EFFECTIVENESS OF FARM JOURNALS IN DISSEMINATING AGRICULTURAL INFORMATION TO FARMERS OF KERALA

BY

BALACHANDRAN K. P.

THESIS

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1983

DECLARATION

I hereby declare that this thesis entitled "EFFECTIVENESS OF FARM JOURNALS IN DISSEMINATING AGRICULTURAL INFORMATION TO FARMERS OF KERALA" 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.

BALACHANDRAN. K.P

Vellayani,
26/15 Feb 1983.

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Certified that this thesis entitled "EFFECTIVENESS OF FARM JOURNALS IN DISSEMINATING AGRICULTURAL INFORMATION TO FARMERS OF KERALA" is a record of research work done independently by Sri. Balachandran, K.P. under my guidance and supervision and that it has not previously formed the basis for the award of any degree, diploma, fellowship or associateship to him.

Dr. A.M. Tampi
Chairman, Advisory Committee
Associate Professor
Department of Agricultural Extension.

Vellayani,
26th Feb 1983.

APPROVED BY:

Chairman:

Dr. A.M. TAMPI

Members:

Sri. A.G.G. MENON

Sri. K.P. MADHAVAN NAIR

Sri. P. GANGADHARAN

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BALACHANDRAN.K.P

Vellayani,
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INTRODUCTION

CHAPTER I

INTRODUCTION

Considerable knowledge has been generated in the agricultural universities and research stations. This information has to be conveyed, in an easy and understandable manner, to the farming community. Recent experiments in planned change in India have highlighted the importance of communication in implementing programmes leading to economic growth. Communication is being recognised as the key factor in the process of achieving directed change. This has led to more scientific and organised efforts in the formation of communication policies.

Among the mass media that have been used for the service of the Indian farmers, particularly for farmers in Kerala where the literacy level is the highest among all the states in India, the role of printed literature has become very vital. It has played a great role in farm communication. Though farm journalism has made much headway in our country, in view of the vast area and huge population the circulation of farm journals published today seems to be negligible.

Looking into the present situation there is a growing demand for improving the farm journals, to make them more popular, understandable, informative and educative. Farm information experts are often confronted with the problem of

effectiveness of different mass media as carriers of farm information. Researches have already been made on radio and television. But very little has been done to assess the effectiveness and impact of farm journals on the rural audience. The present study is to find out the effectiveness of two prominent farm journals published by two authentic sources in Kerala.

'Kerala Karshakan', one of the journals selected, is a farm journal published by the Farm Information Bureau of the Govt. of Kerala. 'Kalpadhenu', the other journal selected, is published by the Kerala Agricultural University. These two journals have come to be established as two prominent publications in the farm sector of Kerala.

Need for the study:

Since their establishment Kerala karshakan and Kalpadhenu have been playing vital role in the transfer of technology, to the farming community. Questions may arise at this juncture, as to whether the articles in the journals are in line with farmers' needs or whether the articles are read by the farmers or whether the articles are easy to read and understand. No previous attempts have been made on this and the present study is aimed to answer these and other related questions. In short, this investigation is to assess the effectiveness of the journals in their dissemination of information to the farmers.

Objectives of the study:

The purpose of the study is to assess the effectiveness of farm journals in disseminating agricultural information to

farmers. The following are the specific objectives.

1. To measure the readability of the articles on agricultural information published in the journals, 'Kerala karshakan' and'Kalpadhenu'.
2. To assess the reading preference and reading habit of the farmer subscribers of the journals with respect to the content areas of the journals.
3. To assess the knowledge level of the farmer subscribers of the journals against a control group.
4. To find the relationship between personal and socio-economic characteristics of the respondents with their reading habit and knowledge.
5. To analyse the format and content of the journals in terms of their utility to farmers in farming.

Scope and limitations of the study:

The farmer subscribers and non-subscribers who formed the respondents of the study were selected from Trichur district alone. The coverage was assessed with respect of five recent issues of the journals. These shortcomings arise out of limitations of time and resources which had set up barrier in probing in depth of this research. However, considerable care and thought have been exercised to make this study as objective and systematic as possible.

THEORETICAL ORIENTATION

CHAPTER II

THEORETICAL ORIENTATION

This chapter discusses in broad outline the theoretical framework of the study formed on the basis of relevant reviews. This will provide a basis for operationalising variables enabling data collection. Reviews of relevant literature have also been given in this chapter.

The contents of this chapter are presented under the following heads.

1. Readability of agricultural publications.
2. Reading preference of farmers.
3. Reading habit of farmers.
4. Influence of printed information on knowledge.
5. Format and content of journals.
6. Farmers' characteristics.
7. Variables selected for the study.
8. Theoretical concepts and operational definitions of variables under study.
9. Hypotheses developed for the study.

2.1 Readability of agricultural publications

Various researchers have studied readability in different ways.

Wert (1937), Jackman (1941) and Stevens and Hare (1947) have shown that readers' judgement on the level of difficulty is not related with the readability of message. This was

contradicted by researchers like Russel and Fea (1951), Hackman and Kershner (1951) and Klare et al. (1954) who reported a positive relationship between readers' judgement and readability.

Flesch (1946) pointed out that fewer words per sentence, fewer syllables per word, more words about people and more sentences addressed to people, make writings easier to read.

Meade (1947) reported that one-third of the farmers sampled in a study did not understand the words used in popular bulletins and in some cases farmers even gave contradictory response to the real meaning.

Flesch (1954) pointed out that readability is influenced by (1) realism, specificity and concreteness and (2) energy, forceful delivery and vividness of words. Flesch, again (1960) observed that human interest makes for easier reading.

Regarding readability of message and reading efficiency, studies by Klare (1963) and Kershner (1964) showed a positive relationship between the two.

Patel and Patel (1970) reported that 48.33% of farmers surveyed in a study failed to understand the meaning of the pictures used in "Khedut Patrika".

Based on studies conducted in the USA, Canada and the UK Paul (1970) concluded that as a group, extension publications are difficult for the average reader.

Nehiley (1980) was of the view that majority of Florida's farmers avoided using extension publications because many are hard to read and use unfamiliar technical style.

Therefore, as suggested by Somasundaram and Jaganath (1974) it is advisable to test the readability of any farm literature before its publication.

2.2 Reading preference of farmers

Content is the most influencing factor on the readership of any publication. An individual prefers to read a publication more, if he finds its contents suiting his taste. As far as agricultural publications are concerned, it is the utility of their content that matters. As said by Freedman (1965) the more the perceived utility of the content, the more will be the desire to be exposed to it. A farmer prefers to read a publication more, if he perceives its contents as useful to him. So an adequate measure of farmers' perception of usefulness of the content of a publication, is their preference in reading the contents.

Many researchers have assessed the reading preference of farmers to different content areas of journals and newspapers. Oliver (1971) found that the farmer subscribers of "Dinamoni", daily gave preference to the different areas of agricultural information in this order: recommended package of practices, farmers' experience, research findings, pest incidence and their control.

According to Singh and Haque (1972) the order of preference to the items of information on wheat cultivation as given by farmers is as follows: fertilizers, inter-cultural operations, disease control, storage, sowing, harvesting, ploughing, water test, improved seeds, marketing of produce and soil test.

Khandekar and Mathur (1975) while assessing the effectiveness of "Unnat krishi" farm magazine found that the subscribers preferred to read about cultivation of crops first, followed by animal husbandry and dairy, fruit and vegetable cultivation, poultry, fishery and piggery.

Rajan (1982) found the preference of the subscribers of "Malayala Manorama" daily to agricultural information in this order: crop production, dairy, poultry, pisciculture and piggery. Among crop production aspects the preference was in the order of plant protection, manures and fertilizers, seeds and sowing, soil and water management and processing and storage.

2.3 Reading habit of farmers

Reading habit indicates the extent of exposure to the communication through the journals. Individuals vary much in their reading habit, as shown by following reviews.

Williamson (1938) found in a study that out of 401 subscribers of newspaper, 246 read the farm page regularly, 96 seldom read it and 59 never read it.

Delbert's study (1955) among Wisconsin farmers revealed that 92% of respondents received atleast one farm magazine and 51% read three or more regularly.

Murphy's study (1962) of the reading habits of Wisconsin farmers showed that 19.5% of farmers surveyed devoted less than half an hour per day in reading agricultural publication, 26% spent half an hour to less than one hour per day, 19.5% spent one hour per day, 14% one to two hours per day, 14% two to three hours per day, 5.5% more than three hours per day and 1.5% did not mention.

Honnart (1970) observed that 57% of Belgian farmers read regularly the agricultural news published in a paper and 18% read less regularly and others never read it.

A study by Veerabhadriah and Sethurao (1970) revealed that 57% of the farmers of Dharwar in Karnataka read the farm information regularly.

A study conducted by Awa (1974) in Yates county pointed out that farm bulletins were read by 16.8% of low income farmers and 44.7% of the community leaders.

Oliver et al. (1974) reported that 76.7% of the farmer subscribers surveyed read agricultural articles published in "Dinamoni" daily.

Rajan (1982) found that majority of farmer subscribers of "Malayala Manorama" daily, read the farm columns published under the farm news service in the daily.

2.4 Knowledge and Printed information

Information given through print media, which include the journals, is mainly influential in increasing the knowledge level of the readers. The following reviews substantiate this.

Ryan and Gross (1943) in a study on the diffusion of hybrid corn in Iowa found 10.7% of farmers citing farm journal as the original source of knowledge.

Lionberger (1960) observed that agricultural publications serve as important influential source during the awareness and interest stages of adoption.

Rao (1961) found that booklets and information folders were most effective in changing the knowledge of farmers.

Menefee and Menefee (1964) revealed that in a Mysore village, the village news letter has not only reached 81 out of 191 farmers but also resulted in increased knowledge among the participants.

Mazer and Brown (1974) in their study on effectiveness of news letters on dairy men, found significant difference in the knowledge scores of dairy men who obtained news letters and those who did not obtain such news letters.

Annamalai and Sundaresan (1975) observed that booklets increased the knowledge of farmers about sunflower cultivation by 26.12%.

2.5 Format and content of farm journals

Under the format and content, the aspects studied include the following: layout, coverage, serviceability, relevancy and practicability. Relevant reviews on these are presented below.

2.5.1 Layout

Roy and Cooper (1938) found that among extension circulars with illustrated and non-illustrated cover, the illustrated cover stimulated the use of information contained in these circulars.

Gallup and Fanning (1943) reported that simple writing, large print and more illustration were suggested by farmers.

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

Ferguson (1959) opined the pictures as the most eye catching element in the layout which should be handed for maximum visual aopearance.

Kelsey and Hearne (1965) recommended that the periodicals should have a cover page of heavy material illustration be placed near the text reference and in natural surrounding.

Rao and Kherde (1965) in their study found that good and colourful illustrations (such as the photograph of a local farmer with his produce) have a pleasing effect on the farmers.

According to Turnbull and Baird (1968) the most useful elements of attracting attention were colour, photographs or illustration and titles.

According to Ganapathy (1971) the letters must not be too small or too big. Any size between 12 - 16 points would be suitable for low level literates.

Patel and Patel (1970) reported in their evaluative study of "Khedut Patrika" that the cover page should be attractively printed with combination of two or more colours along with some action pictures.

Robert (1980) stated that headlines or underlined words or phrases were useful in directing readers' attention.

2.5.2 Coverage

Fett (1972) in his study of content analysis of agricultural news in Brazilian newspapers, observed that nearly all newspapers studied regularly published considerable agricultural news.

Mathur & Bhilegaonkar (1976) found that crop production had been the major area on which articles were written in "Kethi", a hindi farm magazine, over a period of 10 years (1966-76).

The National Workshop for Farm Journalists on Methods and Techniques of Farm Journalism and Communication of Agricultural Technology (IARI, 1976) studied several farm magazines published by various organisations and observed that the contents of the farm magazines were not need based. Coverage of areas like animal husbandry, dairying and poultry were generally very inadequate.

Singh and Kumar (1977) in their content analysis of one English daily, "The Indian Nation" and one Hindi daily, "The Aryavarta" found that the amount of mean space devoted by each newspaper to the publication of "agricultural news" was significantly more than that devoted to the publication of other types of materials with agricultural content.

2.5.3 Serviceability

No reviews were found to be available pertaining to serviceability of journals. However, this has been included in this study.

2.5.4 Relevancy and Practicability

Regarding relevancy of articles published in journals, Brown and Keral (1967), Guerrero (1968) and Grunig (1968) were of the opinion that the information given to farmers must have situational relevance in order to contribute towards agricultural development.

Fett (1972) also reported, in his study of content analysis of agricultural news, that situational relevance of the information attracted a larger proportion of audience attraction.

Regarding practicability, Oliver et al. (1974) found that the agricultural articles published in the newspaper "Dinamoni" were reported as practicable by the farmers.

2.6 Farmers' characteristics

Studies on the relationship of each of the farmers' personal and socio-economic characteristics selected, namely age, education, farm size, cosmopoliteness, scientific orientation and extension contact, with knowledge and reading habit of the farmers are given below.

1. Knowledge

a. Age

Bhaskaran and Mahajan (1968) found that young and middle aged farmers were slightly superior to the old age group in the matter of retention of knowledge about extension methods.

Singh and Prasad (1974) reported that age had no significant relationship with the knowledge quotient of the communication sources of young farmers.

Kaleel (1978) found that age had no significant relationship with knowledge gained by farmers about subject matter.

b. Education

Bhaskaran and Mahajan (1968) found that education of farmers in general had a close positive relationship with the response to extension teaching both in respect of retention of knowledge and acceptance of practices.

Supe and Salode (1975) reported that formal education was significantly related to level of knowledge of farmers on demonstrated practices.

Kaleel (1978) concluded that there was positive and significant association between education of farmers and their level of knowledge.

c. Farm size

Supe and Salode (1975) found that farm size was not related to knowledge of farmers on the selected practices of jowar in national demonstration programme.

Ahamed (1981) found that there was positive and significant relationship between farm size and level of knowledge of trained and untrained farmers.

d. Cosmopoliteness

Knight and Singh (1975) reported that cosmopoliteness has a positive relationship with gain in knowledge of farmers.

Kamarudeen (1981) found a positive relationship between knowledge of farmers and cosmopoliteness.

e. Scientific Orientation

After studying the differential perception of farmers about the attributes of farm innovations, Dhanokar (1970) reported that scientific attitude helped the farmers in understanding the details of practices.

Supe and Salode (1975) reported that scientifically oriented participant farmers had higher knowledge on the demonstrated practices of jowar under the national demonstration programme.

f. Extension contact

Knight and Singh (1975) reported that contact with extension agencies had positive relationship with gain in knowledge.

Kaleel (1978) also found a positive and significant relationship between contact with extension agencies and gain in knowledge.

2. Reading habit.

a. Age

Schramm and White (1960) observed that peak reading was during 30 - 50 years of age.

Wilson (1963) found out that younger farmers read more farm publications than older farmers.

Kidwai (1965) found that young and middle aged farmers were heavier readers of farm publications.

Study by Gwyn and Hodge (1968) revealed that middle aged farmers preserved publications and were heavier readers.

Zalaki (1973) also found a positive relationship between age end readership of agricultural publication.

b. Education

Marlol (1939) observed that education was significantly related with reading of farm publication.

Wilson's study (1963) showed that amount of reading by farmers increased with education.

Studies by Kidwal (1965), Marsh and Knox (1966), Mishra (1969) and Zalaki (1973) also revealed a positive relationship between readership of publication and level of education.

c. Farm size

Gwyn and Hodge (1968) observed that large farmers felt the usefulness of publications more than small farmers and were also heavier readers.

Rajan (1982) observed no significant relationship between reading habit of farmers and farm size.

d. Cosmopoliteness

Rajan (1982) reported a significant relationship between cosmopoliteness and reading habit.

e. Scientific orientation

No relevant reviews are available as to the relationship of scientific orientation with reading habit. However, this has been included in the study as a variable affecting reading habit.

f. Extension contact

With regard to the relationship of extension contact with reading habit also, no pertinent reviews are available. However, this has been included in the study as a variable affecting reading habit.

2.7 Variables selected for the study.

The following variables were selected for the present study.

1. Readability of articles published in the journals, Kerala karshakan and Kalpadhenu.
2. Reading preference of the farmer subscribers.
3. Reading habit of the farmer subscribers.
4. Knowledge level of farmer subscribers and non-subscribers.
5. Format and content of the journals:

under these the aspects studied include the following:

a. Layout of the journals as assessed by the subscribers.
b. Coverage, in terms of the frequency of articles published.

c. Serviceability of the journals as assessed by the subscribers, and

d. Relevancy and practicability of articles, as assessed by the subscribers.

The readability is supposed to be influenced by the following mechanical characteristics of the articles.

a. Number of syllables per 100 words and

b. Percentage of personal words.

This forms one group of independent variables.

The reading habit and knowledge of the respondents are supposed to be influenced by their following personal and socio-economic characteristics.

a. Age

b. Education

c. Farm size

d. Cosmopoliteness

e. Scientific orientation

f. Extension contact

This forms another group of independent variables.

2.8 Theoretical and operational definitions of the concepts.

In this section, the concepts used in this study are defined.

Farmer subscriber.

Farmer subscriber is operationalised as an individual

who owns some cultivated land and who has been subscribing to one of the two farm journals under study, for atleast one year prior to the time of interview.

Farmer non-subscriber

The farmer non-subscriber is operationally defined as an individual who owns some cultivated land and who has not been subscribing to either of the two farm journals under study, at any time.

Effectiveness of the journal

The term effectiveness as used in the study denotes the extent to which the journals are successful in increasing the knowledge of the readers, as inferred from the difference in the knowledge level between subscribers and non-subscribers.

Readability

Hakanson and Deming (1956) defined readability thus, "broadly applied, readability means reaching the widest possible audience with writing that informs and inspires without difficulty".

Ahuja (1979) defined readability as that describing the stylystic factors in writing, which makes it easier to read.

Nehiley (1980) defined readability as the characteristics of the material that determine how difficult it is to understand and read.

For the purpose of the present study the definition by Nehiley (1980) was adopted.

Syllable

According to Chamber's 20th century dictionary a syllable is a word or part of a word uttered by a single effort of the voice. This definition was used in this study also.

Word

Chamber's 20th century Dictionary defined word as an oral or written sign expressing an idea or notion. This definition was used in this study.

Personal word

According to Flesch (1960) personal words include all nouns with natural gender and pronouns except neuter pronouns. This definition was made use of in this study also.

Reading habit

Reading habit as used in this study denotes the frequency of reading the content areas of the journals, namely, agricultural information, development information, editorial and advertisements, by the readers.

Reading preference

Reading preference was operationalised in this study, as the reading behaviour of the individual by which he favours to read certain topics over others.

Knowledge

Knowledge is defined by English and English (1958) as a

body of understood information possessed by an individual or by a culture.

In this study knowledge is defined as the amount of know-how gained by the individual with respect to the different areas of agriculture which are covered in the journals.

Layout

Layout is operationally defined as the general design and arrangement of the components of the journals, namely cover page, headings, letters, pictures and advertisements.

Coverage

Coverage, as used in the study denotes the extent to which agricultural areas are dealt within the journals, in terms of the frequency of articles published on each area.

Serviceability

Serviceability is operationalised in the study as the extent to which the journals, through the articles published in them, serve their functions as journals for the farmers.

Relevancy

Relevancy has been operationally defined as the extent to which the articles published in the journals are pertinent to the farmers' needs.

Practicability

Practicability is operationally defined as the dagree to

which the information given through the journals can be put to use by the farmers.

Age

Age is defined operationally as the number of years the respondent has completed since birth till the date of interview.

Education

Pillai (1978) defined the term "educational status" as the number of years of formal school or college studies undergone by an individual.

Education, in this study is identical with the level of literacy and refers to the ability of the individual to read and write and the extent of schooling.

Farm size

Farm size is operationally defined as the number of acres of land owned by an individual, including the one leased in and leased out.

Cosmopoliteness

Rogers and Svenning (1969) defined cosmopoliteness as the extent of contact outside the village, such as visiting the nearest town and membership in organisation outside the village.

For this study, cosmopoliteness of an individual was operationalised in terms of the individual's frequency of

visit to the nearest town, the purpose of visit and his membership in any organisation in the town.

Scientific orientation

According to Supe (1969) scientific orientation is the degree to which a farmer is oriented to the use of scientific methods in decision making. This definition was adopted in this study.

Contact with extension agencies

Contact with extension agencies had been operationalised as the frequency of visiting the extension agencies like Junior Agricultural Officers, Block Development Officers, University Scientists etc. in connection with agricultural activities.

2.9 Hypotheses developed for the study.

The following hypotheses were formulated for the study based on the theoretical orientation and review of literature.

1. There will be no significant difference in readability level between the articles published in the journals and the fourth standard Malayalam text book.

2. Majority of the farmer subscribers of the journals will not read the agricultural information published in the journals.

3. Majority of farmer subscribers will not read the development information published in the journals.

4. Majority of farmer subscribers will not read the editorial published in the journals.

5. Majority of farmer subscribers will not read the advertisements published in the journals.

6. There will be no significant relationship between age of the respondents and their reading habit.

7. There will be no significant relationship between education of the respondents and their reading habit.

8. There will be no significant relationship between farm size of the respondents and their reading habit.

9. There will be no significant relationship between cosmopoliteness of the respondents and their reading habit.

10. There will be no significant relationship between scientific orientation of the respondents and their reading habit.

11. There will be no significant relationship between extension contact of the respondents and their reading habit.

12. There will be no significant difference between the knowledge level of subscribers and that of the control.

13. There will be no significant relationship between the age of the respondents and their knowledge.

14. There will be no significant relationship between education of the respondents and their knowledge.

15. There will be no significant relationship between the farm size of the respondents and their knowledge.

16. There will be no significant relationship between cosmopoliteness of the respondents and their knowledge.

17. There will be no significant relationship between scientific orientation of the respondents and their knowledge.

18. There will be no significant relationship between the extension contact of the respondents and their knowledge.

19. There will be no significant agreement between the ranking of the areas of agriculture according to readers' preference and according to the frequency of articles published in the journals.

20. There will be no significant agreement between the ranking of the areas of crop production according to readers' preference and according to frequency of articles published in the journals.

METHODOLOGY

CHAPTER III

METHODOLOGY

In this chapter the methodology followed in the study is explained. This includes selection of locale of research, sampling procedures, measurement of variables, method of collection of data and statistical methods used for analysis.

3.1 Locale of research

The district of Trichur in Kerala was purposively selected for the study. This is based on the number of subscribers to the two journals, which is the highest in Trichur district.

3.2 Selection of journals

The two journals selected for the study were "Kerala karshakan" and "Kalpadhenu". These were selected for the following reasons.

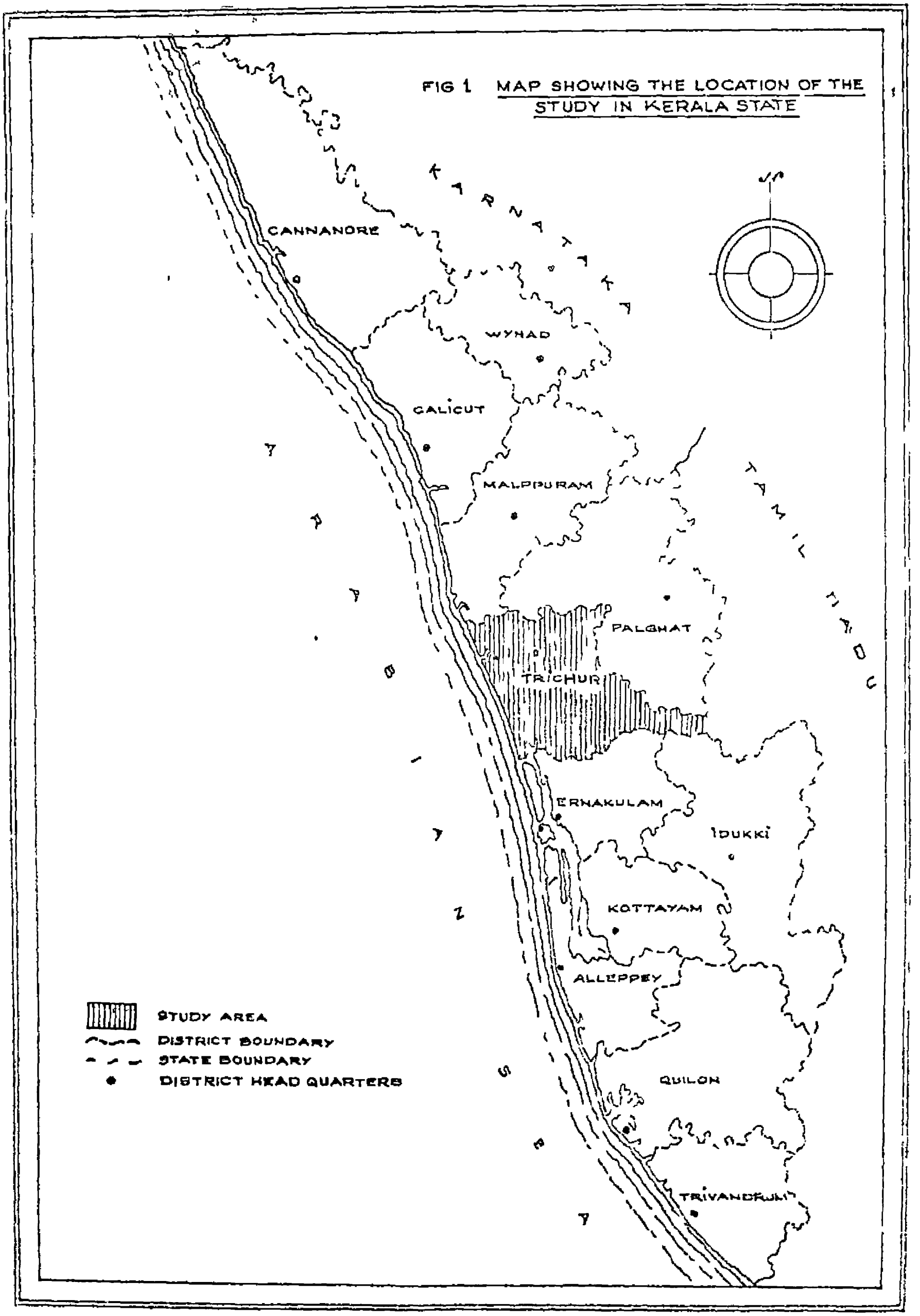
1. The information pertaining to subscribers is most accessible with these two journals.

2. These two are considered to be the most popular amongst the farmers.

3.3 Selection of sample

The unit of analysis was the individual farmer designated as subscriber and non-subscriber. Those who are subscribing

FIG 1 MAP SHOWING THE LOCATION OF THE STUDY IN KERALA STATE



to any one of the journals and own some cultivated land were considered as farmer subscribers. Those who own some cultivated land, but are not subscribing to either of the journals were designated as farmer non-subscriber, who formed the control group.

Random sampling was done for the selection of the respondents. The list of the subscribers to the journals were obtained from their respective centres of publication. From this, a sample of fifty subscribers each, were randomly selected for the two journals. The criteria for the selection of the non-subscribers (control) were that they should be from Trichur district and that they should not have subscribed to either of the journals at any time. Thus fifty respondents were selected as non-subscribers. So the final sample included 150 respondents of which 50 were subscribers to "Kerala karshakan", 50 subscribers to "Kalpadhenu" and 50 were non-subscribers who formed the control group.

3.4 Measurement of variables.

The methods followed for measuring the different variables under study are presented below:

3.4.1 Readability.

Different researchers have measured readability in different ways. Mainly two methods were used (1) using readability formula and (2) using readers' judgement.

Flesch (1954) used two factors namely communicative energy and realism in the writing to predict readability.

Harrington and Mallinson (1958) used direct questioning to measure readability.

Pizarek (1969) used two criteria viz. average sentence length in words and percentage of words which according to a vocabulary consists of atleast four syllables, to measure readability of texts in polish language.

Zalaki (1973) measured readability in three different ways: by assessing reading comprehension, by assessing reading efficiency and by assessing readers' judgement.

Rajan (1982) developed a readability formula for Malayalam texts.

The formula is, $X_1 = 110.4 - 0.176\ X_2 + 1.265\ X_3$

Where X_1 = Predicted readability scores of the article

X_2 = Number of syllables per 100 words in the article

X_3 = Percentage of personal words in the article.

This formula was adopted in this study, to measure readability. Interpretation of the readability scores thus obtained was also done as per the method used by Rajan (1982).

Interpretation of the readability score obtained:

The readability formula when applied to a reading material gives a readability score. The higher the score, the more is the readability. For more scientific interpretation, the readability scores obtained were compared with standards fixed with reference to a functionally literate individual's level.

According to UNESCO standards, a minimum of four years of schooling is required for a typical individual to attain and maintain functional literacy (Gray, 1956). So it was assumed that fourth standard text books can be read easily by all individuals who are functionally literate. Hence the Malayalam text book prescribed by the Government of Kerala for the fourth standard was taken as the standard. From this book, ten hundred word samples were randomly drawn and the readability was assessed using the formula.

The results are given in table 1.

Table 1. Readability scores of 10 samples from fourth standard Malayalam text book

Sl. No.	Number of syllables per 100 words	Percentage of personal words	readability score
1	305	2	59.25
2	299	3	61.57
3	307	2	58.90
4	314	4	60.20
5	325	4	58.26
6	300	0	57.60
7	296	2	60.83
8	300	5	63.93
9	312	6	63.08
10	316	6	63.37

Mean = 60.70
SD = 2.13

Three readability categories were established based on the mean and standard deviation, as shown in table 2.

Table 2. Readability categories.

Sl. No.	Criterion for classification	Readability score	Readability category
1	Mean + 1 SD	> 63	High
2	Mean ± 1 SD	59 - 63	Medium
3	Mean - 1 SD	< 59	Low

For assessing the readability of the articles in the journals, 10 articles each were selected for Kerala karshakan and Kalpadhenu, from five issues. For each article the number of syllables per 100 words and percentage of personal words were found out. Then the readability scores were found out using the formula, and interpreted by comparing with the standard fixed.

For counting the words, the procedure suggested by Nair (1977) was followed. He has given the following directions for counting words in Malayalam.

1. Count all noun forms as one word. But participles or post-fixes occurring in combination with nouns need not be counted as words.

2. Count each word in a compound word, if not a name.

3. All verbal forms are to be counted as words. All adverbs are also words. Modifications done to verbs to give special meaning need not be considered as words.

4. Adjectives should be counted, except in cases where they do not have independent meaning. The sounds used to connect adjectives with nouns are to be counted.

5. All prepositions, all independently standing conjunctions and all exclamatory words are to be counted.

These principles were followed in counting the words in the articles.

All letters in Malayalam with a vowel sound in it were considered as syllable.

All nouns with natural gender and all pronouns except neuter ones were taken as personal words.

3.4.2 Reading preference.

Reading preference of the farmer subscribers was assessed with respect to the following:

1. General areas in the journals.
2. Areas of agriculture in the journals.
3. Areas of crop production in the journals.

Assessment of reading preference involved two steps namely (1) identification of content areas and (2) ranking the content areas according to readers' preference.

1. Identification of content areas.

a. Identification of general areas in the journals

After analysing the contents of the journals, the following areas were delineated as general areas for assessing readers' preference.

1. Agricultural information
2. Development information
3. Editorial
4. Advertisements

b. Identification of the areas of agriculture

After examining the contents of the journals over a period of time, the following areas of agriculture have been identified as covered in the journals and for assessing the readers' preference.

1. Crop production
2. Animal husbandry and dairy
3. Poultry
4. Fisheries

c. Identification of the areas of crop production

The following five areas have been identified as areas of crop production, dealt with in the journals and for assessing reading preference of the subscribers.

1. Seeds and sowing
2. Soil and water management

3. Manures and fertilizers
4. Plant protection
5. Harvesting and processing

2. Ranking of the content areas.

The ranking of the content areas identified, according to readers' preference was done by using the method of paired comparison as suggested by Edwards (1957).

The four general areas, the four areas of agriculture and the five areas of crop production were given in pairs in all possible combinations in the interview schedule. The maximum number of pairs possible is given by the formula, $n\left(\frac{n-1}{2}\right)$ where 'n' is the number of items to be given in pairs. Thus there were 6 pairs of items for the general areas, 6 pairs for the areas of agriculture and 10 pairs for the areas of crop production.

The respondents were asked to indicate the one item which they prefer more to read over the other item in each pair, for all the pairs. From the judgements of the respondents, F, P and Z matrices were developed and scale values derived as explained below.

F matrix

From the judgements of the respondents the F matrix was constructed using the frequencies, where the cell entries

correspond to the frequency with which the column stimuli were judged more favourable than row stimuli.

P matrix

For each cell entry in the F matrix, proportion entries were made in the P matrix by dividing them by N, where N was the total number of respondents who made the judgements. The entries of P matrix gave the proportion of times the column stimuli were judged more favourable than the row stimuli.

Z matrix

The entries of Z matrix were obtained from the table of normal deviates, which gives the Z values corresponding to the proportion in the P matrix. The sum of normal deviates entered were calculated for each column and the arithmetic means were found out. In order to get a positive scale, a constant was added to the scale values. The scale was taken as the scores of preference to the areas by the respondents.

3.4.3 Reading habit.

For assessing reading habit, reading habit scores were calculated by cumulating the scores obtained for questions asked on reading habit. The questions were based on the frequency of reading agricultural information, development information, editorial and advertisements, in the journals. The responses were collected in a four point continuum. The response categories and the scores given were as follows:

Response	Score
Always	3
Often	2
Occasionally	1
Never	0

The respondents were then grouped according to the reading habit scores.

3.4.4 Knowledge.

Knowledge has been measured by different researchers in different ways. Shankariah and Singh (1967) used the teacher-made test consisting of simple question items and constant alternative items (true-false) to measure the knowledge of the farmers about improved methods of vegetable cultivation.

Sinha et al. (1968) used the method of self appraisal to assess the knowledge level of agricultural extension officers.

Nair (1969) measured knowledge level of farmers on recommended package of practices of rice using teacher-made test with multiple choice questions.

Jaiswal and Dave (1972) computed the knowledge score based on the formula,

$$\text{Knowledge score} = \frac{\text{No. of correct answers}}{\text{total raw score}} \times 100$$

Singh and Singh (1974) developed a knowledge test based on the response of farmers to questions on various aspects of wheat cultivation. The total score of each respondent was calculated by the formula, $\frac{X_1}{n} \times 100$

Where X_1 = No. of correct answers

n = Total no. of questions.

Nachiappan and Murthy (1976) used the teacher made test to find out the knowledge level of small farmers about farm technology. They calculated knowledge index by the following formula:

$$\text{Knowledge index} = \frac{\text{Actual score obtained}}{\text{Maximum allotted}} \times 100$$

For this study, the method followed by Nair (1969) was adopted. The method is described as follows:

1. Item collection:

The content of knowledge test is composed of questions called items. A number of items on the aspects of agriculture dealt within the journals were collected in consultation with the project leader and after analysing the contents of the journals. Altogether 42 items were collected. The items were converted into multiple choice questions.

2. Item analysis

Item analysis was done to get the following factors:

(i) index of item difficulty and

(ii) index of item discrimination.

The collected items were administered to 20 farmers. Scores of 1 and 0 were given for correct and wrong answers, respectively. The total score of each individual was then calculated and arranged in ascending order. As suggested by Garret (1973) 27 per cent of the lowest and 27 per cent of the highest scores were taken for calculating the indices of item difficulty and item discrimination. The 27 per cent with highest scores and the 27 per cent with lowest scores were termed as high group and low group respectively.

(i) Index of item difficulty.

The difficulty index of each item was calculated by averaging the percentages of correct answers in nigh and low groups.

(ii) Index of item discrimination.

The discrimination index of each item, that is, its capacity to discriminate the well informed from the poorly informed, was calculated by the formula,

$$E = \frac{S_1 - S_2}{N/3}$$

Where E = discrimination index

S_1 and S_2 = Frequencies of correct answers in high and low groups respectively.

N = Total no. of respondents in the item analysis sample.

3. Final selection of items.

Those items which had a difficulty index of between 25 and 75 and discrimination index of above 0.20 were selected for inclusion in knowledge test. With this presumption 30 items were selected for the final knowledge test.

4. Method of scoring.

A score of 1 was given for correct answer and 0 for wrong answer.

The total score for each respondent was calculated by summing up the scores obtained for each item. Thus the maximum knowledge score that could be obtained by a respondent was 30 and minimum zero.

The knowledge score of all the respondents were added together. The mean and standard deviation were worked out, on the basis of which the respondents were classified into low, medium and high as follows:

Low (mean - 1 SD)
Medium (mean $\pm$ 1 SD)
High (mean + 1 SD)

3.4.5 Format and content of the journals.

Under the format and content the aspects studied include layout, coverage, serviceability, relevancy and practicability.

a. Layout

The layout of the journals was assessed with respect to the following aspects:

1. Cover page - Attractiveness, colour and illustrations.
2. Headings - Letter size and Appropriateness of headings.
3. Letter size of the text.
4. Pictures - Quality and Relevancy of the pictures.
5. Advertisements - Usefulness and Types of advertisements.

Questions were prepared on these aspects and given in the interview schedule. The respondents were asked to give their opinions or preferences for each question. The response categories were as follows:

1. Cover page:

Attractiveness	:	Very attractive/Attractive/Not attractive
Colour	:	Black and white/One colour/Contrasting colours
Illustration	:	Photographs/Drawings

2. Headings:

Letter size	:	Large/Medium/Small
Appropriateness to Articles	:	Appropriate/Not appropriate

3. Letter size of text: Large/Medium/Small

4. Pictures:

Relevancy to articles	:	Relevant/Not relevant
Quality	:	Very good/Good/Poor

5. Advertisements:

Usefulness	:	Very useful/Useful/Not useful
Types	:	Manures and fertilizers/ Pesticides/Cattle feeds/ Others

b. Coverage

Coverage was assessed in terms of frequency of articles published on agricultural areas, in the five issues of the journals.

The articles were grouped into the following four categories based on the subject matter dealt within them:

1. Crop production
2. Animal husbandry and dairy
3. Poultry and
4. Fisheries

The number of articles falling under each of the above four areas were enumerated and these areas were ranked based on the number of articles published under each.

Similarly, the articles published under crop production were again categorized into the following five areas based on the subject matter dealt within them.

1. Seeds and sowing
2. Soil and water management
3. Manures and fertilizers
4. Plant protection
5. Harvesting and processing

The number of articles published under each of the above areas were enumerated and the areas ranked accordingly. For the areas of agriculture other than crop production, sub-categorisation was not done.

The rankings, thus obtained, of the areas of agriculture and areas of crop production according to frequency of articles published in the journals, were then compared with the ranking of these areas obtained according to readers preference, for assessing the extent of agreement between readers' preference and content of articles published in the journals. Spearman's rank correlation coefficient was worked out for assessing the agreement between the rankings.

c. Serviceability of the journals

Serviceability of the journals was assessed by analysing the responses of subscribers to 5 statements. The statements reflect the functions of a farm journal. The response was collected in a three point continuum as follows:

Response	Score
Agree	3
Neutral	2
Disagree	1

Weighted average was worked out for each statement. The statements were then ranked accordingly.

d. Relevancy and practicability

(i) Relevancy:

Relevancy was assessed with respect to the articles on agricultural areas published in the five issues of the journals. The respondents were asked to give their opinion about the relevancy of the articles in a three point continuum as given below:

Most relevant

Relevant

Not relevant

The percentages of respondents falling in each of these categories were then worked out.

(ii) Practicability:

Practicability was also assed with respect to agricultural information published in the five issues of the journals. The respondents were asked to give their opinion about the practicability of the information in a three point continuum as follows:

Most practicable

Practicable

Not practicable

Here also the percentages of respondents falling in each of these categories were worked out.

3.4.6 Measurement of personal and socio-economic characteristics.

The procedures adopted for measuring the personal and socio-economic characteristics of the respondents, namely age, education, farm size, cosmopoliteness, scientific orientation and extension contact, were as described below.

1. Age

The respondents were asked to give the number of years completed since birth upto the date of interview.

2. Education

The respondents were asked to indicate the literacy level or extent of formal education undergone by them by selecting the appropriate category from among the following seven categories, as per Trivedi's (1963) socio-economic scale.

Category	Score
Illiterate	0
Can read only	1
Can read and write	2
Primary school	3
Middle school	4
High school	5
College and above	6

3. Farm size.

The respondents were asked to give the total area of land owned by them, including the one leased in and leased out.

4. Cosmopoliteness.

The measures used to operationalise the concept of cosmopoliteness by past researchers were the following:

1. Attitudinal indicators:

Researchers like Gouldner (1957), Dobriner (1958) and Warden (1964) used attitudinal indicators to measure cosmopoliteness. The respondents were asked to indicate the degree of agreement or disagreement with statements such as, "the most rewarding organizations a person can belong to are local organizations serving local needs" (Dobriner, 1958).

2. Behavioural indicators:

Goldsen and Ralis (1952) used the behavioural indicators to measure cosmopoliteness. The respondent was asked to reflect his communication contact with those external to his social system.

Bhaskaran (1976) used the frequency of visit to the nearest town in a month's period and the purpose of visit to give an index of cosmopoliteness.

In this study cosmopoliteness was measured in terms of (1) frequency of visit to the nearest town (2) purpose of visit

and (3) membership in any organisation in the town. The response categories and scores were as follows:

(1) Frequency of visit to the nearest town.

Never	:	0
Once in a month	:	1
Twice in a month	:	2
Once in a week	:	3
Twice of more a week	:	4

(2) Purpose of visit.

Agricultural	:	3
Personal/ Professional	:	2
Other purpose	:	1
Entertainment	:	0

(3) Membership in organisation in town.

Yes	:	1
No	:	0

5. Scientific orientation:

Scientific orientation of the respondents was assessed by using the scale developed by Supe (1969). It consisted of six statements of which one was negative. The responses were collected in a five point continuum as shown below.

Response	Score
Strongly agree	7
Agree	5
Undecided	4
Disagree	3
Strongly disagree	1

For the negative statement the scoring is just the reverse.

6. Extension contact:

To measure farmers' contact with extension agencies, the scoring technique developed by Jaiswal et al. (1971) was used. It is based on the frequency of meeting, by the respondents, with Junior Agricultural Officers, Village Extension Workers, Demonstrators etc. in connection with agricultural activities. The respondents were asked to indicate their frequency of visiting these personnal in connection with agricultural purpose. Scores were given as follows:

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

3.5 Data collection:

A draft interview schedule was prepared incorporating all the variables under study and tested by administering to twenty farmers, who were not includedin the main sample. In the light of the results of the pretest, suitable modifications were made and the schedule was finalised. The schedule in its finalised form is given in Appendix I.

The data was collected from the respondents by personal interviews with them. The questions were rendered in Malayalam during the interview. Analysis was done for the two journals in separate.

3.6 Statistical methods used:

The following statistical tests were used in the analysis of the data collected.

1. Percentage analysis.

This was done to work out the distribution of respondents based on reading habit and based on their opinion about the format and content of the journals.

2. The paired comparison technique.

The paired comparison technique as explained by Edwards (1957) was adopted to find out the farmers' preference to read the different content areas of the journals.

3. Normal test of significance

The normal test of significance was used to test the

significance of difference between the knowledge level of subscribers and non-subscribers (control).

4. Correlation coefficient.

To determine the magnitude of relationship between each of the personal and socio-economic characteristics with knowledge and reading habit, correlation coefficients were worked out and tested for significance.

5. Spearman's rank correlation coefficients.

This was used to assess the extent of agreement between the readers' preference and the contents of articles published in the journals.

6. 't' test.

The 't' test was done to test the significance of difference between the readability level of the articles published in the journals and that of the fourth standard Malayalam text book.

7. Weighted averages.

The weighted averages were worked out for ranking the statements on serviceability of the journals. This was worked out by multiplying the number of respondents, falling in each of the three response categories of each statement, by the respective scores of the responses, adding them together and then dividing it by the total number of respondents.

RESULTS

CHAPTER IV

RESULTS

The results of the study are presented under the following heads:

1. Readability of articles published in the journals.
2. Reading preference of the farmer subscribers of the journals.
3. Reading habit of the farmer subscribers of the journals.
4. Relationship of reading habit with personal and socio-economic characteristics of the subscribers.
5. Knowledge level of subscribers and non-subscribers.
6. Relationship of the knowledge of the subscribers and non-subscribers with their personal and socio-economic characteristics.
7. Format and content of the journals.

These results are given in two sections. Section I deals with "Kerala karshakan" and Section II deals with "Kalpadhenu".

Section I (Kerala karshakan)

4.1 Readability of articles:

The readability was assessed for 10 articles selected from five issues of Kerala karshakan. The results are given

in Table 3. Of the 10 articles, five were on crop production, four were on animal husbandry and dairy and one on poultry.

Table 3. Readability of articles published in Kerala karshakan.

Area	Article No.	No. of syllables per 100 words	Percentage of personal words	Readability score	Mean
Crop Production	1	298	2	60.48	55.46
	2	315	0	54.96	
	3	322	0	53.72	
	4	313	0	55.31	
	5	327	0	52.85	
Animal husbandry and dairy	6	310	2	58.37	57.01
	7	316	0	54.78	
	8	320	0	54.08	
	9	296	2	60.83	
Poultry	10	330	0	55.58	55.58

Pooled mean = 56.096

It is seen from the table that the mean readability score of the articles was 56.096 which was low compared to the standard fixed. It is also seen that articles on animal husbandry and dairy had comparatively higher readability scores than articles on other fields. The fourth standard Malayalam text book, which is the standard, had a mean readability score

of 60.70 which was found to be significantly higher than that of the articles published in Kerala karshakan. This was revealed by the 't' test which gave a t value of 5.69 which was significant at 0.05 level.

4.2. Reading preference.

Reading preference of the respondents was assessed with reference to (1) general areas of the journal (2) areas of agriculture in the journal and (3) areas of crop production in the journal.

1. Reading preference of the general areas in Kerala karshakan

The respondents (N = 50) judged the general areas in the journal (editorial, development information, agricultural information and advertisements) on the basis of their preference to read. The paired comparison analysis of the data gave the following ordering of the areas on the basis of reading preference, as shown in Table 4.

Table 4. Scale values on reading preference for the general areas in Kerala karshakan.

Areas -	Agricultural information	Development information	Editorial	Advertisements
Scale values:-	1.498	0.782	0.732	0.000

The table reveals that agricultural information was

preferred most followed by development information and editorial, and advertisements, the least preferred area.

2. Reading preference of the areas of agriculture in Kerala karshakan.

The respondents (N = 50) judged the areas of agriculture in the journal (crop production, animal husbandry and dairy poultry and fisheries) on the basis of their preference to read. The paired comparison analysis of the data gave the following ordering of the areas on the basis of reading preference, as shown in Table 5.

Table 5. Scale values on reading preference for the areas of agriculture in Kerala karshakan.

Areas →	Crop production	Animal husbandry and dairy	Poultry	Fisheries
Scale values →	1.700	1.509	0.527	0.000

The table reveals that crop production was the most preferred area to read followed by animal husbandry and dairy, poultry and fisheries, in that order.

3. Reading preference of the areas of crop production in Kerala karshakan.

The respondents (N = 50) judged the areas of crop production in the journal (seeds and sowing, soil&water management, manures and fertilizers, plant protection and harvesting and

processing) on the basis of their preference to read. The paired comparison analysis of the data gave the following ordering of the areas on the basis of reading preference as shown in Table 6.

Table 6. Scale values on reading preference for the areas of crop production in Kerala karshakan.

Areas →	Plant protection	Manures and fertilizers	Seeds and sowing	Soil and water management	Harvesting and processing
Scale values →	1.144	0.769	0.528	0.094	0.000

The table reveals that plant protection was the most preferred area to read followed by manures and fertilizers, seeds and sowing and soil and water management, and harvesting and processing, the least preferred area.

The diagrammatic representation of the results on the reading preference of the respondents with respect to the general areas, areas of agriculture and areas of crop production, are presented in Figure 2. The matrices for the paired comparison analysis are given in Appendix II(a).

4.3 Reading habit.

The reading habit scores of the farmer subscribers of the journal are given in Table 7.

FIG 2 SCALE VALUES FOR THE FARMERS' PREFERENCE TO THE CONTENTAREAS OF KERALA KARSHAKAN

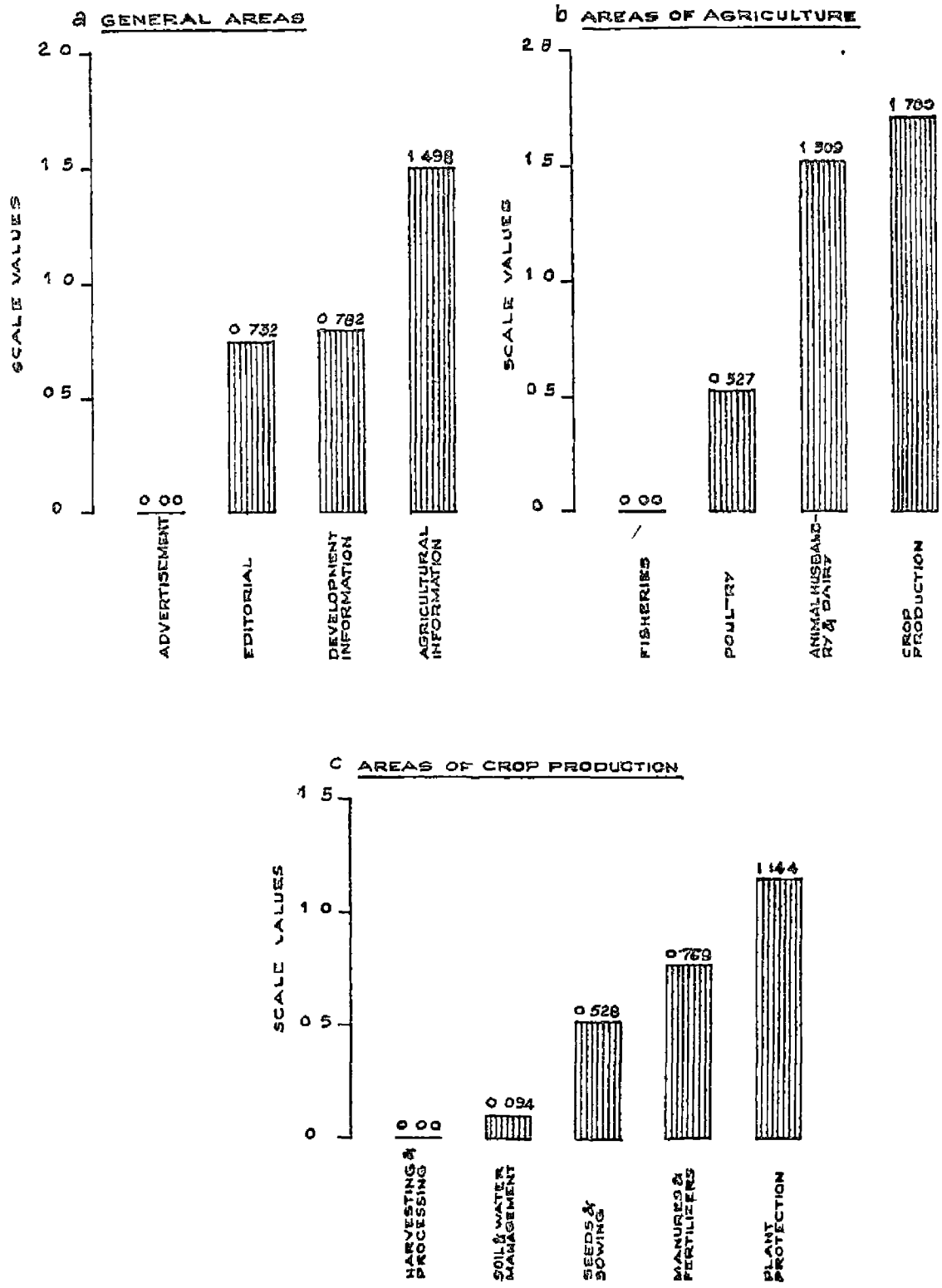


Table 7. Distribution of respondents according to reading habit scores.

Reading habit scores	Frequency (N = 50)	Percentage
0 - 5	0	0
6 - 10	11	22
11 - 15	17	34
16 - 21	22	44

The table reveals that 44 per cent of the respondents were having high reading habit scores, of above 15, and none had scores below 6. Twenty two per cent got scores ranging from 6 - 10 while 34 per cent had scores of 11 - 15.

Since the above reading habit score is a cumulative measure of the reading habit, the different aspects of it were found separately as given below:

Table 8 gives the frequency of reading the agricultural articles published in Kerala karshakan by the respondents.

Table 8 reveals that regarding the reading of crop production articles by the respondents, 64 per cent read them always, 24 per cent often and 12 per cent occasionally. There were no non-readers of crop production articles. With respect to animal husbandry and dairy 46 per cent read the articles

Table 8. Frequency of reading Agricultural information by the respondents.

Response	Areas of agriculture							
	Crop production		Animal husbandry and dairy		Poultry		Fisheries	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
	(N=50)		(N=50)		(N=50)		(N=50)	
Always	32	64	23	46	15	30	10	20
Often	12	24	10	20	10	20	10	20
Occasionally	6	12	13	26	18	36	19	38
Never	0	0	4	8	7	14	11	22

always and 20 per cent often. Occasional readers were 26 per cent. 8 per cent were non-readers. In the case of information on poultry 30 per cent read always and 20 per cent read them often. While 36 per cent were occasional readers, 14 per cent never read the information on poultry. In the case of fisheries, the percentage of respondents reading the information always, often occasionally and never came to 20, 20, 38 and 22 respectively.

Table 9 given below presents the frequency of reading development information by the respondents.

Table 9. Frequency of reading Development Information by the respondents.

Response	Frequency (N = 50)	Percentage
Always	28	56
Often	12	24
Occasionally	6	12
Never	4	8

The table reveals that 56 per cent of the respondents read the development information always. 24 per cent read them often and 12 per cent occasionally. 8 per cent were not reading the articles.

The following table (Table 10) gives the frequency of reading editorial by the respondents.

Table 10. Frequency of reading Editorial by the respondents.

Response	Frequency (N = 50)	Percentage
Always	18	36
Often	21	42
Occasionally	5	10
Never	6	12

A perusal of the above table reveals that 36 per cent of the respondents read editorial always and 42 per cent read often 10 per cent were occasional readers and 12 per cent were non-readers.

Table 11 gives the frequency of reading advertisements by the respondents.

Table 11. Frequency of reading Advertisements by the respondents.

Response	Frequency (N = 50)	Percentage
Always	14	28
Often	20	40
Occasionally	10	20
Never	6	12

The above table shows that 28 per cent read advertisements always and 40 per cent read them often 20 per cent read advertisements occasionally and 12 per cent never read the advertisements.

4.4 Relationship of the reading habit of farmer subscribers with their personal and socio-economic characterstics.

To ascertain the relationship between the reading habit of the subscribers and their personal and socio-economic characteristics, correlation analysis was done. The correlation

of the selected personal and socio-economic characteristics with reading habit is given below in Table 12.

Table 12. Relationship of reading habit with personal and socio-economic characteristics.

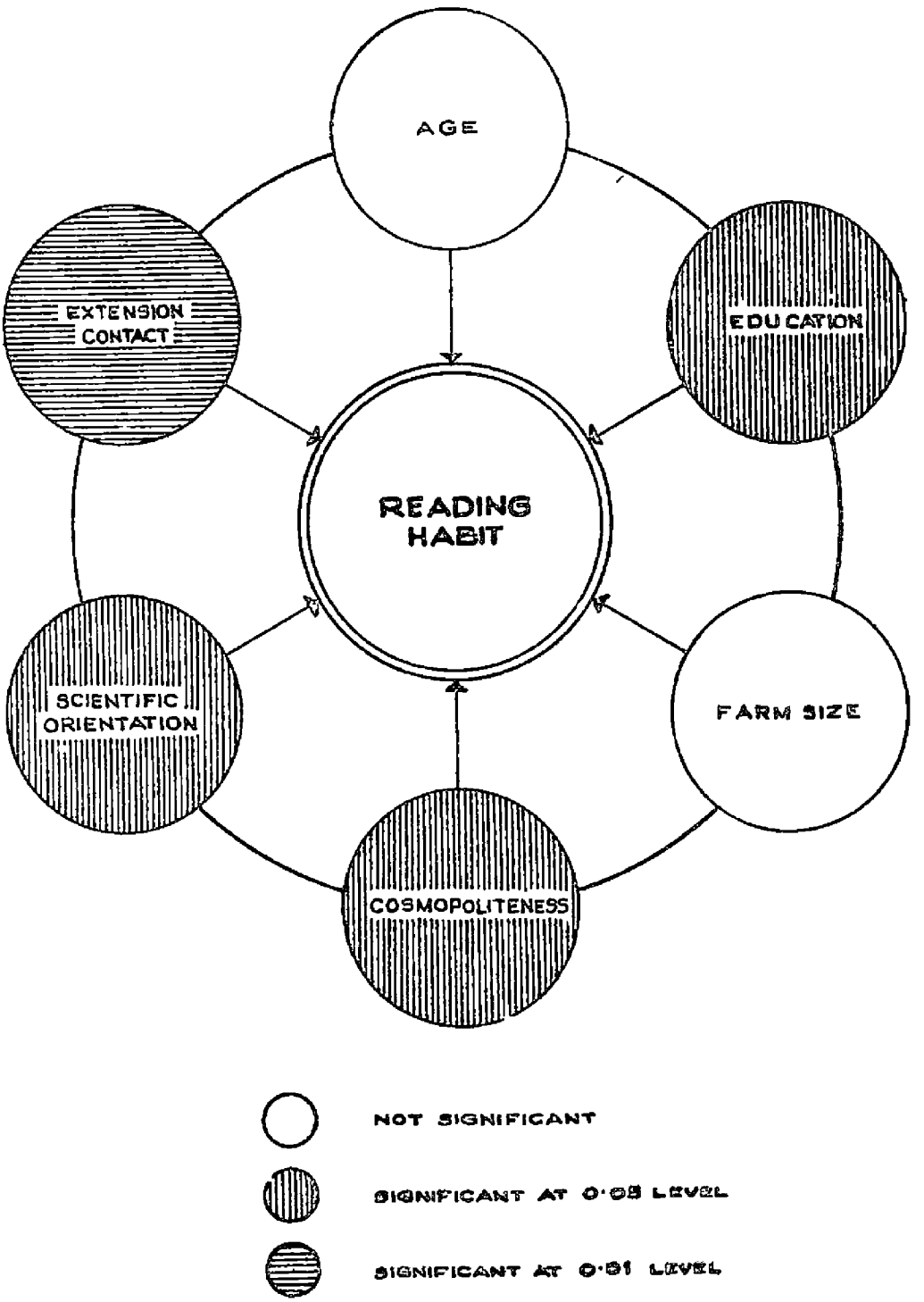
Sl. No.	Personal and socio-economic characteristics	Correlation coefficient (r)
1	Age	0.052
2	Education	0.331*
3	Farm size	0.058
4	Cosmopoliteness	0.284*
5	Scientific orientation	0.338*
6	Extension contact	0.550**

* Significant at 0.05 level

** Significant at 0.01 level

The table indicates that except age and farm size, all other characteristics were having significant positive relationship with reading habit. Though age and farm size were having positive relationship, it was not significant, either at 0.01 level or 0.05 level of probability. Among the other characteristics extension contact was found to have significant positive relationship at 0.01 level of probability while education, cosmopoliteness and scientific orientation were having significant relationship at 0.05 level.

FIG 3 RELATIONSHIP OF PERSONAL AND SOCIO-ECONOMIC CHARACTERISTICS WITH READING HABIT OF KERALA KARSHAKAN SUBSCRIBERS.



4.5 Knowledge.

The distribution of the respondents according to knowledge score is given below in Table 13.

Table 13. Distribution of respondents according to knowledge score.

Category	Subscribers (N=50)		Non-subscribers (N=50)	
	Frequency	Percentage	Frequency	Percentage
High (Mean + 1SD)	3	6	4	8
Medium (Mean ± 1SD)	39	78	36	72
Low (Mean - 1SD)	8	16	10	20

The table reveals that among subscribers 6 per cent were having high knowledge level whereas 8 per cent among non-subscribers were having high level of knowledge. The percentage of respondents having medium level of knowledge was 78 for subscribers and 72 for non-subscribers. While 16 per cent of the subscribers were having low level of knowledge, 20 per cent of non-subscribers were having low level of knowledge.

The mean knowledge scores of the subscribers and non-subscribers are given below in Table 14.

Table 14. Mean knowledge scores of the subscribers and non-subscribers of Kerala karshakan.

Groups	Mean score	Z value
Subscribers	21.76	6.3*
Non-subscribers	17.25	

* Significant

The table indicates that the mean scores of knowledge differ widely between the groups. The Z value was 6.3 which was significant indicating that there was significant difference between the knowledge level of subscribers and non-subscribers.

4.6 Relationship of knowledge with personal and socio-economic characteristics of the respondents.

Table 15 gives the magnitude of relationship between knowledge and the selected personal and socio-economic characteristics of the subscribers and non-subscribers.

The table reveals that except age, all other characteristics were having significant positive relationship with knowledge, both for subscribers and non-subscribers.

Table 15. Relationship of knowledge with personal and socio-economic characteristics.

Sl. No.	Personal and socio-economic characteristics	Correlation coefficient	
		Subscribers	Non-subscribers
1	Age	0.158	0.248
2	Education	0.647**	0.660**
3	Farm size	0.253*	0.324*
4	Cosmopoliteness	0.657**	0.879**
5	Scientific orientation	0.625**	0.939**
6	Extension contact	0.780**	0.539**

* Significant at 0.05 level

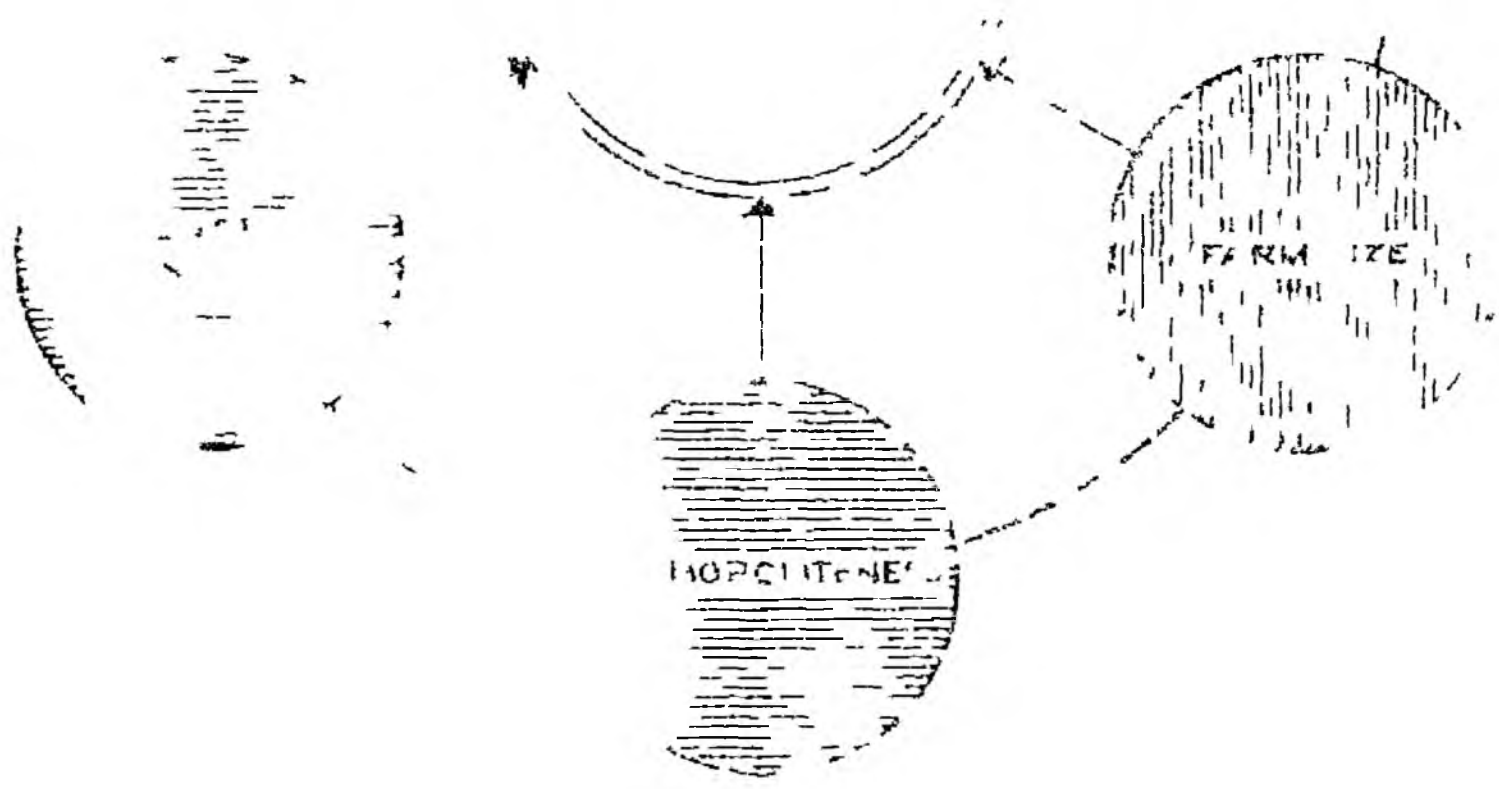
** Significant at 0.01 level

Though age was having a positive relationship with knowledge it was not significant either at 0.01 level or 0.05 level of probability. For both subscribers and non-subscribers, farm size was significantly related with knowledge at 0.05 level of probability while the relationship of education, cosmopoliteness, scientific orientation and extension contact was significant at 0.01 level of probability.

4.7 Format and content of Kerala karshakan.

1. Layout:

The distribution of respondents based on their opinion and preferences about the layout of the journal is given below in Table 16.


FARM SIZE

3 A RELATIONSHIP OF PERSONAL AND SOCIO-ECONOMIC CHARACTERISTICS WITH KNOWLEDGE OF KERALA KRISHAKA SREE RECIPE

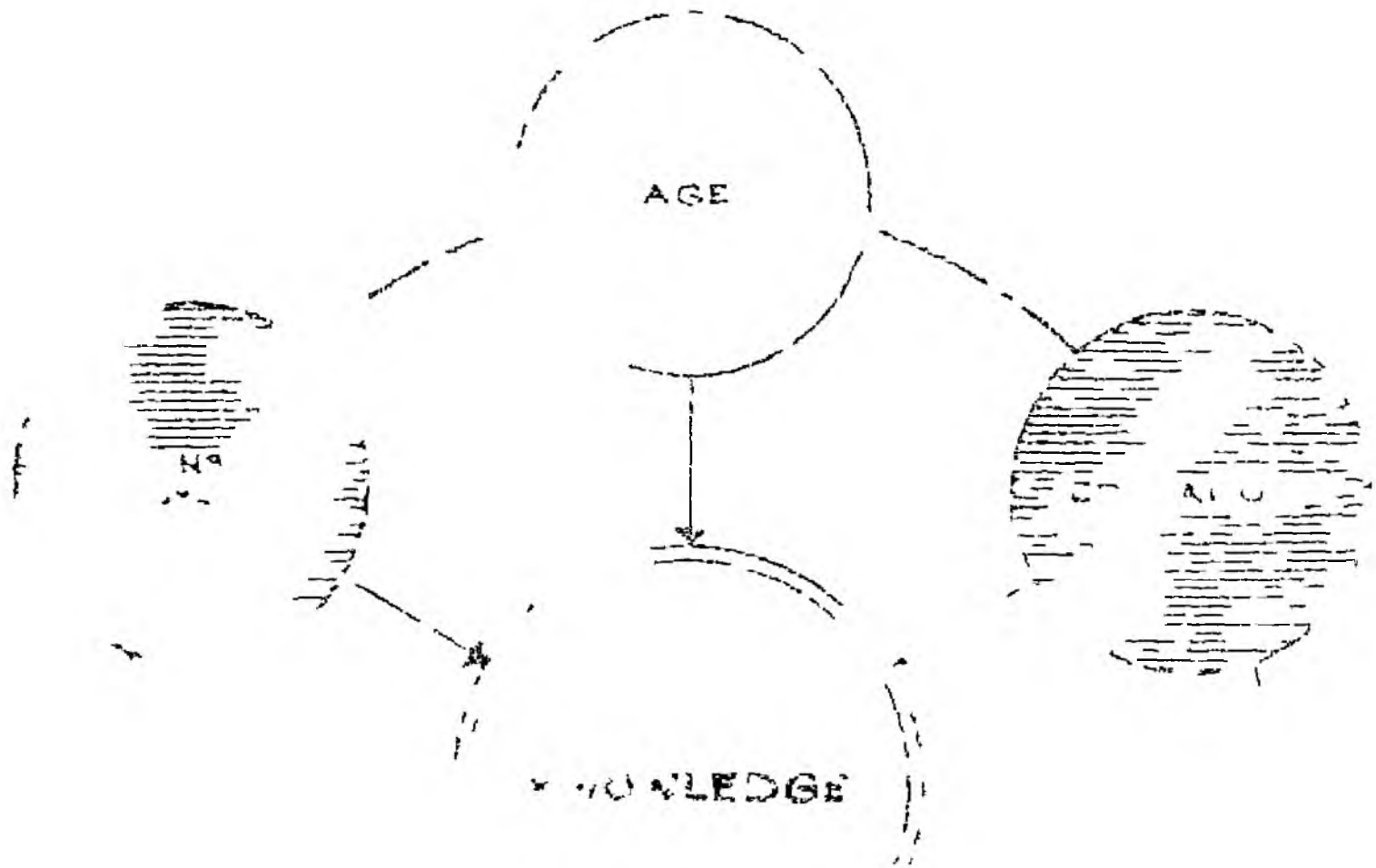


FIG 4 RELATIONSHIP OF PERSONAL AND SOCIO-ECONOMIC CHARACTERISTICS WITH THE KNOWLEDGE OF KERALA KARSHAKAN SUBSCRIBERS

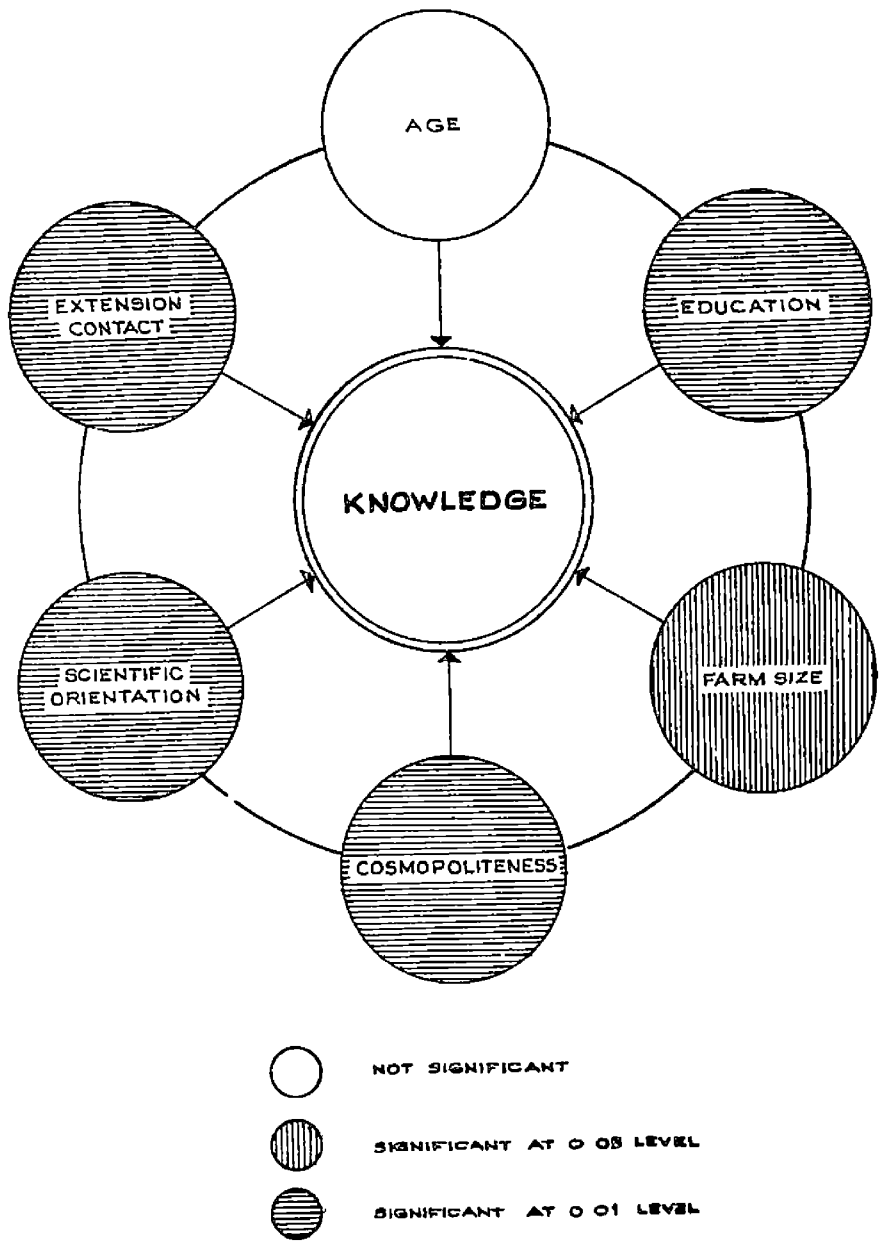


Table 16. Distribution of respondents based on their opinions and preferences about layout.

Layout of Kerala karshakan	Frequency (N = 50)	Percentage
1	2	3
1. Cover page		
a. Attractiveness		
Very attractive	19	38
Attractive	31	62
Not attractive	0	0
b. Colour		
One colour	20	40
Contracting colours	15	30
Black and white	15	30
c. Illustrations		
Photographs	42	84
Drawings	8	16
2. Headings		
a. Letter size		
Small (18 point)	5	10
Medium (24 point)	26	52
Large (36 point)	19	38
b. Appropriateness of headings		
Appropriate	50	100
Not appropriate	0	0

1	2	3
3. Letter size (text)		
Small (10 point)	10	20
Medium (12 point)	33	66
Large (14 point)	7	14
4. Pictures		
a. Relevancy		
Relevant	50	100
Not relevant	0	0
b. Quality		
Very good	14	28
Good	29	58
Poor	7	14
5. Advertisements.		
a. Usefulness		
Very useful	12	24
Useful	27	54
Not useful	11	22
b. Types preferred		
Manures and fertilizers	38	76
Pesticides	12	24
Cattle feeds	..	..
Others	..	..

A perusal of the above table shows that regarding the cover page of the journal, 62 per cent found it attractive

while 38 per cent found it very attractive. 40 per cent preferred one colour on the cover page while 30 per cent each preferred contrasting colours and black and white on the cover page. 84 per cent preferred photographs on the cover page as against 16 per cent who preferred drawings.

Regarding headings used in the journal, cent per cent were of the opinion that the headings are appropriate to the articles. For letter size, 52 per cent preferred 24 point letters while 38 per cent preferred 36 point letters. 10 per cent preferred 18 point letters for the headings.

In the case of letter size of the texts, 66 per cent preferred 12 point letters, 20 per cent preferred 10 point letters and 14 per cent preferred 14 point letters.

With regard to pictures, 100 per cent was of the opinion that the pictures were relevant to the articles. Regarding quality of the pictures 58 per cent rated the pictures as good while 28 per cent found the pictures very good and 14 per cent found them poor.

Advertisements were found very useful by 24 per cent, useful by 54 per cent and not useful by 22 per cent. With regard to the types of advertisements preferred, 76 per cent preferred advertisements on manures and fertilizer while 24 per cent advertisements on pesticides. The other two are not usually advertised in Kerala karshakan.

2. Coverage.

Coverage was assessed with reference to the frequency of agricultural articles published in the five issues of the journal.

Table 17 gives the ranking of the areas of agriculture based on the number of articles published under each.

Table 17. Ranking of the areas of Agriculture based on the frequency of articles published in the five issues of Kerala karshakan.

Sl. No.	Areas of agriculture	Frequency of articles published	Rank
1	Crop production	19	1
2	Animal husbandry and dairy	10	2
3	Poultry	1	3
4	Fisheries	0	4

The table shows 30 articles, classified into four areas of agriculture. Of these, 19 articles were on crop production, 10 were on animal husbandry and dairy and 1 on poultry. No article was there on fisheries.

The following table (Table 18) gives the ranking of the areas of crop production based on the frequency of articles published under each.

Table 18. Ranking of the areas of Crop Production based on the frequency of articles published in the five issues of Kerala karshakan.

Sl. No.	Areas of crop production	Frequencies of articles published	Rank
1	Soil and water management	6	1
2	Plant protection	4	2
3	Manures and fertilizers	3	3
4	Seeds and sowing	2	4
5	Harvesting and processing	1	5

As table 18 indicates, out of 19 articles published on crop production (Table 17) only 16 could be classified exclusively into one or other of the five areas of crop production. Among these, 6 articles were on soil and water management, 4 articles were on plant protection, 3 on manures and fertilizers, 2 on seeds and sowing and one was on harvesting & processing. Three articles could not be classified into specific aspects, since they dealt with all aspects of cultivation.

(i) Extent of agreement between the content of articles published in Kerala karshakan and the reading preference of subscribers.

The extent of agreement between the content of articles published in Kerala karshakan and reading preference of subscribers was determined by assessing the extent of

association between the two sets of ranking, one according to the frequency of articles published and other according to readers' preference.

(a) Extent of agreement between the content of articles published and readers preference with reference to the areas of agriculture.

Table 19 gives the rankings of the four areas of agriculture according to the frequency of articles published and according to readers' preference.

Table 19. Ranking of the areas of Agriculture according to frequency of articles published and according to readers' preference.

Sl. No.	Areas of agriculture	Ranking according to frequency of articles published	Ranking according to readers' preference
1	Crop production	1	1
2	Animal husbandry and dairy	2	2
3	Poultry	3	3
4	Fisheries	4	4

$r_s = 1.00$

The table 19 reveals that the ranks are in perfect agreement with each other. The Spearman's rank correlation coefficient was 1.00 which was significant at 0.05 level of probability.

(b) Extent of agreement between the content of the articles published and readers' preference, with reference to areas of crop production.

Table 20 gives the ranking of the areas of crop production according to the frequency of articles published and according to the readers' preference.

Table 20. Ranking of the areas of Crop Production according to the frequency of articles published and according to readers' preference.

Sl. No.	Areas of crop production	Ranking according to frequency of articles published	Ranking according to readers' preference
1	Soil and water management	1	4
2	Plant protection	2	1
3	Manures and fertilizers	3	2
4	Seeds and sowing	4	3
5	Harvesting and processing	5	5

$$r_s = 0.4$$

The table indicates that the two sets of ranks were not in agreement with each other. The Spearman's rank correlation coefficient was 0.4 which was not significant at 0.05 level.

3. Serviceability of the journal

The following table (Table 21) gives the ranking of the

five statements on serviceability of Kerala karshakan according to weighted average, calculated for each statement.

Table 21. Ranking of the statements on serviceability.

Sl. No.	Statements	Rank	Weighted average
1	Journal helps in finding solutions to problems	1	2.76
2	Gives upto-date information	2	2.74
3	Gives timely information	3	2.70
4	The journal is need based	4	2.68
5	Persuades to adopt	5	2.32

The above table shows that the statement, "journal helps in finding solution to problems" was ranked first followed by the statements, "gives up-to-date information", information given is timely, "the journal is need based" and "persuades to adopt", which was ranked last.

4. Relevancy and practicability.

a. Relevancy.

The following table (Table 22) gives the distribution of respondents according to their opinion about the relevancy of the articles on the areas of agriculture published in the five issues of the journal.

five statements on serviceability of Kerala karshakan according to weighted average, calculated for each statement.

Table 21. Ranking of the statements on serviceability.

Sl. No.	Statements	Rank	Weighted average
1	Journal helps in finding solutions to problems	1	2.76
2	Gives uota-date information	2	2.74
3	Gives timely information	3	2.70
4	The journal is need based	4	2.68
5	Persuades to adopt	5	2.32

The above table shows that the statement, "journal helps in finding solution to problems" was ranked first followed by the statements, "gives up-to-date information", information given is timely, "the journal is need based" and "persuades to adopt",which was ranked last.

4. Relevancy and practicability.

a. Relevancy.

The following table (Table 22) gives the distribution of respondents according to their opinion about the relevancy of the articles on the areas of agriculture published in the five issues of the journal.

Table 22. Distribution of respondents based on their relevancy expressed on the articles in Kerala karshakan.

Response	Areas of agriculture							
	Crop production		Animal husbandry and dairy		Poultry		Fisheries	
	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage
Most relevant	13	26	12	24	2	4	..	..
Relevant	31	62	27	54	10	20	..	..
Not relevant	6	12	11	22	38	76	..	..

The table reveals that regarding crop production articles 26 per cent found them most relevant as against 12 per cent who found them not relevant. 62 per cent found the articles relevant. In the case of articles on animal husbandry and dairy the percentages were 24, 54 and 22 respectively for most relevant, relevant and not relevant. With regard to the article on poultry, 76 per cent found it not relevant while 20 per cent found it relevant and 4 per cent most relevant. There were no articles on fisheries in the five issues studied.

b. Practicability.

The following table shows the distribution of respondents based on their opinion about the practicability of the information given on the areas of agriculture in the five issues.

Table 23. Distribution of respondents based on practicability of information in Kerala karshakan as expressed by them.

Response	Areas of agriculture							
	Crop production		Animal husbandry and dairy		Poultry		Fisheries	
	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage
Most practicable	15	30	12	24	2	4	..	..
Practicable	25	50	26	52	10	20	..	..
Not practicable	10	20	12	24	38	76	..	..

The table reveals that 30 per cent found the information given on crop production most practicable, 50 per cent found it practicable and 20 per cent found it not practicable. As regards to animal husbandry and dairy, 24 per cent found the information most practicable while 52 per cent found it practicable. It was not practicable for 24 per cent. The article on poultry was found practicable by 20 per cent and not practicable by 76 per cent. 4 per cent found it most practicable.

Section II (Kalpadhenu)

4.1 Readability of articles.

The following table (Table 24) gives the readability of 10 articles selected from five issues of Kalpadhenu. Of these, five were on crop production, three were on animal husbandry and dairy and one each on poultry and fisheries.

Table 24. Readability of articles published in Kalpadhenu.

Area	Article No.	No.of syllables per 100 words	Percentage of personal words	Readability score	Mean
Crop Production	1	306	0	56.54	55.99
	2	296	0	58.30	
	3	315	2	57.97	
	4	335	1	52.70	
	5	318	0	54.43	
Animal husbandry and dairy	6	321	0	53.90	54.6
	7	320	2	54.08	
	8	310	0	55.84	
Poultry	9	317	0	54.64	54.61
Fisheries	10	323	0	53.55	53.55

Pooled mean = 55.195

The table reveals that the mean readability score of the articles was 55.195 which was low compared to the standard fixed for comparison, namely, fourth standard Malayalam text book. The table also reveals that the mean readability score of articles on crop production was comparatively higher than that of other fields. The fourth standard Malayalam text book had a mean readability score of 60.70 which was found to be significantly higher than that of the articles, as indicated by the 't' test. This gave a t value of 6.4 which was significant at 0.05 level.

4.2 Reading preference.

Reading preference of the respondents was assessed with reference to (1) general areas as in the journal (2) areas of agriculture in the journal and (3) areas of crop production in the journal.

1. Reading preference of the general areas in Kalpadhenu.

The respondents (N = 50) judged the general areas in the journal (editorial, development information, agricultural information and advertisements) based on their preference to read. The paired comparison analysis of the data gave the following ordering of the areas based on reading preference, as shown in Table 25.

Table 25. Scale values on reading preference for the general areas in Kalpadhenu.

Areas -	Agricultural information	Development information	Editorial	Advertisement
Scale values -	1.169	0.600	0.423	0.000

The table reveals that agricultural information preferred most followed by development information, editorial and advertisement, in that order.

2. Reading preference of the areas of agriculture in Kalpadhenu.

The respondents (N = 50) judged the areas of agriculture in the journal (crop production, animal husbandry and dairy, poultry and fisheries) on the basis of their preference to read. The paired comparison analysis of the data gave the following ordering of the areas on the basis of reading preference, as shown in Table 26.

Table 26. Scale values on reading preference for the areas of agriculture in Kalpadhenu.

Areas -	Crop production	Animal husbandry and dairy	Poultry	Fisheries
Scale values -	1.861	1.425	0.738	0.000

The table shows that the most preferred area to read was crop production, followed by animal husbandry and dairy and poultry, and fisheries, the least preferred area.

3. Reading preference of the areas of crop production in Kalpadhenu.

The respondents (N = 50) judged the areas of crop production in the journal (seeds and sowing, soil and water management, manures and fertilizers, plant protection and harvesting and processing) on the basis of their preference to read. The paired comparison analysis of the data gave the following ordering of the areas on the basis of reading preference, as shown in Table 27.

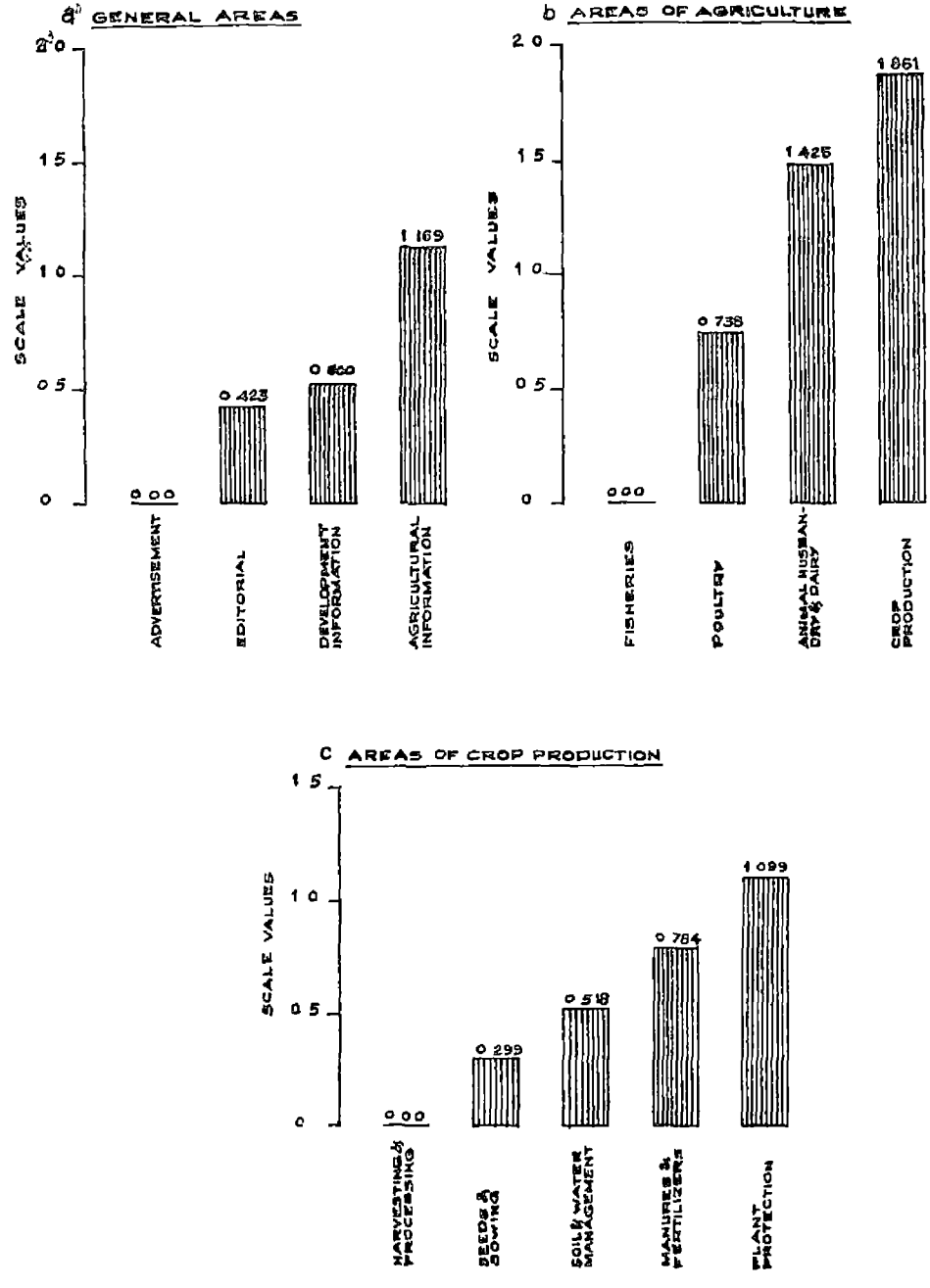
Table 27. Scale values on reading preference for the areas of crop production in Kalpadhenu.

Areas -	Plant protection	Manures and fertilizers	Soil and water management	Seeds and sowing	Harvesting and processing
Scale values -	1.099	0.784	0.518	0.299	0.000

The table reveals that plant protection was the most preferred area to read followed by manures and fertilizers, seeds and sowing, soil and water management and harvesting and processing, being the least preferred area.

The diagrammatic representation of the results on the reading preference of the respondents with respect to the general areas, areas of agriculture and areas of crop production, are presented in Figure 5. The matrices for the paired comparison analysis are given in Appendix II (b).

FIG 5 SCALE VALUES FOR THE FARMERS' PREFERENCE TO THE CONTENT AREAS OF KALPADHENU



4.3 Reading habit.

The reading habit scores of the farmer subscribers of Kalpadhenu are given below in Table 28.

Table 28. Distribution of respondents according to reading habit scores.

Reading habit scores	Frequency (N = 50)	Percentage
0 - 5	0	0
6 - 10	8	16
11 - 15	15	30
16 - 21	27	54

From the table it is seen that 54 per cent of the respondents obtained high reading habit scores ranging from 16 to 21. While no one got scores of below 6, 16 per cent got scores of 6 to 10 and 30 per cent obtained scores of 11 to 15.

Since the above reading habit score was a cumulative measure of the reading habit, the different aspects of it were found separately as given below:

The following table gives the frequency of reading agricultural information by the respondents.

Table 29. Frequency of reading Agricultural Information by the respondents.

Response	Areas of agriculture							
	Crop production		Animal husbandry and dairy		Poultry		Fisheries	
	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage
Always	34	68	25	50	17	34	8	16
Often	8	16	9	18	13	26	11	22
Occasionally	8	16	11	22	14	28	17	34
Never	0	0	5	10	6	12	14	28

The above table reveals that regarding crop production 68 per cent were reading the information pertaining to it always and 16 per cent often. Another 16 per cent read them occasionally while there were no non-readers. In the case of animal husbandry and dairy 50 per cent read the articles always and 18 per cent read them often. 22 per cent were occasional readers and 10 per cent never read the articles. As regards to information on poultry 34 per cent read always and 26 per cent read often. 28 per cent read the articles occasionally while 12 per cent were non-readers. In the case of fisheries, 16 per cent read the articles always and 22 per cent read them

often. 34 per cent were occasional readers and 28 per cent were non-readers.

The following table (Table 30) gives the frequency of reading development information by the respondents.

Table 30. Frequency of reading Development Information by the respondents.

Response	Frequency (N = 50)	Percentage
Always	25	50
Often	14	28
Occasionally	6	12
Never	5	10

The table shows that 50 per cent of the respondents read the development information always and 28 per cent read often. 12 per cent were occasional readers and 10 per cent were non-readers.

The frequency of reading editorial by the respondents is given in Table 31.

Table 31. Frequency of reading Editorial by respondents.

Response	Frequency (N = 50)	Percentage
Always	20	40
Often	12	24
Occasionally	13	26
Never	5	10

The table indicates that 40 per cent read the editorial always. It is read often by 24 per cent. 26 per cent were occasional readers and 10 per cent were non-readers.

The frequency of reading advertisements is given below in Table 32.

Table 32. Frequency of reading Advertisements by the respondents.

Response	Frequency (N = 50)	Percentage
Always	17	34
Often	13	26
Occasionally	12	24
Never	8	16

Table 32 reveals that advertisements were read always by 34 per cent. 26 per cent read them often and 24 per cent were occasional readers. 16 per cent were non-readers.

4.4 Relationship of reading habit of farmer subscribers with their personal and socio-economic characteristics.

Correlation analysis was conducted to assess the relationship of reading habit of the farmer subscribers with their personal and socio-economic characteristics. The correlation of the selected personal and socio-economic characteristics with reading habit is given in Table 33.

Table 33. Relationship of reading habit with the personal and socio-economic characteristics.

Sl. No.	Personal and socio-economic characteristics	Correlation coefficient (r)
1	Age	0.208
2	Education	0.281*
3	Farm size	0.190
4	Cosmopoliteness	0.270*
5	Scientific orientation	0.322*
6	Extension contact	0.151

* Significant at 0.05 level

A perusal of the table reveals that except age, farm size and extension contact all other characteristics were having significant positive relationship with reading habit. Though age, farm size and extension contact were having positive relationship, it was not significant either at 0.05 level or 0.01 level of probability. The relationship of the other characteristics, namely, education, cosmopoliteness and scientific orientation was significant at 0.05 level of probability.

4.5 Knowledge.

The distribution of respondents according to their knowledge score is given in Table 34.

FIG 6 RELATIONSHIP OF PERSONAL AND SOCIO-ECONOMIC CHARACTERISTICS WITH READING HABIT OF KALPADHENU SUBSCRIBERS

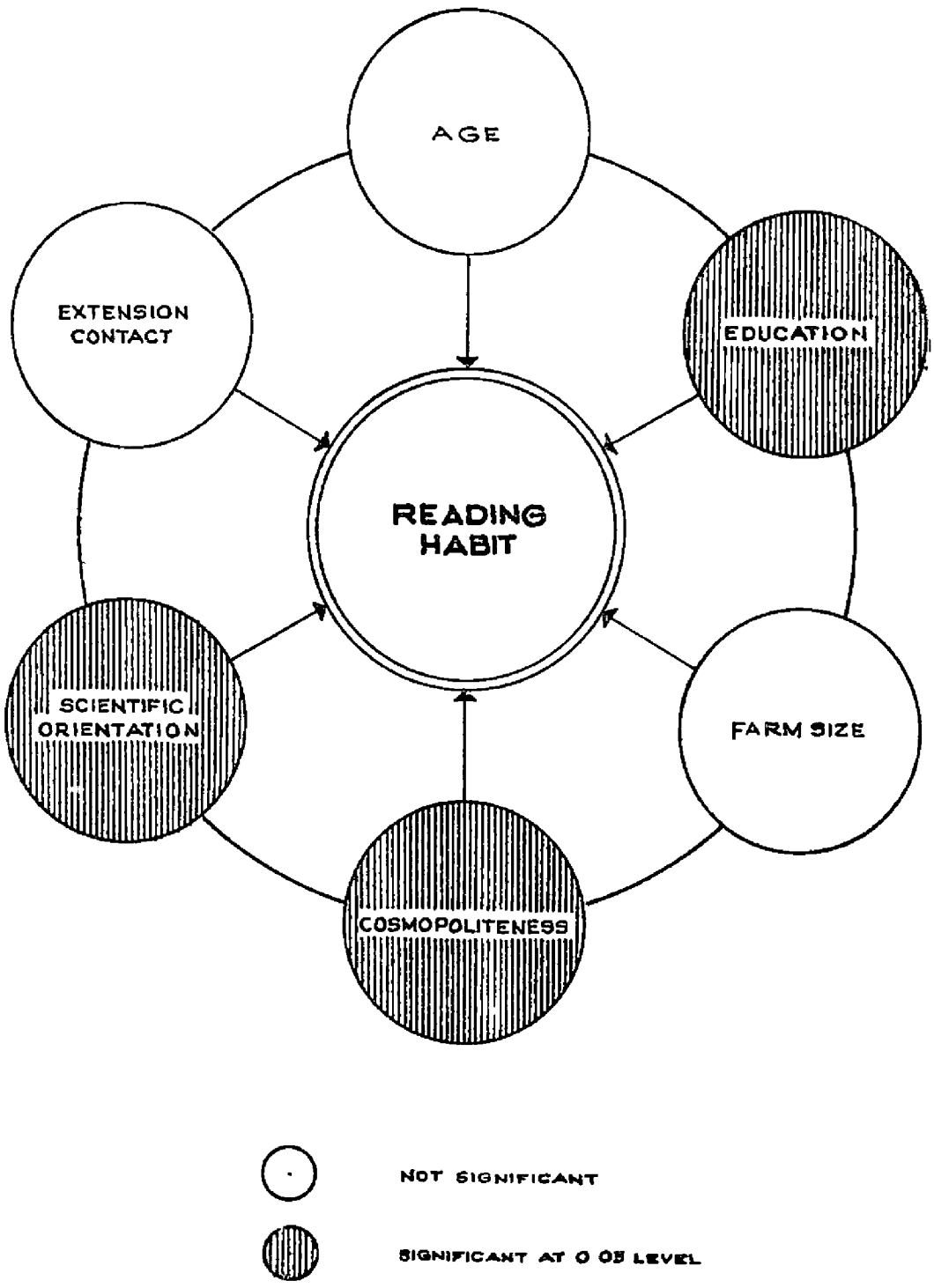


Table 34. Distribution of respondents according to knowledge score.

Category	Subscribers (N=50)		Non-subscribers (N=50)	
	Frequency	Percentage	Frequency	Percentage
High (Mean + 1SD)	3	6	4	8
Medium (Mean ± 1SD)	41	82	36	72
Low (Mean - 1SD)	6	12	10	20

The table shows that 6 per cent of subscribers were having high level of knowledge and 82 per cent were having medium level of knowledge. 12 per cent had low level of knowledge. In the case of non-subscribers it was 8 per cent, 72 per cent and 20 per cent respectively.

The mean knowledge scores of subscribers and non-subscribers are given in Table 35.

Table 35. Mean knowledge scores of subscribers and non-subscribers of Kalpadhenu.

Groups	Mean score	Z value
Subscribers	21.48	5.6*
Non-subscribers	17.25	

* Significant

The above table indicates that the mean knowledge score of the subscribers and non-subscribers differ. The Z value calculated also was significant which indicated that the knowledge level of the subscribers and non-subscribers differ significantly

4.6 Relationship of knowledge with personal and socio-economic characteristics of respondents.

The following table (Table 36) shows relationship of the personal and socio-economic characteristics of the respondents with their knowledge.

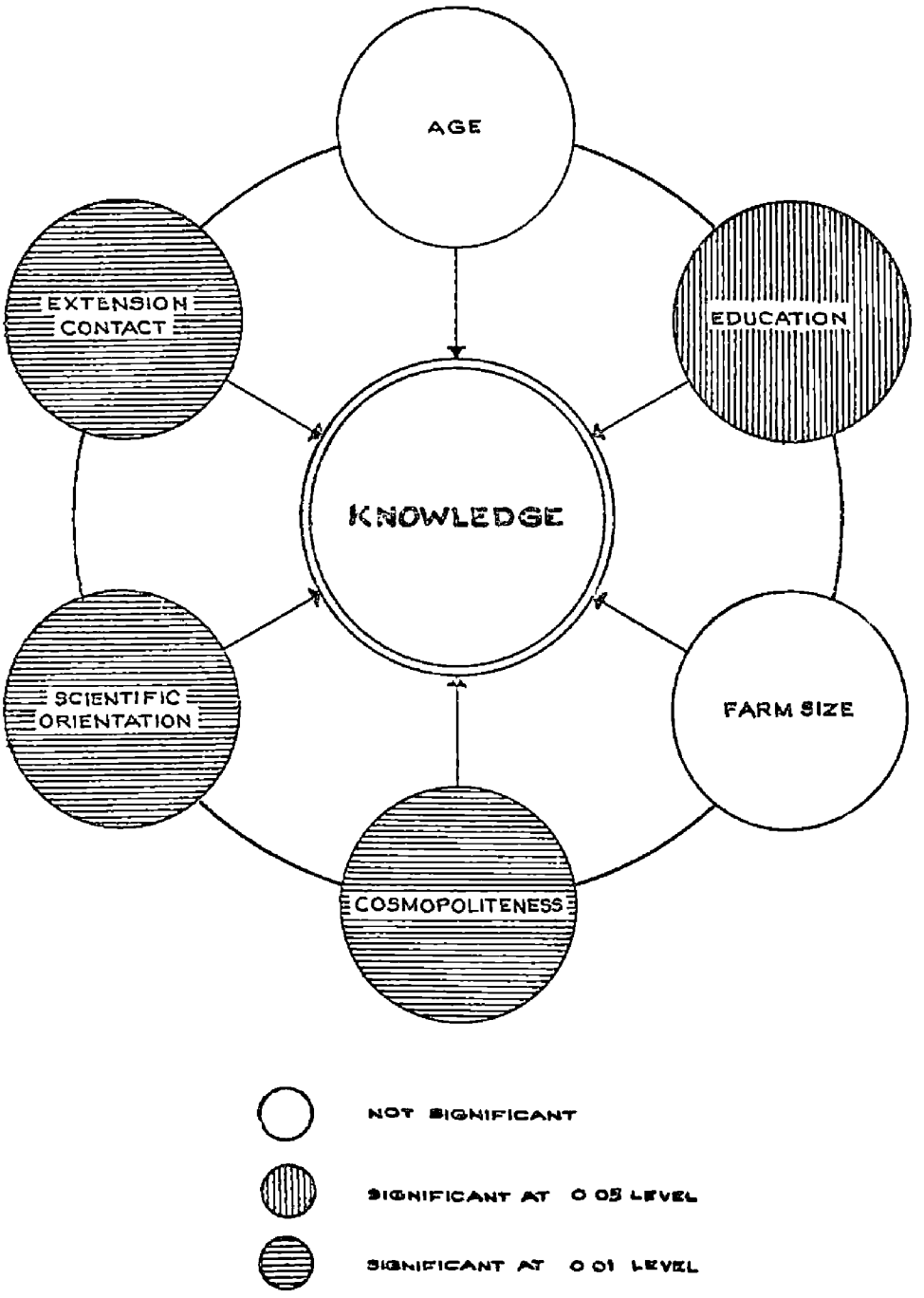
Table 36. Relationship of knowledge with personal and socio-economic characteristics.

Sl. No.	Personal and socio-economic characteristics	Correlation coefficient	
		Subscribers	Non-subscribers
1	Age	0.227	0.248
2	Education	0.315*	0.660**
3	Farm size	0.113	0.324*
4	Cosmopoliteness	0.489**	0.879**
5	Scientific orientation	0.735**	0.939**
6	Extension contact	0.576**	0.539**

* Significant at 0.05 level

** Significant at 0.01 level

FIG. 7 RELATIONSHIP OF PERSONAL AND SOCIO-ECONOMIC CHARACTERISTICS WITH THE KNOWLEDGE OF KALPADHENU SUBSCRIBERS



As evident from the above table, except age and farm size in the case of subscribers and age in the case of non-subscribers, all other characteristics were positively and significantly related to knowledge. In the case of subscribers relationship of education with knowledge was significant at 0.05 level of probability while that of cosmopoliteness, scientific orientation and extension contact was significant at 0.01 level of probability. In the case of non-subscribers except for farm size, which was significant at 0.05 level, all others namely, education, cosmopoliteness, scientific orientation and extension contact, were significantly related to knowledge at 0.01 level of probability.

4.7 Format and content of Kalpadhenu.

1. Layout.

The distribution of respondents based on their opinions and preference about the layout of the journal is given below in Table 37.

Table 37. Distribution of respondents based on their opinion and preference about layout.

Layout of Kalpadhenu	Frequency (N = 50)	Percentage
1	2	3
1. Cover page		
a. Attractiveness		
Very attractive	28	56
Attractive	22	44
Not attractive	0	0

1	2	3
b. Colour preferred		
One colour	24	48
Contrasting colours	26	52
Black and White	0	0
c. Illustration		
Photographs	46	92
Drawings	4	8
2. Headings		
a. Letter size		
Small (18 point)	4	8
Medium (24 point)	21	42
Large (36 point)	25	50
b. Appropriateness of headings		
Appropriate	50	100
Not appropriate	0	0
3. Letter size (text)		
Small (10 point)	16	32
Medium (12 point)	25	50
Large (14 point)	9	18
4. Pictures		
a. Relevancy		
Relevant	50	100
Not relevant	0	0

1	2	3
b. Quality		
Very good	10	20
Good	32	64
Poor	8	16
5. Advertisements		
a. Usefulness		
Very useful	17	34
Useful	29	58
Not useful	4	8
b. Types preferred		
Manures and fertilizers	17	34
Pesticides	15	30
Cattle feeds	14	28
Others	4	8

The above table shows that regarding the attractiveness of the cover page, 56 per cent found it very attractive and 44 per cent found it attractive. Regarding the colour of the cover page, 48 per cent preferred one colour and 52 per cent preferred contrasting colours. None preferred black and white. 92 per cent preferred photographs to drawings on the cover page. 8 per cent preferred drawings.

With respect to headings, cent per cent found them appropriate to the articles. Regarding letter size of headings,

small letters (18 point) were preferred by 8 per cent, medium letters (24 point) by 42 per cent and large letters (36 point) by 50 per cent.

Regarding the letter size of the text 32 per cent preferred small letters of 10 point. 50 per cent preferred medium sized letters (12 point) and large letters (14 point) were preferred by 18 per cent.

Pictures were found relevant to the articles concerned by cent per cent of the respondents. As far as quality of the pictures was concerned, 20 per cent found them as very good, 64 per cent as good and as poor by 16 per cent.

With regard to advertisements, 58 per cent found them useful compared to 34 per cent who found the advertisements very useful and 8 per cent who found them not useful. While 34 per cent preferred advertisements on manures and fertilizers, 30 per cent preferred pesticide advertisements and 28 per cent cattle feed advertisements. 8 per cent preferred other types.

2. Coverage

Coverage was assessed with reference to the frequency of agricultural articles published in five issues of Kalpadhenu.

Table 38 gives the ranking of the areas of agriculture according to the frequency of articles published under each area.

Table 38. Ranking of the areas of agriculture based on the frequency of articles published in the five issues of Kalpadhenu.

Sl. No.	Areas of agriculture	Frequency of articles published	Rank
1	Crop production	45	1
2	Animal husbandry and dairy	10	2
3	Fisheries	2	3
4	Poultry	1	4

The table reveals that 58 articles were classified into crop production, animal husbandry and dairy, poultry and fisheries, the number of articles published being 45, 10, 1 and 2 respectively, on crop production, animal husbandry and dairy, poultry and fisheries.

The articles published on crop production were again classified into different areas such as seeds and sowing, soil and water management, manures and fertilizers, plant protection and harvesting and processing.

Table 39 gives the ranking of the areas of crop production according to the frequency of articles published on each area.

Table 39. Ranking of the areas of crop production based on the frequency of articles published in the five issues of Kalpadhenu.

Sl. No.	Areas of crop production	Frequency of articles published	Rank
1	Plant protection	20	1
2	Seeds and sowing	6	2
3	Soil and water management	4	3
4	Manures and fertilizers	2	4
5	Harvesting and processing	1	5

A perusal of the above table reveals that 33 articles were classified into one or other of the five areas of crop production. Among these 20 were on plant protection, followed by 6 articles on seeds and sowing, 4 on soil and water management, 2 on manures and fertilizers and one on harvesting and processing. The remaining 12 articles, since dealt with all aspects of cultivation, could not be classified into specific categories.

(i) Extent of agreement between the content of articles published in Kalpadhenu and the reading preference of subscribers.

The extent of agreement between the content of articles published and readers' preference was assessed by finding the extent of association between the two sets of ranking, one

according to the frequency of articles published and the other according to readers' preference.

a. Extent of agreement between the content of articles published in Kalpadhenu and the readers' preference with reference to the areas of agriculture.

The following table (Table 40) gives the rankings of the areas of agriculture according to thefrequency of articles published in the journal and according to the readers' preference.

Table 40. Ranking of the areas of Agriculture according to the frequency of articles published and according to readers' preference.

Sl. No.	Areas of agriculture	Ranking according to frequency of articles published	Ranking according to readers' preference
1	Crop production	1	1
2	Animal husbandry and dairy	2	2
3	Fisheries	3	4
4	Poultry	4	3

$$r_s = 0.80$$

The table reveals that the two sets of ranks were not in agreement with each other. The Spearman's rank correlation coefficient was calculated as 0.80 which was not significant at 0.05 level of probability.

b. Extent of agreement between the content of articles published in Kalpadhenu and readers' preference with reference to areas of crop production.

The following table gives the ranking of the areas of crop production according to the frequency of articles published and according to the readers' preference.

Table 41. Ranking of the areas of Crop Production according to the frequency of articles published and according to readers' preference.

Sl. No.	Areas of crop production	Ranking according to frequency of articles published	Ranking according to readers' preference
1	Plant protection	1	1
2	Seeds and sowing	2	4
3	Soil and water management	3	3
4	Manures and fertilizers	4	2
5	Harvesting and processing	5	5

$$r_s = 0.6$$

The table indicates that the two sets of ranks were not in agreement with each other. The Spearman's rank correlation coefficient was calculated as 0.6 which was not significant at 0.05 level of probability.

3. Serviceability of the journal

Table 42 gives the ranking of the five statements on

serviceability of Kalpadhenu according to the weighted average, calculated for each statement.

Table 42. Ranking of the statements on serviceability.

Sl.No.	Statements	Rank	Weighted average
1.	Journal helps in finding solutions to problems	1	2.74
2.	Gives upto-date information	2	2.72
3.	The journal is need based	3	2.70
4.	Gives timely information	4	2.68
5.	Persuades to adopt	5	2.62

The above table shows that the statement,"journal helps in finding solutions to problems" was ranked first and the statement, "persuades to adopt" was ranked last, with the other statements, "gives upto-date information", "the journal is need based" and "gives timely information" being ranked second, third and fourth respectively.

4. Relevancy and practicability.

a. Relevancy

The following table (Table 43) gives the distribution of respondents based on their opinion about the relevancy of articles published on the areas of agriculture in the five issues of the journal.

Table 43. Distribution of respondents based on their relevancy expressed on the articles in Kalpadhenu.

Response	Areas of agriculture							
	Crop production		Animal husbandry and dairy		Poultry		Fisheries	
	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage
Most relevant	16	32	12	24	6	12	4	8
Relevant	26	52	29	58	25	50	4	8
Not relevant	8	16	9	18	19	38	42	84

The table shows that 32 per cent of the respondents found the articles on crop production most relevant, 52 per cent found them relevant and 16 per cent not relevant. The articles on animal husbandry and dairy were found most relevant by 24 per cent, relevant by 58 per cent and not relevant by 18 per cent. 12 per cent opined the article on poultry as most relevant, 50 per cent found it relevant and 38 per cent found it not relevant. As regard to articles on fisheries, 8 per cent each found them most relevant and relevant while 84 per cent found them not relevant.

b. Practicability

The following table gives the opinion of the respondents on the practicability of the information given on the areas of agriculture.

Table 44. Distribution of respondents based on the practicability of the information in Kalpadhenu as expressed by them.

Response	Areas of agriculture							
	Crop production		Animal husbandry and dairy		Poultry		Fisheries	
	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage	Frequency (N=50)	Percentage
Most practicable	16	32	14	28	6	12	2	4
Practicable	22	44	24	48	22	44	2	4
Not practicable	12	24	12	24	22	44	46	92

The table reveals that regarding information on crop production, 32 per cent found it most practicable, 44 per cent practicable and 24 per cent not practicable. 28 per cent found the information on animal husbandry and dairy most practicable while 48 per cent found it practicable and 24 per cent not practicable. While 12 per cent found the information on poultry most practicable, 44 per cent found it practicable and another 44 per cent found it not practicable. As regard to fisheries, 92 per cent opined the information as not practicable while 4 per cent each found it practicable and most practicable.

DISCUSSION

CHAPTER V

DISCUSSION

In this chapter the findings of the study are discussed to help draw conclusions. The discussion is dealt with under the following heads.

1. Readability of the articles in the journals.
2. Reading preference of the farmer subscribers.
3. Reading habit of the farmer subscribers.
4. Relationship of reading habit with personal and socio-economic characteristics of the subscribers.
5. Knowledge level of the subscribers and non-subscribers.
6. Relationship of knowledge of subscribers and non-subscribers with their personal and socio-economic characteristics.
7. Format and content of the journals.

The discussion is given in two sections. Section I deals with "Kerala karshakan" and Section II deals with "Kalpadhenu".

Section I (Kerala karshakan)

5.1 Readability of articles.

It was seen that the articles selected in Kerala karshakan, showed a low readability (Table 3) compared to

the standard fixed namely the readability level of fourth standard Malayalam text book. It was also revealed that there was significant difference between the readability level of the articles in Kerala karshakan and that of the fourth standard Malayalam text book. The null hypothesis that there will be no significant difference between the readability levels of the articles published in the journal and the fourth standard Malayalam text book, is therefore rejected. It was seen that the articles on animal husbandry and dairy revealed a comparatively higher readability level than the other areas. The low readability of the articles may be attributed to the lesseruse of personal words. The results thus revealed that the journal may try to use a more colloquial style of writing.

5.2 Reading preference of farmer subscribers.

1. Reading preference of the general areas in Kerala karshakan.

Discussing on the reading preference of the farmers (Table 4) to the general areas it can be seen that agricultural information was given first preference by the farmers followed by development information, editorial and advertisements, in that order. This is only natural, as Kerala karshakan is a farm journal and the subscribers are farmers in general. In a similar study Rajan (1982) found the preference of content areas of "Malayala Manorama" daily

in the following order, politics/government/world news, developmental news, agricultural columns, crime/accident, sports news and advertisements.

2. Reading preference of the areas of agriculture in Kerala Karshakan.

Within the areas of agriculture in the journal, the first preference was to crop production followed by animal husbandry and dairy, poultry and fisheries (Table 5). A similar study by Khandekar and Mathur (1975) showed that the preference of the readers of "Unnat krishi" farm magazine was in the order of cultivation of crops, animal husbandry and dairy, fruit and vegetable cultivation, poultry, fisheries and piggery. These two rankings are essentially similar. This might be due to the significance of crop production and animal husbandry and dairy as the advancements in these fields are always on the increase.

3. Reading preference of the areas of crop production in Kerala Karshakan.

Among the areas of crop production, the preference of the farmers was in this order: plant protection, most preferred, followed by manures and fertilizers, seeds and sowing, soil and water management and harvesting and processing, which is the least preferred area, (Table 6). This finding more or less agrees with the finding of Rajan (1982) who found that farmer readers of "Malayala Manorama" daily preferred plant

protection first, followed by manures and fertilizers, soil and water management, processing and storage and seeds and sowing. The reasons for such a preference to plant protection articles may be comparatively greater advancements in the field of pesticides and greater incidence of pests and diseases since the introduction of high yielding varieties ofcrops.

5.3 Reading habit of farmer subscribers.

The analysis of data revealed that 78 per cent (Table 7) of the farmer subscribers has developed better reading habit. This showed that the farmers have frequently been making use of the contents of the articles in the journal.

It was also revealed that (Table 8) with respect to the reading of agricultural areas in the journals, cent per cent read the crop production articles, 92 per cent read the articles on animal husbandry anddairy, 86 per cent read articles on poultry and 78 per cent read articles on fisheries, published in the journal. The proportion of readers of agricultural information was higher than that of non-readers (Table 8). Hence the null hypothesis that majority of the farmer subscribers will not read the agricultural information in the journal is rejected.

Data again indicate that 92 per cent of the respondents read the development information (Table 9) of which 56 per cent read them always. The proportion of the respondents reading

development information was higher than that of non-readers of such information and so the null hypothesis that majority of the farmer subscribers will not read the development information in the journal is rejected.

It was found that (Table 10) 88 per cent of the respondents read the editorial in Kerala karshakan. Only 12 per cent were non-readers. Since the proportion of readers of editorial in Kerala karshakan was higher than that of non-readers, the null hypothesis that majority of farmer subscribers will not read the editorial is rejected.

The analysis further showed that (Table 11) 88 per cent of the farmer subscribers read the advertisements published in the journal, though their preference to advertisements is last. The farmers may be interested in being informed of arrivals and use of newer pesticides and fertilizers, which are normally put through the advertisements. Here also the proportion of readers of advertisements in Kerala karshakan was higher than the proportion of non-readers of advertisements. Hence, the null hypothesis that majority of the farmer subscribers will not read the advertisements is rejected.

These findings indicate that the content areas of Kerala karshakan were read by a significant proportion of the farmer subscribers.

5.4 Relationship of reading habit with the personal and socio-economic characteristics of the respondents.

1. Age

The null hypothesis in this regard was that there will be no significant relationship between age and reading habit. The results (Table 12) showed that age was not significantly related with reading habit. Therefore, the null hypothesis is accepted. This revealed that age has no influence on reading habit. Oliver (1971) found that age had not influenced the reading of articles published by the IADP personnel in a Tamil daily. The present finding is also in line with this.

2. Education

The analysis showed that (Table 12) education was significantly and positively related with reading habit. Hence, the null hypothesis that there will be no significant relationship between education and reading habit is rejected. Findings of Kidwai (1965) and Zalaki (1973) support this. This might be due to the fact that the more the education of a farmer, the more will be his desire to get new information which contributes to more reading of the journal.

3. Farm size

It was seen that (Table 12) size of land holding of the farmer subscribers had no significant relationship with their reading habit. Hence, the null hypothesis that there

will be no significant relationship between farm size and reading habit is accepted. This finding conforms with those of Zalaki (1973) and Rajan (1982).

4. Cosmopoliteness

The results revealed a positive and significant relationship between cosmopoliteness and reading habit (Table 12). Hence, the null hypothesis that there will be no significant relationship between cosmopoliteness and reading habit is rejected. Rajan (1982) also reported a similar finding. This might be due to the fact that the more cosmopolite a farmer is, the more will be his interest to get new information, since he can get further information from urban centres and this leads to heavier reading of the journal.

5. Scientific orientation

The null hypothesis in this regard was that there will be no significant relationship between scientific orientation and reading habit. But the results (Table 12) revealed a positive and significant relationship between scientific orientation and reading habit. The null hypothesis was therefore rejected. This might be due to the fact that, the higher scientific orientation of a farmer makes him more interested in getting new information which contributes to more reading.

6. Extension contact

The results showed a significant relationship between extension contact and reading habit (Table 12). Hence the

null hypothesis that there will be no significant relationship between extension contact and reading habit is rejected. This indicates that frequent contacts with extension agencies contribute to more reading of the journal.

5.5 Knowledge.

It was seen that (Table 13) 78 per cent of the subscribers and 72 per cent of the non-subscribers were having mediocre knowledge. But analysis further revealed that the mean knowledge score of the subscribers differed significantly from that of the non-subscribers (Table 14). Hence the null hypothesis that there will be no significant difference between the knowledge level of the subscribers and that of non-subscribers (control) is rejected. This might be due to the fact that the subscribers, who are frequently reading Kerala karshakan are provided with the latest information of agriculture, through the articles published in the journal.

5.6 Relationship of knowledge with personal and socio-economic characteristics of the respondents.

1. Age

The results (Table 15) revealed that age had no significant relationship with knowledge in the case of the both subscribers and non-subscribers. Hence, the null hypothesis that there will be no significant relationship between age and knowledge is accepted. This shows that age is not

influencing the acquisition of knowledge. This finding is in line with that of Kaleel (1978) who also reported a non-significant relationship between age and knowledge of farmers.

2. Education

Education and knowledge were found to be significantly related with each other (Table 15) for both subscribers and non-subscribers. Hence, the null hypothesis that there will be no significant relationship between education and knowledge is rejected. Finding by Kaleel (1978) supports the present finding. This might be due to the fact that the more the education of the farmer, the more will be his interest to get new information which leads to more knowledge.

3. Farm size

It was seen that (Table 15) farm size was significantly related with knowledge of subscribers as well as non-subscribers. Hence, the null hypothesis that there will be no significant relationship between farm size and knowledge is rejected. This indicates that farm size has influence on the acquisition of knowledge. Finding by Ahamed (1981) support this, who found that farm size has positive and significant relationship with level of knowledge of trained and untrained farmers.

4. Cosmopoliteness

The results revealed that (Table 15) cosmopoliteness was significantly associated with knowledge, in the case of both subscribers and non-subscribers. The null hypothesis that there

will be no significant relationship between cosmopoliteness and knowledge is rejected. Findings by Knight and Singh (1975) and Kamarudeen (1981) support this. This might be due to the fact that a farmer who is frequently visiting urban centres, will be more informed about new practices of cultivation and therefore will behaving more knowledge.

5. Scientific orientation

Scientific orientation was also found to be significantly related with knowledge (Table 15). Hence, the null hypotnesis that will be no significant relationship between scientific orientation and knowledge is rejected. This finding conforms with the findings by Supe and Salode (1975) and Kamarudeen (1981). This shows that the more the scientific orientation of a farmer, the more will be his knowledge.

6. Extension contact

The null hypothesis that there will be no significant relationship between extension contact and knowledge is rejected, as results showed (Table 15)a significant relationship between the two. Findings by Knight and Singh (1975) and Kaleel (1978) support this. This reveals that when a farmer's contact with extension agencies is more, the more will be his acquisition of knowledge.

5.7 Format and content of Kerala karshakan.

1. Layout

It was found that (Table 16) majority preferred single colour cover page with photographs than drawings. Majority also

found the cover page attractive, preferred 24 point letters (medium) for headings, and 12 point (medium) for letters of texts and found the quality of pictures good cent per cent found the headings appropriate and the pictures relevant to the articles. Advertisements were found useful by 78 per cent and advertisements on manures and fertilizers were preferred by majority of the subscribers. This attributes to the long standing features of Kerala karshakan being a publication for more than 20 years.

2. Coverage

The results revealed that (Table 17) majority of the articles published was on crop production, the number being 19. This constituted 47 per cent of the total. The remaining was made up of 10 articles on animal husbandry and dairy and one on poultry and no article on fisheries. The ranking of the areas of agriculture according to the frequency of articles published was therefore in this order: crop production, animal husbandry and dairy, poultry and fisheries.

Analysis further revealed that (Table 18) of the 19 articles published on crop production, 6 were on soil and water management, 4 were on plant protection, 3 were on manures and fertilizers, 2 were on seeds and sowing and one article was on harvesting and processing. The remaining 3 articles covered all aspects of cultivation and hence not considered. The ranking of the areas therefore according to frequency of articles

published was in this order: soil andwater management, plant protection, manures and fertilizers, seeds and sowing and harvesting and processing.

Extent of agreement between reading preference of the subscribers and contents of articles published.

a. Agreement of the areas of agriculture.

The results revealed (Table 19) a perfect agreement between the ranking of the areas of agriculture according to readers' preference and according to frequency of articles published. Hence, the null hypothesis that there will be no significant agreement between the ranking of the areas of agriculture according to frequency of articles published and according to readers' preference is rejected. This indicates that importance given to these areas in Kerala karshakan has been duly recognised by the farmers.

b. Agreement of the areas of crop production

Analysis showed that (Table 20) the ranking of the areas of crop production according to frequency of articles published did not agree with the ranking according to readers' preference. Hence the null hypothesis that there will be no significant agreement between the rankings of the areas of crop production according to frequency of article published and according to readers' preference is accepted. The disagreement occurred because the area of soil and water management which was given only fourth preference by the readers was ranked first

according to frequency of articles published and plant protection which was given first preference was ranked second according to frequency of articles published. So also, the areas of manures and fertilizers and seeds and sowing which were third and fourth according to frequency of articles published were given second and third preference respectively by the farmers. Thus the results reveals that more importance may be given to plant protection, manures and fertilizers and seeds and sowing, to be in conformity with farmers' needs.

3. Serviceability of the journal

It was seen that (Table 21) the problem solving function of Kerala karshakan was ranked first and the persuasive function last, with otherfunctions coming in between. It is only natural to expect that Kerala karshakan with its wide range of articles is helping the farmers to solve their problems. The lesser persuasibility, calls for a more popular style of writing in the articles.

4. Relevancy and practicability

a. Relevancy

Analysis showed that (Table 22) pertaining to relevancy, articles on crop production and animal husbandry and dairy were relevant to majority. Only 12 per cent and 22 per cent found them not relevant. The article on poultry was found not relevant by 76 per cent. But this might be due to the fact that only one article was there on poultry which may be not relevant to many.

b. Practicability

Pertaining to practicability (Table 23) also it was seen that majority were of the opinion that information on crop production and animal husbandry and dairy was practicable. It was unpracticable only to 20 per cent and 24 per cent respectively. But 76 per cent found the information on poultry not practicable. Here also, the reason might be the number of articles published on poultry which was only one.

Section II (Kalpadhenu)

5.1 Readability of articles.

It was found that the 10 articles selected for assessment of readability, showed low readability (Table 24) according to the standard fixed for comparison, namely the readability level of fourth standard Malayalam text book. It was also seen that the readability level of the articles published in Kalpadhenu was significantly lower than that of the fourth standard Malayalam text book . Hence, the null hypothesis that there will be no significant difference between the readability levels of the articles published in Kalpadhenu and the fourth standard Malayalam text book is rejected. It was noted that the articles on crop production were having a comparatively higher readability level than other areas. The low readability of the articles shall be attributed to lack of personal words. This calls for the use of more personal words in the articles, for increasing the readability level.

5.2 Reading preference of farmer subscribers.

1. Reading preference of the general areas in Kalpadhenu.

The readers' preference to the general areas in the journal was in the following order (Table 25): Agricultural information, development information, editorial and advertisements. This indicates that agricultural information was given more importance by the readers. In a similar study Oliver (1971) found that the preference of the readers of "Dinamoni" daily to its content areas in this order: news within the country, news abroad, farm news, market prices and editor's report.

2. Reading preference of the areas of agriculture in Kalpadhenu.

Among the areas of agriculture, crop production was preferred most by the respondents followed by animal husbandry and dairy, poultry and fisheries, in that order (Table 26). This indicates the importance given to crop production which might be due to the better returns from crop production than other fields. In a similar study Rajan (1982) found the preference of the readers of "Malayala Manorama" daily to the areas of agriculture in this order: crop production, dairy, poultry, pisci-culture and piggery. These two rankings are essentially similar.

3. Reading preference of the areas of crop production in Kalpadhenu.

The areas of crop production were preferred by the respondents in the following order (Table 27): plant protection,

manures and fertilizers, soil and water management, seeds and sowing and harvesting and processing. This indicates that farmers like to receive more information on those aspects of crop production which require more technical knowledge and skill. Moreover, most of the high yielding varieties of crops which are now cultivated are susceptible to pests and diseases which necessitates more knowledge on plant protection.

5.3 Reading habit of farmer subscribers.

Analysis of data showed that (Table 28) 84 per cent of the respondents were more frequently reading Kalpadhenu. It was also revealed that (Table 29) regarding reading of agricultural information in the journal, cent per cent read the articles crop production, 90 percent read the articles on animal husbandry and dairy, 88 per cent read those on poultry and 72 per cent read the articles on fisheries. This indicates that significant proportion of the subscribers were reading the agricultural information in Kalpadhenu. Hence, the null hypothesis that majority of the farmers will not read the agricultural information in the journal is rejected.

It was again found that (Table 30) 90 per cent of the respondents were reading the development information in Kalpadhenu of which 50 per cent always read them and only 10 per cent were non-readers. Therefore the null hypothesis that majority of the farmer subscribers will not read the development information in the journal is rejected.

Regarding reading of editorial it was seen that (Table 31) 90 per cent read the editorial of which 40 per cent were regular readers. The null hypothesis that majority of farmer subscribers will not read the editorial is therefore rejected.

Analysis further showed that (Table 32) 84 per cent of the subscribers were reading the advertisements compared to 16 per cent of non-readers. Hence, the null hypothesis that majority of farmer subscribers will not read the advertisements is rejected. This may be due to the fact that farmers are interested in knowing about new pesticides, fertilizers etc. which are normally informed of through the advertisements.

5.4 Relationship of reading habit with the personal and socio-economic characteristics of the respondents.

1. Age

It was found that (Table 33) relationship of age with reading habit is not significant. Hence, the null hypothesis that there will be no significant relationship between age and reading habit is accepted. This indicates that reading of the journal is not influenced by age of the reader. In a similar study Oliver (1971) also reported that age had not influenced the reading of articles published by the IADP personnel in a Tamil daily.

2. Education

The null hypothesis was that there will be no significant relationship between education and reading habit. The analysis

showed that (Table 33) education was significantly and positively related with reading habit. Hence, the null hypothesis is rejected. This is only natural, since more the education, more will be the interest to be exposed to new information and hence more reading. Kidwai (1965) and Zalaki (1973) also reported a significant association between education and reading of publications.

3. Farm size.

The analysis showed a non-significant association between farm size and reading habit (Table 33). The null hypothesis that there will be no significant relationship between farm size and reading habit is therefore accepted. This indicates that reading of the journal is not influenced by the size of land holding, how much it may be. Findings of Zalaki (1973) and Rajan (1982) support this.

4. Cosmopoliteness.

Cosmopoliteness and reading habit were significantly associated with each other, as evident from the results (Table 33). Hence, the null hypothesis that there will be no significant relationship between cosmopoliteness and reading habit is rejected. This might be due to the fact that farmers who are frequently visiting urban centres will be more interested to get new information and hence are more prone to reading the journal. This finding was in conformity with that of Rajan (1982).

5. Scientific orientation.

The null hypothesis that there will be no significant

relationship between scientific orientation and reading habit is rejected, as results showed (Table 33) a significant association between reading habit and scientific orientation. This is but natural, since, the more the scientific orientation, the more will be the desire to get new information which contributes to better reading habit.

6. Extension contact.

A non-significant relationship between extension contact and reading habit was evident from the results (Table 33). Hence the null hypothesis that there will be no significant relationship between extension contact and reading habit is accepted. This indicates that contact with extension agencies has no influence on reading habit of the subscribers.

5.5 Knowledge.

It was found that (Table 34) 82 per cent of subscribers and 72 per cent of the non-subscribers were having medium level of knowledge. The mean knowledge score of the subscribers was, however, found to be differing significantly from that of non-subscribers. The null hypothesis that there will be no significant difference between the knowledge level of the subscribers and that of non-subscribers (control) was therefore rejected. This might be due to the fact that

since the subscribers are timely informed about the latest in agricultural technology through Kalpadhenu, they will be having more knowledge.

5.6 Relationship of knowledge with personal and socio-economic characteristics of the respondents.

1. Age

It was evident from the results (Table 36) that age had no significant relationship with knowledge for both subscribers and non-subscribers. So the null hypothesis that there will be no significant relationship between age and knowledge is accepted. This indicates that irrespective of age farmers are interested in acquiring knowledge on improved practices. This finding conforms with that of Kaleel (1978) who found that age had no significant relationship with knowledge gained by farmers on subject matter.

2. Education

Analysis indicated that (Table 36) education was significantly associated with knowledge of both subscribers and non-subscribers. Hence the null hypothesis that there will be no significant relationship between education and knowledge is rejected. This is but natural, since more educated a farmer is, the more will be his desire to get exposed to information sources, contributing to more knowledge. This finding conforms with that of Supe and Salode (1975) and Kaleel (1978).

3. Farm size.

It was seen that (Table 36) farm size had non-significant association with knowledge in the case of subscribers and significant association in the case of non-subscribers. Hence the null hypothesis that there will be no significant relationship between farm size and knowledge is accepted in the case of subscribers and rejected in the case of non-subscribers. This might be due to the fact that the subscribers irrespective of them being small or large farmers are equally exposed to Kalpadhenu and are therefore equally informed on improved aspects of cultivation. In the case of non-subscriber, such an association between farm size and knowledge might be due to the fact that big farmers will have more access to information sources than small farmers and will be therefore having more knowledge on improved practices.

4. Cosmopoliteness.

The analysis showed that (Table 36) cosmopoliteness was significantly associated with knowledge, in the case of both subscribers and non-subscribers. Hence the null hypothesis that there will be no significant relationship between cosmopoliteness and knowledge is rejected. This finding conforms with those of Knight and Singh (1975) and Kamarudeen (1981). This might be so because the more the individual is oriented to his external surroundings, the more will be his exposure to sources of information and hence more will be his knowledge.

5. Scientific orientation.

Here also it was seen that (Table 36) scientific orientation was significantly related with knowledge. The null hypothesis that there will be no significant relationship between scientific orientation and knowledge is therefore rejected. Finding of Supe and Salode (1975) supports this. It is only natural to expect that scientifically oriented farmers will be having more knowledge on improved practices of agriculture.

6. Extension contact.

Since it was seen that extension contact was significantly associated with knowledge (Table 36) the null hypothesis that there will be no significant relationship between extension contact and knowledge is rejected. This may be due to the reason that when a farmer frequently contacts extension agencies, his desire to get the latest information gets heightened which contributes to acquisition of more knowledge on these. This finding conforms with those of Knight and Singh (1975) and Kaleel (1978).

5.7 Format and content of Kalpadhenu.

1. Layout

It was seen that (Table 37) majority of the subscribers preferred contrasting colours on the cover page with photographs rather than drawings. The cover page has also been found attractive by all 50 per cent preferred 36 point (large) letters for headings and 12 point (medium) for text. Similarly

all found the headings appropriate to the articles. While all found the pictures relevant to the articles, 64 per cent found their quality good. Advertisements on manures and fertilizers and pesticides were preferred more and the advertisements were found useful to majority. All these indicate that in general the format and content of the Kalpadhenu have come to be established among the readers.

2. Coverage

It was found that the bulk of the articles published was on crop production (Table 38). 45 articles were on this topic, which formed 52 per cent of the total. The remaining was made up of 10 articles on animal husbandry&dairy, 2 on fisheries one on poultry and 18 on topics other than agriculture. The ranking of the areas of agriculture according to the frequency of articles published was in this order: crop production, animal husbandry and dairy, fisheries and poultry.

It was also seen that (Table 39) among the 45 articles published on crop production, 20 articles were on plant protection, 6 were on seeds and sowing, 4 were on soil and water management, 2 were on manures and fertilizers and one was on harvesting and processing. The remaining 12 articles covered all the aspects and hence not considered. So the ranking of the areas of crop production according to the frequency of

articles published was in this order: plant protection, seeds and sowing, soil and water management, manures and fertilizers and harvesting and processing.

Extent of agreement between the reading preference of the subscribers and content of the articles published in Kalpadhenu.

a. Agreement of the areas of agriculture

It was found that (Table 40) there was no significant agreement between the rankings of the areas of agriculture according to readers' preference and according to frequency of articles published. Hence the null hypothesis that there will be no significant agreement between the rankings of the areas of agriculture according to readers' preference and according to frequency of articles published is accepted. The disagreement occurred, since the area, poultry which was given third preference by the readers was only fourth according to frequency of articles published. This calls for giving more importance to poultry, to be in conformity with farmers' needs.

b. Agreement of the areas of crop production

Regarding areas of crop production also, it was found that (Table 41) the rankings of the areas according to readers' preference and according to frequency of articles published, were not in agreement. Hence the null hypothesis that there will be no significant agreement between the rankings of the

areas of crop production according to readers' preference and according to frequency of articles published is accepted. The disagreement was there because, the area of seeds and sowing which was second according to frequency of articles published, was only fourth according to readers' preference and the area of manures and fertilizers which was given second preference by the readers was only fourth according to frequency of articles published. This indicates that number of articles published on seeds and sowing were more which was not in conformity with farmers' needs. Similarly more importance should be given to manures and fertilizers.

3. Serviceability of the journal

Pertaining to serviceability of Kalpadhenu, it was seen that (Table 42) majority of the subscribers agreed that the journal helps in finding solutions to problems. The persuasive function was ranked last by them. The low persuasive nature of the journal might be due to the fact that the articles are more of an academic nature rather than a popular one.

4. Relevancy and practicability

a. Relevancy

Regarding relevancy of articles published in the journal, it was found that (Table 43) the articles on crop production and animal husbandry and dairy were relevant to majority and only 16 per cent and 18 per cent respectively found them not

relevant. As regard to articles on poultry and fisheries, 38 per cent and 84 per cent found them not relevant. But this might be due to the fact that only one article was published on poultry and two on fisheries, which may be not relevant to majority.

b. Practicability

Regarding practicability also it was seen that (Table 44) information on crop production and animal husbandry and dairy was found practicable by majority and not practicable by only 24 per cent. But 44 per cent and 92 per cent found the information on poultry and fisheries not practicable. Here again, the reason shall be attributed to low number of articles published on poultry and fisheries.

SUMMARY

CHAPTER VI

SUMMARY

Effective and rapid communication of information generated in agricultural universities and research stations to the farming community is an important factor in agricultural development. The role of printed literature such as the journals, in the transfer of this information has become very vital these days. It is more important in a state like Kerala where the literacy rate is very high. The farm journals are becoming more and more popular among the farmers as sources of farm information. Hence this study was undertaken to assess the effectiveness of farm journals in disseminating agricultural information to farmers, with the following specific objectives:

1. To measure the readability of articles on agricultural information published in the journals, Kerala karshakan and Kalpadhenu.
2. To assess the reading preference and reading habit of farmer subscribers of the journals with respect to the content areas of the journals.
3. To assess the knowledge level of the subscribers against a control group.
4. To find the relationship between personal and socio-economic characteristics of the respondents with their reading habit and knowledge.

5. To analyse the format and content of the journals in terms of their utility to farmers in farming.

Trichur district was selected as the location of the study, being the highest in the number of subscribers of both Kerala-karshakan and Kalpadhenu.

The sample totalling 150, which included 50 Kerala karshakan subscribers, 50 Kalpadhenu subscribers and 50 non-subscribers, were selected by random sampling.

The variables in this study were the readability of articles in the journals, reading preference and reading habit of the farmer subscribers of the journals, knowledge level of subscribers and non-subscribers, format and content of the journals. Age, education, farm size, cosmopoliteness, scientific orientation and extension contact were the personal and socio-economic characteristics of the respondents, which were studied to find out their relationship with reading habit and knowledge.

The data was collected by interviewing the respondents individually with the help of a pre-tested schedule developed for the present study. The data collected was subjected to various statistical analyses such as the paired comparison technique, percentage analysis, t test, weighted average, normal test of significance and Spearman's rank correlation.

The salient findings of the study were the following:

1. The readability level of the articles on agricultural information published in Kerala karshakan and Kalpadhenu, which were

analysed for readability, was found to be low.

2. The reading preference of the subscribers of both Kerala karshakan and Kalpadhenu, to the general areas in the journals was found to be in the order, namely, agricultural information, development information, editorial and advertisements. The preference to the areas of agriculture was in this order: crop production, animal husbandry and dairy, poultry and fisheries. Within the areas of crop production, the preference of Kerala karshakan subscribers was in the order, namely, plant protection, manures and fertilizers, seeds and sowing, soil and water management and harvesting and processing. The preference of Kalpadhenu subscribers was plant protection followed by manures and fertilizers, soil and water management, seeds and sowing and harvesting and processing.

3. Majority of the farmer subscribers of both journals were found to be in the habit of reading the content areas of the journals viz. agricultural information, development information, editorial and advertisements.

4. Among the personal and socio-economic characteristics selected, age and farm size were found to have no significant association with reading habit of Kerala karshakan subscribers. All other characteristics, viz. education, cosmopoliteness, scientific orientation and extension contact had significant association with reading habit. In the case of Kalpadhenu subscribers, age, farm size and extension contact were found

to have no influence on reading habit while education, cosmopoliteness and scientific orientation had significant association.

5. The knowledge level of the subscribers of Kerala karshakan and Kalpadhenu was found to be higher than that of non-subscribers.

6. Age of the farmer subscribers of Kerala karshakan was found to have no influence on the knowledge while education, farm size, cosmopoliteness, scientific orientation and extension contact were significantly associated with knowledge. In the case of Kalpadhenu subscribers, age and farm size were found to have no association with their knowledge while education, cosmopoliteness, scientific orientation and extension contact had significant association with knowledge.

7. Regarding layout of Kerala karshakan and Kalpadhenu, the respective subscribers found the cover page attractive and preferred coloured cover page with photographs than drawings. Medium and large letter sizes were preferred to small letters for headings and all agreed that the headings are appropriate to the articles. Regarding letter size of texts, majority of subscribers of both Kerala karshakan and Kalpadhenu preferred medium sized (12 point) letters. Pictures were found relevant and their quality good to majority. Advertisements were found useful by majority, of which preference was more to the advertisements of manures and fertilizers, in the case of Kerala karshakan subscribers. More or less an equal number

of Kalpadhenu subscribers preferred the different advertisements in Kalpadhenu.

8. Regarding serviceability, majority, agreed that the journals help in finding solutions to problems, while they did not agree that the journals persuaded them to adopt improved practices.

9. Bulk of the articles published was on crop production followed by animal husbandry and dairy, poultry and fisheries in the case of Kerala karshakan and crop production, animal husbandry and dairy, fisheries and poultry in Kalpadhenu. Within the areas of crop production, number of articles published in Kerala karshakan was more on soil and water management, followed by plant protection, manures and fertilizers, seeds and sowing and harvesting and processing. In Kalpadhenu it is plant protection, seeds and sowing, soil and water management, manures and fertilizers and harvesting and processing.

10. There was perfect agreement between the content of articles published in Kerala karshakan and readers' preference with reference to areas of agriculture and no significant agreement with reference to areas of crop production. In Kalpadhenu there was no perfect agreement between the content of articles published and readers' preference with reference to areas of agriculture as well as areas of crop production.

11. In the case of Kerala karshakan, majority of the subscribers opined that information on crop production and

animal husbandry and dairy was relevant and practicable while that on poultry and fisheries was not relevant or practicable to majority. In Kalpadhenu, majority of subscribers found the information on crop production, animal husbandry and dairy and poultry as relevant and practicable while the article on fisheries was not relevant and practicable to majority.

The following recommendations are made based on the results of the study:

1. The readability level of articles may be tested before publication and only those which rank higher may be published.
2. While writing in the journals, more personal words and colloquial language may be used to make the journals more popular.
3. More articles pertaining to newer pesticides and newer methods of plant protection may make the journals more preferred by the farmers.
4. The letter size of texts in Kalpadhenu may be raised from 10 point to 12 point, as per farmers' preference, after careful analytical and case studies.
5. Coloured cover pages may be more used, as per farmers' preference.

Suggestions for future research:

1. To know exactly what farmers read, a more deeper analysis of the reading habit of the farmer subscribers may be undertaken.

2. A comparative study of the journals, not only between them but also with other journals, may also be undertaken.

3. A more detailed content analysis of the journals may be done, taking into consideration aspects other than the frequency of articles published.

REFERENCES

REFERENCES

Ahamed, P. (1981). Effectiveness of the training programmes for farmers. M.Sc. (Ag.) Thesis. Department of Agricultural Extension, Kerala Agricultural University.

Ahuja, B.N. (1979). Theory and Practice of Journalism. Surjeet Publications, New Delhi.

*Annamalai, R. and Sundaresan, S. (1975). Study on the Communicability and Utility of the Information materials prepared for Extension work in Coimbatore district. Tamil Nadu Agricultural University. Fourth Annual Report, 1974-75. TNAU, Coimbatore.

Awa, N.E. (1974). Communicating with rural poor. J. Extn. 12 (4): 8 - 12.

Bhaskaran, C. (1976). A study of Sociometric Identification of Opinion leaders and their Characteristics in a Progressive and Non-progressive village in Kanyakumari district of Tamil Nadu. M.Sc. (Ag.) Thesis. Department of Agricultural Extension, University of Agricultural Sciences, Bangalore.

Bhaskaran, K. and Mahajan, B.S. (1968). Effectiveness of extension methods in gaining knowledge about and acceptance of Agrosan seed treatment to cotton. Indian J. Extn. Edn. 4: 28 - 33.

*Brown, M. and Keral, B. (1967). Mass Communication and Development - The problem of local and functional relevance. LTC No.38. The Land Tenure Centre, University of Wisconsin, July 1967.

Chambers's Twentieth Century Dictionary of the English Language. W. and R. Chambers, Ltd., England.

*Delbert, N. (1955). A study of distribution of mass media among Wisconsin farmers and relationship of this distribution to certain socio-economic characteristics. Ph.D dissertation. Department of Agricultural Journalism, University of Wisconsin, Madison.

*Dhanokar, T.S. (1970). Differential perception of farmers about the attributes of farm innovations. M.Sc. (Ag.) Thesis. College of Agriculture, Nagpur.

Dobriner, W.M. (1958). The Suburban Community. Putnam, New York.

Edwards, A.L. (1957). Techniques of attitude scale construction. Appleton Century Crofts Inc. New York.

*English, H. and English, A.C. (1958). A Comprehensive dictionary of psychological and psychoanalytical terms. Longman Green and Co., New York.

Fett, J.H. (1972). Content and situational relevance of agricultural news in Brazilian papers. Journalism Quarterly. 49 (3): 505 - 511.

Ferguson, R. (1959). Editing the small magazine. Columbia University Press, USA.

Flesch, R. (1946). The Art of Plain Talk. Harper and Row, New York.

Flesch, R. (1954). How to make sense. Harper and Row, New York.

Flesch, R. (1960). The Readability Formula. pp 419 - 420 in Wilbour Schramm (ed) Mass Communication. University of Illinois Press, Urbana.

Freedman, J.L. and Sears, D.O. (1965). Selective exposure in Leonard Berkowitz (ed) Advances in Experimental Social Psychology. Academic Press, New York.

*Gallup, G. and Fanning, J.W. (1943). Leaders functioning successfully in Butts county. Agric. Extn. Service Rev. 14: 126.

Ganapathy, K.R. (1971). Writing for low level literates. University of Agricultural Sciences, Bangalore.

Garret, (1973). Statistics of psychology and education. Vakilas, Fleper, Simon Pvt. Ltd., Bombay.

*Goldson, R.K. and Ralis, M. (1952). Factors related to acceptance of innovation in Bangecham, Thailand, Ithaca. New York Cornell University, Data paper 25.

Gouldner, A.W. (1957). Cosmopoliteness and locals Toward and analysis of Latent social roles. Administrative Science. 2: 281 - 306.

*Gray, W.S. (1956). The teaching of reading and writing - an international survey. UNESCO, Paris.

*Grunig, J. (1968). Information and decision making in economic development - Some evidence from Columbia. The Land Tenure Centre. University of Wisconsin, October, 1968

*Guerrero, J.L. (1968). The influence of pre-decisional factors and interpersonal structures on information exchange behaviour. Department of Agricultural Journalism. University of Wisconsin.

*Gwyn, E.T. and Hodge, K. (1968). A county advisory bulletin for farmers - an assessment of a communication medium. Agricultural Extension Counter. University of Reading, England.

*Hackman, R.C. and Kershner, A.M. (1951). The determination of criteria of readability. Tech. Rep. Univ. Maryland.

Hakanson and Denig. (1956). The written word. pp 151 - 158 in J.M.A. Penders (ed) Methods and programme planning in rural extension. Veenman and Zonen Wageningen. Netherlands.

Harrington, R.L. and Mallinson, G.G. (1958). Investigation of two methods of measuring the reading difficulty of material for elementary sciences. Sci. Edn. 42: 385 - 390.

Helbert, M.G. (1953). Understanding of instructional material.

*Honnart, M. (1970). Promotion through the mass media. Annls Gembolux. 76 (4): 181 - 189.

IARI (1976). The National workshop for Farm Journalists on Methods and Techniques of Farm Journalism and Communication of Agricultural Technology. Report. Indian Agricultural Research Institute, New Delhi.

Jaiswal, N.K. and Dave, A.R. (1972). Measurement of progressiveness in farming,in P.R.R. Sinha (ed) Studies in extension education. NICD, Hyderabad.

Jaiswal, N.K., Singh, N.N.and Singh, B.N. (1971). A study of interactional association of selected factors with innovativeness in farming. Indian J. Extn. Edn. 7: 110 - 116.

*Jackman, M.E. (1941). The relation between maturity of content and simplicity of style in selected books of finction. Libr. Qr. 11: 302 - 327.

Kaleel, F.M.H. (1978). A study on the impact of IPD programme in Kerala. M.Sc. (Ag.) Thesis. Department of Agricultural Extension, Kerala Agricultural University.

Kamarudeen, (1981). A study on the impact of National Demonstration Programme on paddy cultivation in Trichur district. M.Sc. (Ag.) Thesis. Department of Agricultural Extension, Kerala Agricultural University.

Kelsey, L.D. and Hearne, C. (1965). Co-operative extension work. Comstock Publishing Association, New York.

Kershner, A.M. (1964). Speed of reading in an adult population under differential condition. J. Appl. Psychol. 48: 25 - 28.

Khandekar, P.R. and Mathur, P.N. (1975). Effectiveness of 'Unnat krishi' farm magazine. Indian J. Extn. Edn. 11: (1 & 2).

Kidwai, W.R. (1965). Reading behaviour of village people. A study in Dehradun village. Indian J. Adult Edn. 26 (11): 9 - 10.

Klare, G.R. (1963). The measurement of readability. Iowa State University Press, Ames, Iowa, USA.

*Klare, G.R., Mabry, J.E. and Gustafson, L.M. (1954). The relationship of verbal communication variables to immediate and delayed acceptability of technical training materials. Lackland, San Antonia USAF Personnel and Training Research Centre. Res. Bull. AFPIRC - TR, 54 - 103.

Knight, A. and Singh, K.N. (1975). Study on personal and social characteristics of farm broadcast listners that are associated with gain in knowledge. Madras Agric. J. 62 (10-12): 698 - 701.

Lockman, R.F. (1956). A note on measuring understandability. J. Appl. Psychol. 40: 195 - 196.

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

*Mathur, P.N. and Bhilegaonkar, M.G. (1976). An exploratory study of content style and writers of 'Kethi'. Division of Agricultural Extension, IARI, New Delhi.

*Mariol, C.J. (1959). Reading habits and interests of Puerto-rican farmers. MS Thesis. Department of Agricultural Journalism, University of Wisconsin, Madison.

Marsh, S.A. and Knox, A.B. (1966). Information seeking and adult education. J. Co-op. Ext. 4 (4): 213.

Mazer, H.R. and Brown, E.J. (1974). Effectiveness of co-operative extension service newsletter with different formats received by dairymen in Pennsylvania. J. Extn. 12 (3): 47 - 48.

*Meade, A.R. (1947). An investigation into farmers' understanding of technical words. MS Thesis. Department of Agricultural Journalism, University of Wisconsin, Madison.

Menefee, S.C. and Menefee, A.G. (1964). Communications in village India - A social report. Kalpataru College, Tiptur, Mysore.

*Mishra. (1969). Mass media use patterns and modernization process in the Indian slums. A study of four basties in Greater Delhi. Ph.D. Thesis. University of Minnesota.

Murphy, D.R. (1962). What farmers read and like. Iowa State University Press, Ames, Iowa, USA.

Nachiappan, P.R. and Murthy, S. (1976). Impact of SFDA on the knowledge of the participant small farmers of Tamil Nadu. Indian J. Extn. Edn., 13 (3 & 4) 64 - 68.

Nair, C.K. (1977). Gadyaradhana (Mal.) Sahithya Pravarthaka Co-operative Society, Kottayam.

Nair, G.T. (1969). A multivariate study on adoption of high yielding paddy varieties by farmers of Kerala state. Ph.D. Thesis. IARI, New Delhi.

Nehiley, J.M. (1980). Targetting extension publications. J. Extn. 18 (6): 11 - 16.

*Oliver, J. (1971). Impact of agricultural news disseminated by IADP personnel through newspaper 'Dinamoni' on the adoption of package of practices for paddy in Tanjavur district of Tamil Nadu. M.Sc. (Ag.) Thesis. TNAU, Coimbatore.

Oliver, J., Doraiswami, K.N. and Radhakrishna Menon, K. (1974). Reading habit of farm news by farmers of Tanjavur district. Madras Agric. J. 62 (10-12): 664 - 667.

Oliver, J., Doraiswami, K.N. and Radhakrishna Menon, K. (1974). Suitability of agricultural news articles published in newspaper 'Dinamoni'. Indian J. Extn. Edn. 10: (3 & 4);

Patel, S.M. and Patel, H.N. (1970). Study and evaluation of "Khedut Patrika" published by Information Unit of the Department of Agriculture, Gujarat state. Indian J. Extn. Edn. 8 (1 & 2): 32 - 36.

*Paul, L.C. (1970). Reading levels of publications for farmers. OECD Ag. Rev. 17 (2): 56 - 62.

Pillai, G.B. (1978). A study on Adoption of Soil Conservation Measures by Farmers in Scheme areas of Trivandrum district. M.Sc. (Ag.) Thesis. Department of Agricultural Extension, Kerala Agricultural University.

*Pizarek, W. (1969). Jak Mierzye Zrozumialose Tekstns (How to measure readability of text) Zeszyty Pasozhawize. 10 (4): 35 - 48 (polish).

Rajan, P. (1982). Effectiveness of communication through Farm News Service of Kerala Agricultural University. M.Sc. (Ag.) Thesis. Department of Agricultural Extension, Kerala Agricultural University.

*Rao, C.S.S. (1961). Effectiveness of audio-visuals in diffusing information and acceptance of approved agricultural practices. Ph.D. Thesis. IARI, New Delhi.

Rao, C.S.S. and Kherde, R.L. (1965). Investigation of the readability of the information folder for use by the farmers. Indian J. Extn. Edn. 6 (3 & 4): 94 - 96.

Robert. (1980). Toward more effective newsletters. J. Extn. 18.

Rogers, E.M. and Svenning, L. (1969). Modernization among peasants - the impact of communication. Rinehart and Winstone Inc. New York.

*Roy, K.B. and Cooper, W.M. (1938). Desirability of illustrated cover page for extension circulars. Little Rock. Ark. Agricultural College.

Russel, D.H. and Fea, H.R. (1951). Validity of six readability formulae as measures of juvenile fiction. Elementary Psychol. J. 52: 36 - 44.

Ryan, B. and Gross, N. (1943). The diffusion of hybrid seed corn in two Iowa counties. Rural Sociology 8: 15-24.

Schramm, W. and White, D.M. (1960). Age, education and economic status as factors in newspaper reading in Schramm (ed) Mass Communication. University of Illinois Press.

Shankariah and Singh, K.N. (1967). Predictive analysis of factors related with knowledge of improved practices of vegetable cultivation. Indian J. Extn. Edn. 3 (1 & 2) 67 - 73.

Singh, K.M.P. and Singh, R.P. (1974). Impact of national demonstracion on the adoption of high yielding varieties of wheat. Indian J. Extn. Edn. 10 (1 & 2): 65 - 67.

Singh, K.N. and Haque, S.M.S. (1972). Information needs of farmers as perceived by them and extension personnel. Agricultural Situation in India - 1972. New Delhi.

Singh, M.P. and Kumar, B. (1977). Analysis of space provided to agricultural information in leading newspapers of Bihar. Indian J. Extn. Edn. 13 (3 & 4): 27 - 31.

Singh, N.P. and Prasad, C. (1974). Communication behaviour and source credibility perception of young farmers. Indian J. Extn. Edn. 10 (1 & 2): 53 - 58.

Sinha, B.P., Jaiswal, N.K. and Singh, B.N. (1968). Analysis of the pre-service training programme of agricultural extension officers. Indian J. Extn. Edn. 4 (3 & 4): 17 - 27.

Somasundaram, J. and Jaganath, L. (1974). Readability of newsletters. Indian J. Extn. Edn. 10 (1 & 2): 59 - 69.

*Stevans, S.S. and Hare, G. (1947). Psychological writings, easy and hard. Am. Psychol. 2: 230 - 235.

*Supe, S.V. (1969). Factors related to different degrees of rationality in decision making among farmers in Buldania district. Ph.D. Thesis. IARI, New Delhi.

Supe, S.V. and Salode, M.S. (1975). Impact of national demonstration on knowledge and adoption level of farmer participants. Indian. J. Extn. Edn. 2 (1 & 2) 36 - 38.

*Trivedi, G. (1963). Measurement and analysis of socio-economic status of rural families. Ph.D. Thesis. Division of Agricultural Extension, IARI, New Delhi.

Turnbull, A.J. and Baird, R.N. (1968). The graphics of communication - Typography, Layout, Design (2nd ed) Holt, Rinehart Winstone, Inc. New York.

*Veerabhadriah, V. and Sethu Rao, M.K. (1970). Extent of mass media utility in a rural community. Indian Agric. News Dig. 2 : 147 - 149.

*Warden, S.A. (1964). The local cosmopolitan dimension of individual value orientation - A study. MA Thesis. Michigan State University.

APPENDICES

Wert, T.E. (1937). A technique for determining levels of group reading. Edn. Res. Bull. 16: 113 - 121.

*Williamson, D.D. (1938). Publicity Survey - Annual Report. State Home Demon-Leader, NH Agric. Extn., Durham.

Wilson, R. (1963). Rural families and the mass media. J. Co-op. Extn. 1 (1): 41 - 46.

Zalaki, C.G. (1973). A study on the awareness, use and readability of agricultural publications by farmers in Bangalore district of Mysore state. M.Sc. (Ag.) Thesis. Department of Agricultural Extension, University of Agricultural Sciences, Bangalore.

* Original not seen

APPENDICES

APPENDIX I

Effectiveness of Farm Journals in Disseminating Agricultural Information to Farmers of Kerala.

Interview Schedule

No.
Date:

I

1. Name:
2. Address:

II

1. Age (in completed years):
2. Educational level:

Illiterate
Can read only
Can read and write
Primary school
Middle school
High school
College

3. Area of land owned:
4. Cosmopoliteness:

a. How often do you visit the nearby town?

Two or more times a week/once in a week/once in a fortnight/once in a month/never

b. Purpose of visiting town

Agricultural/personal/entertainment/other purposes

c. Membership in any organisation in town.

Yes/No

(Appendix I contd...)

5. Scientific orientation:

Please indicate your degree of agreement or disagreement or undecidedness to each of the following statements.

Statements	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
1. New methods of farming give better results to a farmer than the old methods.					
2. The way of farming by our forefathers is still the best way to farm today.					
3. Even a farmer with a lot of farm experience should use new methods of farming.					
4. A good farmer experiments with new ideas of farming.					
5. Though it takes time for a farmer to learn new methods in farming it is worth the efforts.					
6. Traditional methods of farming have to be changed in order to raise the living of a farmer.					

6. Extension contact:

Please indicate how often do you visit the following personnels in connection with agricultural activities.

Personnels	Two or more times a week	Once in a week	Once in a fortnight	Once in a month	Never
1. Junior Agricultural Officer					
2. Block Development Officer					
3. Village Extension Officer					
4. Demonstrators					
5. University Scientists					

(Appendix I contd...)

III

1. Reading preference:

a. Below are given in pairs the general areas in the journal. In each pair indicate the one area which you prefer to read over the other.

1. (a) Editorial
   (b) Development Information
2. (a) Editorial
   (b) Agricultural Information
3. (a) Editorial
   (b) Advertisements
4. (a) Advertisements
   (b) Development Information
5. (a) Development Information
   (b) Agricultural Information
6. (a) Agricultural Information
   (b) Advertisements.

b. Below are given in pairs the areas of agriculture dealt with in the journal. In each pair indicate the one area which you prefer to read over the other.

1. (a) Crop production
   (b) Animal husbandry and dairy
2. (a) Crop production
   (b) Poultry
3. (a) Crop production
   (b) Fisheries
4. (a) Animal husbandry and dairy
   (b) Poultry

(Appendix I contd...)

5. (a) Animal husbandry and dairy
   (b) Fisheries
6. (a) Poultry
   (b) Fisheries

c. Below are given in pairs the areas of crop production dealt with in the journal. In each pair indicate the one area which you prefer to read over the other.

1. (a) Seeds and sowing
   (b) Soil and water management
2. (a) Seeds and sowing
   (b) Manures and fertilizers
3. (a) Plant protection
   (b) Seeds and sowing
4. (a) Harvesting and processing
   (b) Seeds and sowing
5. (a) Soil and water management
   (b) Plant protection
6. (a) Soil and water management
   (b) Manures and fertilizers
7. (a) Harvesting and processing
   (b) Soil and water management
8. (a) Plant protection
   (b) Manures and fertilizers
9. (a) Manures and fertilizers
   (b) Harvesting and processing
10. (a) Plant protection
    (b) Harvesting and processing

(Appendix I contd...)

2. Reading habit:

a. How often do you read the agricultural information in the journal.

Area	Always	Often	Occasionally	Never
Crop production				
Animal husbandry and dairy				
Poultry				
Fisheries				

b. Do you read the development information in the hournal

Yes/No

If Yes, how often: Always/Often/Occasionally

c. Do you read the editorial in the journal

Yes/No

If Yes, how often: Always/Often/Occasionally

d. Do you read the advertisements in the journal

Yes/No

If Yes, how often: Always/Often/Occasionally

3. Knowledge:

Give the correct answer for the following questions:

1. Which of the following is a short duration high yielding variety of rice.

(1) Mahsuri (2) Jaya (3) Jyothi

2. When is short duration varieties of rice transplanted from nursery.

(1) 18 days old (2) 25 days old (3) 35 days old

(Appendix I contd...)

3. What is the spacing of short duration varieties of rice in virippu.

   (1) 20 x 20 cm (2) 25 x 25 cm (3) 15 x 10 cm

4. Mention the chemical for wet seed treatment of rice

   (1) Agrosan GN (2) Agallol-3 (3) BHC

5. What is the rate of using Agallol-3 for seed treatment

   (1) 50gm/50 kg seed (2) 125gm/50 kg seed (3) 5gm/50 kg seed

6. What is the recommended rate of liming in rice fields.

   (1) 400 kg/ha (2) 600 kg/ha (3) 800 kg/ha

7. How will you apply urea/ammonium sulphate to rice.

   (1) Entire quantity as basal top dressing (2) Entire quantity as (3) in split doses at different stages

8. What is sevin.

   (1) Fungicide (2) Insecticide (3) Weedicide

9. Mention the fungicide effective against sheath blight of rice.

   (1) Bavistin (2) Bordeaux mixture (3) Agrosan

10. What is the rate of using Bavistin in an acre.

    (1) 200 gm (2) 300 gm (3) 500 gm

11. Mention the insecticide effective against stem borer of rice.

    (1) Nuvacron (2) Sevin (3) BHC

12. What is the rate of using nuvacron in an acre.

    (1) 250 ml. (2) 350 ml. (3) 500 ml.

13. Mention the insecticide most effective against brown plant hopper of rice.

    (1) Furadan (2) Sevin (3) BHC

(Appendix I contd...)

14. What is 2,4-D.

(1) Insecticide (2) Fungicide (3) Weedicide

15. What is the rate of using 2,4-D in an acre

(1) 400 g (2) 600 g (3) 800 g

16. What is the recommended spacing for coconut in nursery.

(1) 30 x 30 cm (2) 40 x 40 cm (3) 40 x 50 cm

17. How will you apply fertilizers to coconut grown under rainfed conditions.

(1) As single dose (2) Two doses of 1/3 + 2/3
(3) Two doses of $\frac{1}{2}$ + $\frac{1}{2}$

18. Mention the fodder grass suited for intercropping in coconut gardens.

(1) Guinea grass (2) Glyricidia (3) Bersene

19. Mention the insecticide effective against red palm weevil of coconut .

(1) Pyrecon (2) Furadan (3) Ekalux

20. What is ethrel.

(1) Fungicide (2) Growth hormone (3) Weedicide

21. What is the recommended spacing for Nendran banana.

(1) 2 x 2 m (2) 3 x 3 m (3) 4 x 4 m

22. How will you apply fertilizers to banana.

(1) As single dose (2) In two split doses
(3) In three split doses

23. How much concentrate mixture is required for a milch cow.

(1) 2.5 kg (2) 6 kg (3) 10 kg

24. How is legume fodder fed to cattle.

(1) Legume fodder alone (2) Mixed with oil cake
(3) Mixed with green grass or straw.

(Appendix I contd...)

25. What is the control for foot and mouth disease in cattle.

(1) Vaccination (2) Antibiotics (3) No control

26. What is the frequency of vaccination against foot and mouth disease.

(1) Once in a year (2) Once in six months (3) once in two years

27. What is the frequency ofvaccination against rinder pest disease of cattle

(1) Once in a year (2) Once in three years (3) Once in six months

28. In calves diarrhoea is most common in those below ..... days old.

(1) 5 days (2) 10 days (3) 20 days

29. Which of the following can be used against ticks and mites in cattle.

(1) Sevin (2) Antibiotics (3) Dettol.

30. What is the floor space required for one broiler chicken in deep litter system.

(1) 1 Sq.ft. (2) 2 Sq.ft. (3) 2.5 Sq.ft.

4. Layout of the journal:

Please give your opinion or preference for the following questions.

1. Cover page.

a. What is your opinion about the attractiveness of the cover page?

Very attractive/Attractive/Not attractive

b. Which colour(s) do you prefer on the cover page?

Black and white/One colour/Contrasting colours

c. Which type of illustration do you prefer on the cover page?

Photographs/Drawings

(Appendix I contd...)

2. Headings.

   a. Which type of letter size do you prefer for the headings?

      Large/Medium/Small

   b. Are the headings in general appropriate to the articles?

      Yes/No

3. Letter size of text.

   a. Which type of letter size do you prefer for the text?

      Large/Medium/Small

4. Pictures.

   a. Are the pictures, in general, relevant to the articles?

      Yes/No

   b. What is your opinion about the quality of the pictures, in general?

      Very good/Good/Poor

5. Advertisements.

   a. What is your opinion about the usefulness of the advertisements?

      Very useful/Useful/Not useful

   b. Which advertisements do you prefer more?

      Manures and fertilizers/Pesticides/Cattle feeds/others

5. Serviceability of the journal.

   Below are given five statements. Please indicate whether you are agreeing, disagreeing or neutral with each of them.

Statements.	Agree/Neutral/Disagree
1. The journal serves to the needs of the farmers	
2. The journal's articles are with up-to-date information about improved agricultural practices.	

(Appendix I contd...)

Statements	Agree/Neutral/Disagree
3. Information given is very timely	
4. The journal persuades you to adopt improved practices	
5. The journal helps in finding solution to problems in the field of agriculture.	

6. Relevancy and practicability of the articles in the journal:

a. Relevancy:

What is your opinion about the relevancy of the articles on agricultural areas published in the journal

Area	Most relevant/Relevant/Not relevant
Crop production	
Animal husbandry and dairy	
Poultry	
Fisheries	

b. Practicability:

What is your opinion about the practicability of the information on agricultural ares published in the journal.

Areas	Most practicable	Practicable	Not practicable
Crop production			
Animal husbandry and dairy			
Poultry			
Fisheries			

APPENDIX II (a) (Kerala karshakan)

Paired comparison analysis of reading preference to general areas in Kerala karshakan.

F matrix.

Areas	Agricultural information	Development information	Editorial	Advertisements
Agricultural information	..	15	5	6
Development information	35	..	29	10
Editorial	35	21	..	8
Advertisements	44	40	42	..

P matrix.

Areas	Agricultural information	Development information	Editorial	Advertisements
Agricultural information	..	0.30	0.10	0.12
Development information	0.70	..	0.58	0.20
Editorial	0.90	0.42	..	0.16
Advertisements	0.88	0.80	0.84	..

Z matrix.

Areas	Agricultural information	Development information	Editorial	Advertisements
Agricultural information	..	-0.524	-1.282	-1. 175
Development information	0.524	..	0.202	-0.842
Editorial	1.282	-0.202	..	-0.994
Advertisements	1.175	0.842	0.994	..
Sum	2.981	0.116	-0.086	-3.011
Mean	0.745	0.029	-0.021	-0.753
Mean + 0.753	1.498	0.782	0.732	0.000

(Appendix II (a) contd..)

Paired comparison analysis of reading preference to the areas of agriculture in Kerala karshakan.

F matrix.

Areas	Crop production	Animal husbandry and dairy	Poultry	Fisheries
Crop production	..	12	3	0
Animal husbandry and dairy	38	..	4	3
Poultry	47	46	..	5
Fisheries	50	47	45	..

P matrix.

Areas	Crop production	Animal husbandry and dairy	Poultry	Fisheries
Crop production	..	0.24	0.06	0
Animal husbandry and dairy	0.76	..	0.08	0.06
Poultry	0.94	0.92	..	0.10
Fisheries	1.00	0.94	0.90	..

Z matrix.

Areas	Crop production	Animal husbandry and dairy	Poultry	Fisheries
Crop production	..	-0.706	-1.555	-
Animal husbandry and dairy	0.706	..	-1.405	-1.555
Poultry	1.555	1.405	..	-1.282
Fisheries	-	1.555	1.282	-
Sum	2.261	2.254	-1.678	-2.837
Mean	0.754	0.563	-0.419	-0.946
Mean + 0.946	1.700	1.509	0.527	0.000

(Appendix II (a) contd...)

Paired comparison analysis of the reading preference to the areas of crop production in Kerala karshakan.

F matrix.

Areas	Plant protection	Manures & fertilizers	Seeds & sowing	Soil & water management	Harvesting & processing
Plant protection	..	12	8	9	13
Manures and fertilizers	38	..	16	10	11
Seeds & Sowing	42	34	..	12	14
Soil & water management	41	40	38	..	16
Harvesting & processing	37	39	36	34	..

P matrix.

Areas	Plant protection	Manures & fertilizers	Seeds & sowing	Soil & water management	Harvesting & processing
Plant protection	..	0.24	0.16	0.18	0.26
Manures and fertilizers	0.76	..	0.32	0.20	0.22
Seeds & sowing	0.84	0.68	..	0.24	0.28
Soil & water management	0.82	0.80	0.76	..	0.32
Harvesting & processing	0.74	0.78	0.72	0.68	..

Z matrix.

Areas	Plant protection	Manures & fertilizers	Seeds & sowing	Soil & water management	Harvesting & processing
Plant protection	..	-0.706	-0.994	-0.915	-0.643
Manures and fertilizers	0.706	..	-0.468	-0.842	-0.772
Seeds&sowing	0.994	0.468	..	-0.706	-0.585
Soil & water management	0.915	0.842	0.706	..	-0.468
Harvesting & processing	0.643	0.776	0.583	0.468	..
Sum	3.258	1.380	0.173	-1.995	-2.466
Mean	0.651	0.276	0.035	-0.399	-0.493
Mean + 0.493	1.144	0.769	0.528	0.094	0.000

APPENDIX II (b) (Kalpadhenu)

Paired comparison analysis of reading preference to general areas in Kalpadhenu.

F matrix.

Areas	Agricultural information	Development information	Editorial	Advertisements
Agricultural Information	..	17	8	7
Development information	33	..	22	16
Editorial	42	28	..	13
Advertisements	43	34	37	..

P matrix.

Areas	Agricultural information	Development information	Editorial	Advertisements
Agricultural information	..	0.34	0.16	0.14
Development information	0.66	..	0.44	0.32
Editorial	0.84	0.56	..	0.26
Advertisements	0.86	0.68	0.74	..

Z matrix.

Areas	Agricultural information	Development information	Editorial	Advertisements
Agricultural information	..	-0.412	-0.994	-1.080
Development information	0.412	..	-0.151	-0.468
Editorial	0.994	0.151	..	-0.643
Advertisements	1.080	0.468	0.643	..
Sum	2.486	0.207	-0.502	-2.191
Mean	0.621	0.052	-0.125	-0.548
Mean + 0.548	1.169	0.600	0.423	0.000

(Appendix II (b) contd...)

Paired comparison analysis of reading preference to the areas of agriculture in Kalpadhenu.

F matrix.

Areas	Crop production	Animal husbandry and dairy	Poultry	Fisheries
Crop production	..	14	5	3
Animal husbandry and dairy	36	..	12	3
Poultry	45	38	..	9
Fisheries	47	47	41	..

P matrix

Areas	Crop production	Animal husbandry and dairy	Poultry	Fisheries
Crop production	..	0.28	0.10	0.06
Animal husbandry and dairy	0.72	..	0.24	0.06
Poultry	0.90	0.76	..	0.18
Fisheries	0.94	0.94	0.82	..

Z matrix.

Areas	Crop production	Animal husbandry and dairy	Poultry	Fisheries
Crop production	..	-0.583	-1.282	-1.555
Animal husbandry and dairy	0.583	..	-0.706	-1.555
Poultry	1.282	0.706	..	-0.915
Fisheries	1.555	1.555	0.915	..
Sum	3.420	1.678	-1.073	-4.025
Mean	0.855	0.419	-0.268	-1.006
Mean + 1.006	1.861	1.425	0.738	0.000

(Appendix II (b) contd...)

Paired comparison analysis of the reading preference to the areas of crop production in Kaloadhenu.

F matrix.

Areas	Plant protection	Manures & fertilizers	Soil & water management	Seeds & sowing	Harvesting & processing
Plant protection	..	16	12	9	12
Manures and fertilizers	34	..	15	14	14
Soils and water management	38	35	..	17	12
Seeds & sowing	41	36	33	..	12
Harvesting and processing	38	36	38	38	..

P matrix.

Areas	Plant protection	Manures & fertilizers	Soil & water management	Seeds & sowing	Harvesting & processing
Plant protection	..	0.32	0.24	0.18	0.24
Manures and fertilizers	0.68	..	0.30	0.28	0.28
Soil & water management	0.76	0.70	..	0.34	0.24
Seeds & sowing	0.82	0.72	0.66	..	0.24
Harvesting and processing	0.76	0.72	0.76	0.76	..

Z matrix.

Areas	Plant protection	Manures & fertilizers	Soil & water management	Seeds & sowing	Harvesting & processing
Plant protection	..	-0.468	-0.706	-0.915	-0.706
Manures & fertilizers	0.468	..	-0.524	-0.583	-0.583
Soil & water management	0.706	0.524	..	-0.412	-0.706
Seeds & sowing	0.915	0.583	0.412	..	-0.706
Harvesting & processing	0.706	0.583	0.706	0.706	..
Sum	2.795	1.222	-0.112	-1.204	-2.701
Mean	0.559	0.244	-0.022	-0.241	-0.540
Mean + 0.540	1.099	0.784	0.518	0.299	0.000

EFFECTIVENESS OF FARM JOURNALS IN DISSEMINATING AGRICULTURAL INFORMATION TO FARMERS OF KERALA

BY
BALACHANDRAN K. P.

ABSTRACT OF THE THESIS
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Kerala Agricultural University

DEPARTMENT OF AGRICULTURAL EXTENSION
COLLEGE OF AGRICULTURE
VELLAYANI - TRIVANDRUM

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ABSTRACT

The study on the effectiveness of farm journals in disseminating agricultural information to farmers was designed to find out the readability of articles published in two journals, Kerala karshakan and Kalpadhenu, reading preference and reading habit of the subscribers of the journals and the knowledge of the subscribers against a control group. It also envisaged to study the relationship of selected personal and socio-economic characteristics of the respondents with knowledge and reading habit and to analyse the format and content of the journals. The study was conducted in Trichur district, with fifty subscribers, each of Kerala karshakan and Kalpadhenu and fifty non-subscribers, who formed the control, as respondents.

The study revealed that the articles selected for assessing readability showed a low readability level in both the journals. The readers of both Kerala karshakan and Kalpadhenu preferred to read more about agricultural information, among the general areas, crop production among the areas of agriculture and plant protection, among the areas of crop production. It was also seen that majority of the subscribers of the journals were in the habit of reading the content areas of the journals. Of the selected personal and socio-economic characteristics, viz. age, education, farm size, cosmopoliteness, scientific orientation and extension contact, except age and farm size in the case of Kerala karshakan subscribers and age, farm size and extension contact in the case

of Kalpadhenu subscribers, all other characteristics were found to have a significant relationship with reading habit.

The knowledge level of the subscribers of Kerala karshakan and Kalpadhenu was found to be higher than that of the non-subscribers. Regarding relationship of the personal and socio-economic characteristics with knowledge, except age in the case of subscribers of Kerala karshakan and age and farm size in the case of Kalpadhenu subscribers, all other characteristics were having a significant relationship with knowledge.

It was seen that farmer subscribers preferred coloured cover pages with photographs rather than drawings. They preferred medium and large sized letters for headings and medium sized letters for texts. Majority also agreed that headings are appropriate to the articles and the pictures relevant. The quality of pictures was also found good. Advertisements were found useful by majority. While majority preferred advertisements on manures and fertilizers in Kerala karshakan, a more or less equal number preferred the different advertisements in Kalpadhenu.

It was noticed that bulk of the articles published in the five issues of the journals studied, was on crop production and within the areas of crop production, maximum number was on soil and water management in Kerala karshakan and plant protection in Kalpadhenu. There was found to be perfect agreement in Kerala karshakan and no perfect agreement in Kalpadhenu, between the content of articles published and readers' preference, with

reference to the areas of agriculture. Regarding content of articles published and readers' preference with reference to areas of crop production, there was no agreement in Kerala karshakan as well as Kalpadhenu. While majority agreed that the journals helped them in finding solutions to problems, they disagreed that the journals persuaded them to adopt improved practices. Regarding relevancy and practicability, it was seen that information on crop production and animal husbandry and dairy was relevant and practicable to majority of subscribers of both Kerala karshakan and Kalpadhenu.