.

#### 4.4 3 Decoding level

Both the constraints at decoding level namely irrelevance to attributes of innovation and lack of credibility of 'Rubber' magazine (Table 7) had almost equal contribution as constraints in utilization of 'Rubber' magazine. Nearly 40 per cent of respondents were of this opinion.

As stated elsewhere, the probable reason for identifying the irrelevance to attributes of innovation as a constraint by some of the respondents might be due to the inherent inability of this mass medium to cater to the needs of individual farmer in a heterogeneous farming population.

The magazine seems to have a good credibility among the subscribers. The intercorrelation (Appendix-1) between lack of credibility of 'Rubber' magazine and social participation as well as cosmopolitanism had a negative trend in relationship. It is evident that the exposure to the outside community increases the credibility of the magazine which in turn would have brought up the magazine utilization index.

#### 4.5 Relationship between the utilization of 'Rubber' magazine by the respondents and the constraints in transferring the message

##### 4.5.1 Encoding level

The results in Table 8 and Table 9 indicated that at encoding

level none of the constraints showed significant relationship with the utilization of 'Rubber' magazine. However, the constraints such as improper selection of message and faulty perception of audience profile by the author as perceived by the reader were having a negative trend in relationship with the utilization of the magazine. Theoretically, with the proper selection of message and accurate perception of audience, the utilization of 'Rubber' magazine could be increased. But a mass medium cannot satisfy the information needs of a heterogeneous population. This might be the probable reason for identification of these variables by some of the respondents as constraints.

#### 4 5.2. Transmission level

An overview of Table 8 indexed to the relationship of utilization of 'Rubber' magazine with the constraints in transferring the message at transmission level, which gave no significant relationship with any of the constraints.

Untimely reach to the reader, improper layout and design and incompleteness of the message were showing a negative trend in relationship with the utilisation of the magazine. The messages obtained after the proper time may not be useful to an intended audience. Moreover, when a periodical reaches the subscriber very late, it becomes stale and does not have any appeal of freshness to the anxious reader. It is beyond doubt that improper layout and design would definitely lead to a low magazine utilization index, so

also incompleteness of the message. The usability of the text is a dependent factor on completeness of message (Duffy and Kabanee, 1982)

#### 4.5.3 Decoding level

A bird's eye view on Table 9 would reveal that the two constraints had no significant relationship in the utilization of 'Rubber' magazine. The variable irrelevance to attributes of innovation had a negative trend in relationship with the utilization of the magazine. This gave a clear indication that as far as the message is relevant to the farmer, he would have utilized the magazine to a greater extent. This was supported by the significant intercorrelation between improper selection of message and irrelevance to attributes of innovation.

Based on the above findings the hypothesis that there would be no significant influence of the constraints in transferring the message at encoding, transmission and decoding levels on the utilization of 'Rubber' magazine was accepted.

PERSONAL CHARACTERISTICS  
OF RESPONDENTS

CONSTRAINTS IN TRANSFERING MESSAGE

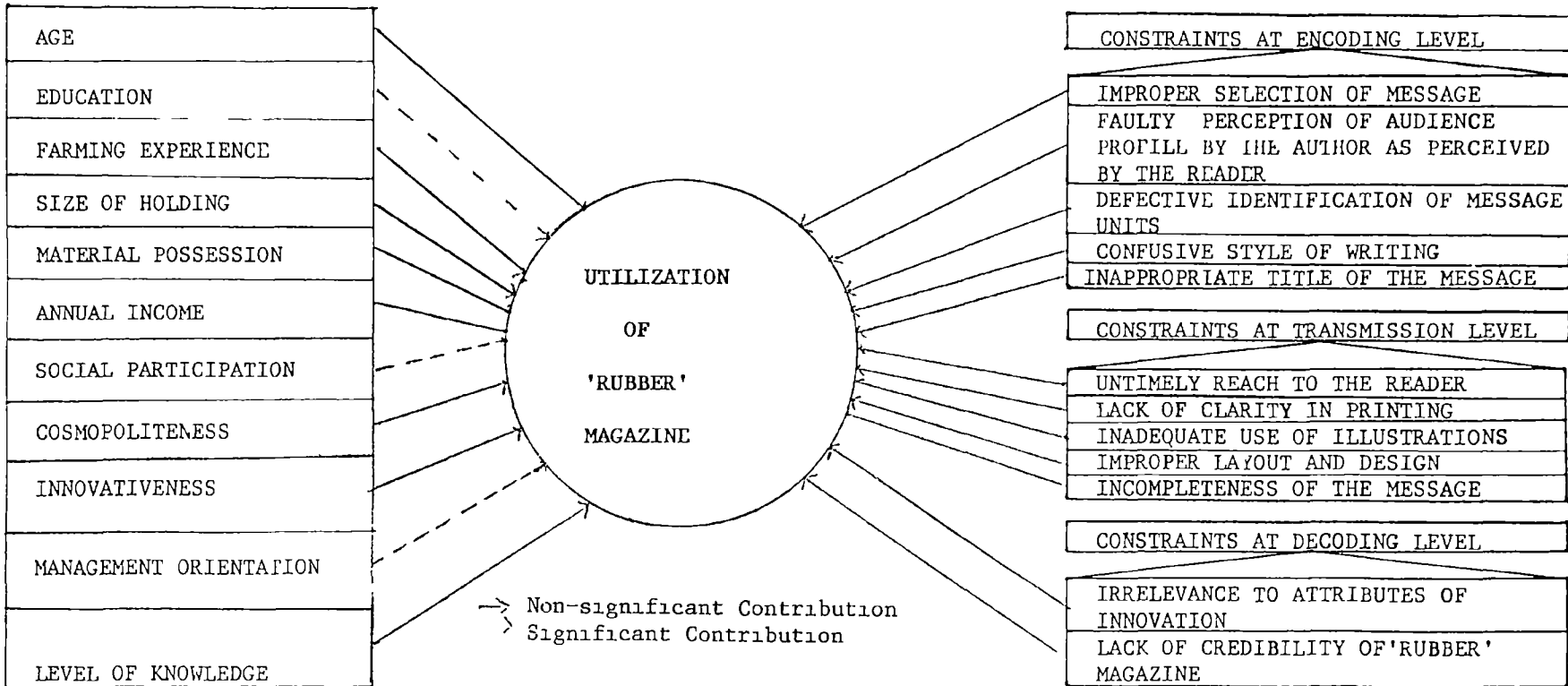


Fig 6 Empirical model of the study

# *Summaży*

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## CHAPTER-VI

### SUMMARY

Communication of innovations has been accepted as a prime element in all phases of development. Various interpersonal and mass media are being utilized by the development agencies to assist in transfer of technology to rural areas. Among the various mass media, print medium is of great importance to the agricultural sector in Kerala where the farmers are literate compared to other states in India. In this context, a farm magazine can play a pivotal role in satisfying the cognitive needs of the farmers.

Many a number of farm magazines are circulating in Kerala but the magazine 'Rubber' was purposively selected because this magazine is having the highest circulation and has been publishing continuously for the last 26 years. But no systematic studies have been conducted on how far the farm magazines are being utilized and what are all factors influencing the utilization of the magazine. In this context, the present study was framed to analyse the extent of utilization of 'Rubber' by its subscribers with the following objectives:

- 1) To measure the extent of utilization of 'Rubber' magazine by its subscriber
- 2) To identify the relationship between the selected personal characteristics of the subscribers and the utilization of the 'Rubber' magazine



- 3) To find out the constraints in transferring the message at encoding, transmission and decoding levels
- 4) To identify the relationship between the constraints in transferring the message and the utilization of farm magazine

The study was conducted in Kottayam, Thrissur and Thiruvananthapuram districts of Kerala State. The respondents were randomly selected from a list of subscribers of 'Rubber' magazine of each district and the sample size was 200. A structured questionnaire was prepared and each respondent was personally met with for data collection.

The data were analysed with the help of statistical tools such as simple correlation analysis, multiple regression analysis and multivariate path analysis. The salient findings of the study are presented below.

- 1) There was considerable extent of variation in the level of utilization of 'Rubber' magazine by the subscribers. The respondents could reach only to a maximum score of 78.13 in the utilization of the magazine, though the potential score was 100.
- 2) The personal characteristics of the subscribers such as management orientation, social participation and education were positively and significantly related to the utilization of the magazine with maximum degree of relationship for management orientation. Level

of knowledge, innovativeness and age showed a positive relationship with the utilization of 'Rubber' magazine, while size of holding, material possession and annual income had a negative trend in relationship.

- 3) The respondents indicated faulty perception of audience profile by the author as perceived by the reader as the major constraint at encoding level, untimely reach to the reader as the major constraint at transmission level and irrelevance to attributes of innovation as the major constraint at decoding level in transferring the message.
- 4) None of the constraints in transferring the message showed significant relationship with the utilization of 'Rubber' magazine

#### Implications of the study

The findings on the level of utilization of the magazine by the subscribers indicate the need of efforts to increase their level of utilization of the magazine to attain maximum possible transfer of message through the magazine. The findings further suggest that there is a need to improve social participation, management orientation and cosmopolitanism of the subscribers which would help them to make efficient use of the print medium.

Though the constraints in transferring the message identified had no significant relationship with utilisation of the magazine, the major ones identified by the respondents are to be taken care of while writing and editing for the farming population.

The findings of this study generally may be applicable to other farm magazines in Malayalam as well.

#### Suggestions for future research

As implied by the findings of this study, there might be several personal characteristics of the farmers with sociological and psychological dimensions that could influence their utilization of the farm magazine. It would be worthwhile if few more attempts are made to analyse utilization of farm magazine taking all possible reader characteristics into consideration.

Similarly, the constraints in transferring the message are also required to be analysed in depth incorporating newer variables to enhance theoretical and empirical knowledge in agricultural journalism to help its further improvement.

There is scope for further standardisation of the 'magazine utilization index' which is used to measure of the utilization of 'Rubber' magazine. Other score cards used in this study call for rigorous reliability and validity tests to standardise the same. Some efforts in that line also may help to have better measurement tools in the field of agricultural journalism.

In addition to print medium utilization studies, there is a need to have systematic analyses on the impact of the farm magazine in terms of increase in awareness, knowledge and symbolic adoption of the messages among the farmers.

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# *Appendices*

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APPENDIX I

Intercorrelation matrix between the independent variables selected for the study and the utilization of Rubber magazine

	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	X <sub>6</sub>	X <sub>8</sub>	X <sub>9</sub>	X <sub>10</sub>	X <sub>11</sub>	X <sub>12</sub>	X <sub>13</sub>	X <sub>14</sub>	X <sub>15</sub>	X <sub>17</sub>	X <sub>18</sub>	X <sub>19</sub>	X <sub>20</sub>	X <sub>21</sub>	X <sub>22</sub>	X <sub>23</sub>	
X <sub>1</sub>	1 000																					
X <sub>2</sub>	0 295	1 000																				
X <sub>3</sub>	0 076	0 004	1 000																			
X <sub>4</sub>	0 114	0 137	0 081	1 000																		
X <sub>5</sub>	0 126	0 024	0 038	0 070	1 000																	
X <sub>6</sub>	0 049	-0 060	0 077	0 054	0 125	1 000																
X <sub>8</sub>	0 092	-0 010	0 022	0 129	0 111	0 092	1 000															
X <sub>9</sub>	0 220	0 109	0 029	0 177	0 150	0 047	0 403	1 000														
X <sub>10</sub>	0 116	0 013	0 109	-0 087	0 066	0 052	0 344	0 448	1 000													
X <sub>11</sub>	0 099	0 019	0 020	0 074	0 084	0 069	0 009	0 135	0 031	1 000												
X <sub>12</sub>	0 087	0 162	0 025	0 022	0 062	0 014	0 056	0 020	0 017	0 066	1 000											
X <sub>13</sub>	0 049	0 186	0 031	0 018	0 169	-0 058	0 038	0 067	0 022	0 298	0 485	1 000										
X <sub>14</sub>	0 046	0 077	0 065	0 058	0 102	0 063	0 008	0 009	0 016	0 077	0 178	0 245	1 000									
X <sub>15</sub>	0 134	0 024	0 138	0 095	0 182	0 134	0 069	0 031	0 149	0 053	0 332	0 398	0 231	1 000								
X <sub>17</sub>	0 070	0 176	0 036	0 013	0 025	0 158	0 104	0 059	0 045	0 121	0 150	0 240	0 132	0 207	1 000							
X <sub>18</sub>	0 038	0 038	0 077	0 025	0 044	0 050	0 022	0 014	0 008	0 101	0 034	0 161	0 036	0 042	0 181	1 000						
X <sub>19</sub>	0 015	0 048	0 044	0 012	0 113	0 195	0 050	0 034	0 067	0 018	0 186	0 220	0 129	0 345	0 227	0 088	1 000					
X <sub>20</sub>	0 204	0 079	0 132	0 079	0 109	0 335	0 130	0 092	0 058	0 125	0 150	0 151	0 038	0 371	0 266	0 110	0 346	1 000				
X <sub>21</sub>	0 007	0 117	0 080	0 078	0 072	0 133	0 077	0 023	0 025	0 042	0 220	0 175	0 224	0 164	0 185	0 142	0 240	0 206	1 000			
X <sub>22</sub>	-0 008	0 045	0 086	0 021	0 064	0 084	0 041	0 039	0 011	0 123	0 255	0 343	0 216	0 138	0 236	0 094	0 142	0 209	0 220	1 000		
X <sub>23</sub>	0 033	0 082	0 051	0 027	0 019	-0 054	-0 031	0 093	0 022	0 020	0 005	0 019	0 017	0 043	0 116	0 075	0 045	0 079	0 014	0 019	1 000	
Y	0 105	0 119	0 108	0 194	0 180	0 166	0 093	0 002	0 019	0 160	0 005	0 037	0 065	0 045	0 071	0 046	0 042	0 150	0 005	0 039	0 064	1 000

X <sub>1</sub>	Age	X <sub>11</sub>	Level of knowledge	X <sub>19</sub>	Inadequate use of illustrations
X <sub>2</sub>	Education	X <sub>12</sub>	Improper selection of message	X <sub>20</sub>	Improper layout and design
X <sub>3</sub>	Innovativeness	X <sub>13</sub>	Faulty perception of audience profile by the author as perceived by the reader	X <sub>21</sub>	Incompleteness of the message
X <sub>4</sub>	Management orientation	X <sub>14</sub>	Defective identification of message units	X <sub>22</sub>	Irrelevance to attributes of innovation
X <sub>5</sub>	Social participation	X <sub>15</sub>	- Confusing style of writing	X <sub>23</sub>	Lack of credibility of Rubber magazine
X <sub>6</sub>	Cosmopolitaness	X <sub>17</sub>	Untimely reach to the audience	Y	Magazine Utilization Index
X <sub>8</sub>	Size of holding	X <sub>18</sub>	Lack of clarity in printing		
X <sub>9</sub>	Material possession				
X <sub>10</sub>	Annual income				



**APPENDIX-II**  
**QUESTIONNAIRE**

- 1 Name
- 2 Address
- 3 Age
- 4 Educational qualification

Can read only without any schooling

Can read and write without any schooling

Lower primary level

Middle school level

High school level

Pre-degree or equivalent

Graduation and above

5 Utilization of the 'Rubber' magazine

The following statements are based on the utilization of 'Rubber' magazine. Indicate your agreement by putting (✓) mark for one of the statements in group I, II, III and IVA. For the rest, you are free to put (✓) mark wherever you agree with the statement.

I Frequency of reading

- a) Regular reader of all issues of the magazine
- b) Regular subscriber, but reads only some issues
- c) Regular subscriber, but not a reader

II Promptness in reading

- 1 Reads the magazine on the same day of receiving

2. Reads certain articles immediately after getting the magazine and leaves others to be read later
- 3 Reads the magazine sometimes before the arrival of the next issue
- 4 Reads the magazine only at the leisure time, even several issues together

### III Reading preference

- 1 Reads all the articles without any order of preference
- 2 Reads all the articles, but only according to the order of preference after going through the list of contents
3. Selects certain articles in every issue and reads only those articles
4. Reads only the articles on current events
- 5 Reads only the specific recommendations for the following month or general recommendations of authority
- 6 Reads only certain articles with preference to the formal (only success stories, only process articles, only information features, only questions and answers etc )
- 7 Avoid lengthy articles
- 8 Reads the articles with author preference
- 9 Reads only the articles with catching captions

### IV Style of reading

A

- 1 Reads an article completely
- 2 Reads an article partially
3. Skims only certain articles and others are read thoroughly
- 4 Skims while reading all articles

B

- 1 While reading, goes back in search of some ideas

- 2 Reads repeatedly certain paragraphs of an article
- 3 Reads very slowly for better comprehension of the technical subject matter
- 4 Reads silently

V Documentation

- 1 Underlines important sentences
- 2 Prepares notes while reading
- 3 Takes cuttings of the needed message
- 4 Binds serialised articles
- 5 Keeps the whole magazine
- 6 Binds the volumes of magazine
- 7 Indexes the contents of the magazine
- 8 No documentation

VI Follow-up

- 1 Seeks further clarification on the message from the author or publisher immediately after reading
- 2 Refers to the preserved material of the magazine whenever a related practice is followed
- 3 Tries to attempt on new recommendations given in the message through the magazine
- 4 Shares the magazine with others after reading
- 5 Direct others to read the magazine

Constraints in transferring the message

A Encoding level

Indicate the extent of trueness of the following statements with respect to this magazine

Very much true	True to some extent	Not at all true
----------------------	---------------------------	--------------------

1 Improper selection of message

- a) Messages selected are not important under our farming situation
- b) Message selected are not practicable
- c) Messages are not suitable to the farmer's financial condition
- d) Messages are not selected on the basis of the need of the readers
- e) Messages are not timely
- f) Messages conveyed cover general problems not the special ones

2 Faulty perception of audience profile by the author as perceived by the reader

- a) The comprehensibility of the farmers are not taken into consideration by the authors
- b) The authors do not consider all categories such as small, medium and large farmers
- c) The authors do not consider farmers of different financial status

3 Defective identification of message units

- a) Many times one paragraph carries more than one message units

Very much true	True to some extent	Not at all true
----------------------	---------------------------	--------------------

- b) The message units are not arranged in sequence to suit the frame of reference of the reader

#### 4 Confusing style of writing

##### I Clarity

- a) All the message units cannot be explained in only one way (chances of misinterpreting)
- b) The words used are the tough ones that can be used to carry the intended meaning
- c) Each sentence is not a simple one carrying one idea each

##### II Brevity

- a) The magazine contains more than necessary words in each sentence
- b) The messages are not written with minimum possible number of sentences to contain the message
- c) There is unnecessary lagging in message presented in the magazine
- d) There is unwanted narration in the magazine

##### III Colour (Variety)

- a) The length of paragraphs do not vary
- b) Sentence structure and length do not vary

Very much true	True to some extent	Not at all true
----------------------	---------------------------	--------------------

- c) Varied examples and illustrations are not used
- d) 'Posing questions and answering them' is not used

6 Inappropriate title of the message

- a) Title is not appropriate to the message dealt in the article
- b) The title is not attractive and not presented in the bold types
- c) Short, crisp and simple words are not used for the title in this magazine
- d) The messages are not clear because confusing headings and subheadings are given

B Transmission level

1 Untimely reach to the audience

- a) The magazine of one month does not reach the farmers in the respective month itself
- b) When the magazine reaches the farmers, the time of practising the technology will be over

2 Lack of clarity in printing

- a) The letter size used in the magazine is not adequate

Very much true	True to some extent	Not at all true
----------------------	---------------------------	--------------------

- b) There is overlapping in printing which causes difficulty in reading
- c) Some parts of message may not get clearly imprinted in the magazine

3 Inadequate use of illustrations

- a) Illustrations used will lead to confusion rather than making it clear
- b) The information is not easily understandable because they are not supported with proper illustrations

4 Improper layout and design

- a) The important messages are not presented in the first few pages
- b) The regularly occurring columns are not presented in the same pages
- c) The photographs are not placed in appropriate places with proper captions
- d) Each page of the magazine is not impressive and not tempt to read
- e) Informative advertisements relating to rubber cultivation are not given in the magazine

5 Imcompleteness of the message

- a) Each article of the magazine does not give all background details for the benefit of a new reader who is blank on the topic

Very much true	True to some extent	Not at all true
----------------------	---------------------------	--------------------

- b) All the natural doubts of the reader are answered in every article of the magazine
- c) Some message contains only few steps and the farmer cannot put into practise in the field

C Decoding level

1 Irrelevance to attributes of innovation

- a) The newer technology that are given in the magazine are not more profitable than the existing one
- b) Adoption of the messages given involves high initial cost
- c) The newer technology given are of high risk
- d) Adoption of the messages do not help to save time
- e) The results of the innovations that are given through the magazine are not observable
- f) The innovations suggested in the magazine are not compatible with the culture of the client
- g) Material resources of the farmer are not taken into consideration while suggesting innovations in the magazine
- h) Potential of the farmer to adopt is not taken into consideration while suggesting the innovations in the magazine



Very True Not at  
much to some all true  
true extent

1) The innovations cannot be tried on smaller scale

j) The innovations are complex to practice

2 Lack of credibility of 'Rubber' magazine Below are given seven sources of information from which you have been getting information regarding rubber cultivation Rank these sources from one to seven according to the credibility you attach to each one of them

a) Officials of State Department of Agriculture -

b) 'Rubber' magazine -

c) Other rubber growers -

d) Newspapers -

e) President of Rubber Producer's Society -

f) Radio -

g) Field Officer of Rubber Board -

7 Farming experience

For how many years you had been engaged in rubber cultivation?

8 Size of holding

Type	Area (in acres)		
	Owned	leased in	leased out
1 Garden land			
2 Wet land			
Total			

9 Material possession (in Rupees)

- a) Worth of land
- b) Worth of building(s)
- c) Worth of furniture
- d) Worth of vehicle(s)
- e) Worth of livestock
- f) Worth of farm machinery and equipment
- g) Others, if any (specify)

10 Annual income

- a) Income from main occupation
- b) Income from subsidiary occupation

11 Social participation

Indicate your attachment to any organisation such as social, cultural, political or labour organisation, co-operatives, recreation clubs etc

- Office bearer of more than one organisation
- Member in more than one organisation and office bearer in one organisation
- Member and office bearer in one organisation
- Member in more than one organisation
- Member in one organisation
- Not a member in any organisation

11) Frequency of participation in the activities

- Participates in all meetings and other activities regularly
- Participates occasionally in meetings and other activities

- Does not participate in meetings and other activities

12 Cosmopolitaness

a) Indicate your frequency of visit to the city or village other than native place

- never
- once in a month
- once in a fortnight
- once in a week
- twice or more in a week

b) Purpose of visit

- Agricultural
- Personal or domestic matters
- Entertainment

13 Innovativeness

Indicate your agreement or disagreement to the following statements

Sl No	Statement	Agree	Disagree
1(a)	I try to keep myself upto date with information on new farm practices but that does not mean that I try out all the new methods in my farm		
(b)	I feel restless, till I try out a new farm practice I have heard about		
(c)	They talk of many new farm practices these days but who knows if they are better than the old one		

- 2(a) From time to time I have heard of several new farm practice and I have tried out most of them in the last few years
- (b) I usually wait to see the results of my fellow farmers obtain before I try out the new farm practices
- (c) Somehow I believe that the traditional way of farming are the best
- 3(a) I am cautious about trying a new practice
- (b) After all our forefathers were wise in their farming practices and I do not see any reason for changing those old methods
- (c) Often new farm practices are not successful, however, if they are promising, I would surely like to adopt them

#### 14 Management orientation

##### I Planning orientation

- a) Each year one should prepare a fresh calendar of operations to be done in the plantations
- b) The number of planting materials, quantity of fertilizers, plant protection chemicals needed for raising the plantation should be assessed in advance
- c) It is necessary to think ahead of the cost involved in raising the plantation
- d) One need not consult any agricultural expert for crop planning
- e) It is possible to increase the yield through farm production plan

II Production orientation

- a) Timely farm operations for the crop ensures good yield
- b) One should use as much fertilizer as he likes
- c) Determining fertilizer dose by soil testing saves money
- d) For timely weed control one should even use suitable weedicides
- e) Spacing should be given as recommended by the specialist

III Marketing orientation

- a) A farmer can get good price by grading his produce
- b) One should sell his produce through the Rubber Producers' Society
- c) Proper processing of the crop should be done to get good price in market

15 Level of knowledge

Answer the following questions

- 1) Source of quality planting material suitable to your land and climate
- 2) A promising clone for our condition
- 3) a Whether manuring required for mature tree?

Yes

No

b. If yes, amount of fertilizer for a mature tree in an year?

c Frequency of application of fertilizer

d Time of application of fertilizer

4) Depth of tapping cut

5) How is weed growth controlled in rubber plantations?

6) How is tapping done during rainy season?

7) Weight of one rubber sheet?

8) What are the prophylactic measures to be taken up to avoid brown bast?

9) How can we control the abnormal leaf fall of rubber?

10) a Have you heard about the chemical used for the stimulation of bark?

Yes

No

b If yes, what is that chemical?

c. How it is applied

11) Is there any necessity for annual tapping rest?

Yes

No

12) In some rubber trees at the fork region - white or pink coloured cobwebbey mycelial growth on the bark surface with streaks of latex oozing out from the lesion rotting, drying up and cracking of the affected bark - development of sprouts from below the affected portion - drying up of the distal portions with dry leaves sticking to the dead branches could be seen. What control measure you take up in this condition?

**A STUDY ON THE  
UTILIZATION OF THE FARM MAGAZINE 'RUBBER'  
AND ANALYSIS OF ITS MESSAGE CONSTRAINTS**

**By**

**SHAMITHA BHARATHAN**

**ABSTRACT OF THE THESIS**

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## ABSTRACT

In development communication print medium can claim an important role particularly in a literate society. Several farm magazines cater to the information needs of agricultural sector, but the extent of their utility has not been empirically measured so far. A study was conducted to analyse the extent of utilization of 'Rubber' magazine, which has the highest circulation and long history of publication among farm magazines in Malayalam along with assessing the influence of selected personal characteristics of the subscribers on magazine utilization. The study also aimed at analysing the message constraints at encoding, transmission and decoding levels.

The study was conducted among the subscribers of the magazine in three selected districts of Kerala with 200 respondents in the sample. The salient findings of the study are

1. There was a considerable extent of variation in the level of utilization of subscribers of 'Rubber' magazine, with a score range of 28 to 79, though the potential utilization index was 100.
2. The personal characteristics of the subscribers such as management orientation, social participation and education had positive and significant influence on the utilization of the magazine.

3 The respondents indicated that faulty perception of audience profile by the author as perceived by the reader as the most important constraint at encoding level, untimely reach to the reader at transmission level and irrelevance to attributes of innovation at decoding level. However, none of the constraints, identified had significant influence on the utilization of 'Rubber' magazine.

A handwritten mark, possibly a signature or initials, consisting of a single continuous line that starts with a small loop, rises to a peak, and then descends with a slight curve.