IMPACT ON KRUSHIJIVAN FARM MAGAZINE PERTAINING TO COGNITIVE DOMAIN ON SUBSCRIBERS

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BY
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ANAND - 388 110
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A STUDY ON IMPACT OF KRUSHIJIVAN FARM MAGAZINE PERTAINING TO COGNITIVE DOMAIN ON SUBSCRIBERS

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ABSTRACT

The farm magazine is one of the important media to disseminate agricultural information to the farming community. Among various farm magazine published in Gujarat, KRUSHIJIVAN farm magazine (KFM) is the oldest farm magazine. It is publishing regularly since May 1969 with the main aim to ‘disseminate and to popularize the scientific methods of agriculture in farming community’. There was hardly any research work carried out in past to measure the impact of farm magazine in terms of gain in knowledge of agriculture technology on subscriber farmers. Looking to this, the study on “IMPACT OF KRUSHIJIVAN FARM MAGAZINE PERTAINING TO COGNITIVE DOMAIN ON SUBSCRIBER FARMERS” was planned and undertaken.

The specific objectives of the study were:
2.1. To study personal profile of the Krushijivan farm magazine subscriber farmers and non-subscriber farmers.
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2.2. To know the impact of *Krushijivan* farm magazine in terms of gain in knowledge of the respondents.

2.3. To know relationship between gain in knowledge regarding selected agriculture technology and their profile.

2.4. To seek suggestions from the subscriber farmers of *Krushijivan* farm magazine to make the farm magazine more effective.

**METHODOLOGY**

The Vadodara districts of the Gujarat state having more number of life members of KFM were selected for the study. Among Vadodara district, Dabhoi, and Sankheda taluka and from each talukas, seven villages were purposively selected. Total 30 KFM subscriber farmers were selected proportionately and 30 non-subscriber farmers were selected randomly from the list of Panchayat office from each village of each talukas for the study. Thus, total 60 KFM subscriber farmers and 60 non-subscriber farmers were included for the study. An interview schedule was prepared in vernacular language and data were collected by personal interviews.

The dependent variables undertaken in this study was gain in knowledge of selected agriculture technology. The independent variables chosen for the purpose of the study were personal, social, economic, psychological and communication. In order to measure the
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gain in knowledge of KFM subscriber farmers and non-subscriber farmers.

The collected data were classified, tabulated and analysed in order to make the findings meaningful. The statistical measures such as percentage, mean score, standard deviation, coefficient of correlation, and two sample independent t-test were used.

MAJOR FINDINGS

1. Majority of the KFM subscriber farmers and non-subscriber farmers (60 per cent and 63.33 per cent, respectively) belonged to middle age group.

2. Nearly half of the KFM subscriber farmers and non-subscriber farmers (51.60 per cent and 48.30 per cent, respectively) were educated up to high school to higher secondary level, while nearly two-fifth KFM subscriber farmers (36.70 per cent) had college education against 13.30 per cent in non-subscriber farmers group.

3. A great a majority of the KFM subscriber farmers (68.40 per cent) and nearly half (46.70 per cent) of non-subscriber farmers had membership in one and more than one organization and nearly one-third (30.00 per cent) of KFM subscriber farmers and
one-fifth (13.30 per cent) of non-subscriber farmers were office-bearers.

4. A great majority KFM subscriber farmers (93.40 per cent) had medium to high level of market intelligence where a great majority of non-subscriber farmers (91.70 per cent) had low to medium level of market intelligence.

5. A great majority of the KFM subscriber farmers (86.70 per cent) were found to have medium to high level of scientific orientation while a great majority of non-subscriber farmers (95.00 per cent) were found to have low to medium level of scientific orientation.

6. A great majority of KFM subscriber farmers (93.30 per cent) had medium to high level of innovativeness whereas a great majority of non-subscriber farmers (88.40 per cent) had low to medium level of innovativeness.

7. A great majority of the KFM subscriber farmers and non-subscriber farmers (96.70 per cent each, respectively) had medium to high level and low to medium level of risk preference, respectively.

8. A great majority of KFM subscriber farmers (95.00 per cent) had medium to high level whereas a great majority of non-subscriber
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farmers (96.70 per cent) had low to medium level of economic motivation.

9. A great majority of KFM subscriber farmers (98.30 per cent) had medium to high level of reading behaviour and a great majority of non-subscriber farmers (95.00 per cent) had low to medium level of reading behaviour.

10. A great majority of KFM subscriber farmers (96.70 per cent) had medium to high level of exposure to mass media while a great majority of (95.00 per cent) non-subscriber farmers had low to medium level of exposure to mass media.

11. A great majority of KFM subscriber farmers had (90.00 per cent) medium to high level of extension participation while a great majority of non-subscriber farmers (95.00 per cent) had low to medium level of extension participation.

12. KFM subscribers had significant impact of KRUSHI JIVAN farm magazine was observed in improving knowledge of selected agriculture technology

13. The independent variables like, education, social participation, market intelligence, scientific orientation, innovativeness, economic motivation, reading behavior, mass media had positive and highly significant correlation with gain in knowledge of KFM subscriber farmers towards selected agriculture technology. The variable like age had shown negative and highly significant
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relationship with gain in knowledge and risk preference and mass media exposure had significant and non-significant relationship with gain in knowledge of the KFM subscriber farmers towards selected agriculture technology

14. The most important suggestions were offered by the KFM subscriber farmers to make the KRUSHIJIVAN farm magazine more effective were:

- Articles based on interview of progressive farmer by scientist, farmers’ own experience as well as more articles on animal husbandry discipline should be given.
- Information on use of byproducts, marketing, economic aspect and government subsidies/services as well as more photographs/figures should be given in an article.
- The page number of article should be given with photograph on cover page.
- KRUSHIJIVAN farm magazine should be available everywhere for farming community as well as the information of farm magazine should be given on radio and television to aware the farming community.
CERTIFICATE

This is to certify that the thesis entitled “IMPACT OF KRUSHIJIVAN FARM MAGAZINE PERTAINING TO COGNITIVE DOMAIN ON SUBSCRIBERS” submitted by PATEL JAYDEEP R. in partial fulfillment of requirements for the award of the degree of Master of Science in Agriculture in the subject of Agricultural Extension of the Anand Agricultural University is a record of bonafide research work carried out by him under my guidance and supervision and the thesis has not previously formed the basis for the award of any degree, diploma or other similar title.

Place: Anand
Date: 06/2012

Major advisor
(N. V. Soni)
Associate Extension Educationist
DECLARATION

This is to certify that whole of the research work reported in the thesis in the partial fulfillment of the requirements for the awards of the degree of Master of Science in Agriculture in the subject of Agricultural Extension is the result of investigation done by the undersigned under the direct guidance and supervision of Dr. N. V. Soni, Associate Extension Educationist, extension Education Institute, Anand Agricultural University, Anand and no part of research work has been submitted for any other degree so far.

Place: Anand

Date: /06/2012

(PATEL JAYDEEP R.)

Countersigned by

(N. V. Soni)
Major advisor
Associate Extension Educationist
Publication Department, DOEE
Anand Agricultural University, Anand
“ACKNOWLEDGEMENT”

“Gratitude is the most exquisite form of memory”

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I. INTRODUCTION

A breakthrough in any field of agriculture is not possible without an effective communication support to disseminate the research findings. Speedy dissemination of agricultural information and technological knowhow to the farmers is essential for bridging the gap between the agricultural scientists and the farmers. The existing extension services are too small to perform this task so; the mass media with their tremendous speedy range and force of impact offer the greatest possibility for effective communication of agricultural technology. Farm people as human beings are anxious and become more anxious with the advancement in science and technology to know what is happening in the field of research in the science of agriculture. They desire to obtain knowledge, particularly in the field of agriculture to improve their socio-economic conditions and their community through the improvement in farming.

In present information age, the communication services, especially the mass media have been designed to support the national development in an alliance for the progress. They are designed to help the farming community to improve its productive capabilities and its overall quality of life. The success of print medium having added advantage of storage and retrieval depends on the extent to which its
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readers are utilizing it. Utilization of print medium includes promptness in reading as well as follow up in addition to reading.

Farmers are always in need of information for improving their own level of living. In India, it is very difficult to contact each and every farmer in a limited time, where more than 90 crore people are scattered in about 33 crore aq.kms. of land including hills and forest areas. The individual contact method cannot disseminate agricultural information speedily. Hence, the mass media is to be considered as an important tool to communicate new information to the smallest person residing in the corner of the country.

Knowledge will be the power in the 21st century and it could be possible through use of print media like farm magazines, books, booklets, leaflets etc. for farmers. The widening reach of mass communication methods such as radio, television, videos and print media offer good prospects for its effective utilization in disseminating agricultural information (Farrington et al., 1998). It reaches the majority in a time efficient and cost-effective way through in terms of effective utilization of the information assimilated from mass communication methods remains an item of debate.

Written materials/publications are regarded as very credible sources of information in rural areas. Among various print media,
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Farm magazine being published at a regular interval pertain latest agriculture technology and recommendations which is the best one most reliable source to the farming community. The farm magazines provide technological know-how to the farmers at regular intervals and also increase the knowledge of farmers regarding improved package of practices of different crops and other allied fields. It is assumed that individuals who read farm magazine are likely to gain more knowledge about agricultural technology. Moreover the readers may supplement some more information by asking related questions to authors, scientists, editors, etc.

On the 1st April 1952, 6762 daily newspapers, weeklies and other periodicals were publishing in our country and 52000 newspapers, periodicals in 100 languages and dialects with all sort of managements ranging from individuals to trust are published (Shrivastava, 2002). Previously a few number of regularly published farm magazines were under circulation. Five hundred farm magazines are being published in almost all the major languages among the 40,000 publications in the country (Pailoor, 2000). Today nearly 250 farm magazines are publishing in India for farming community (Patel et al., 2002). With the increase in literacy, the periodicals are going to play a vital role in the agricultural development and farmers
are going to rely more and more on the print media for seeking farm information.

Among various print media, farm magazine being published at a regular interval pertained latest agriculture technology and recommendations which is the best one most reliable source to the farming community. Whatever the technology and recommendations are converted and simplified only through farm magazines in such a local language which makes them more popular for the practical utilization on the field of the farmers. The farm publications are designed to provide precise and reliable scientific information in simple language and interesting style of presentation. To meet the information need of the farming people, newspapers and magazines are the important print materials being used by extension workers to promote adoption of innovations among farmers. Increase in the production is the final goal of any technology which could be only possible through print media. Thus, in rural development, there is nothing more important than the transfer of technology to the farmers who are real consumer of the information.

The farm magazines provide technological know-how to the farmers at regular intervals and also increase the knowledge of farmers regarding improved package of practices of different crops and other allied fields. It is assumed that individuals who read farm
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magazine are likely to gain more knowledge about agricultural technology. Moreover the readers may supplement some more information by asking related questions to authors, scientists, editors, etc. But the question is that how far such farm magazines are actually helpful to adopt the improved agriculture technology on the fields of the farmers as well as techno-economic changes occur in the farming community.

Speedy development of agriculture is vital for the progress of our country. For this, there is a need to transfer agricultural technologies to the doorsteps of the cultivators. Among farm publications, farm magazine is one of the most important means to make available research findings to the mass of cultivators regularly. Many farm magazines are being published in almost all the major Indian languages.

*Krushijivan* farm magazine published regularly since 1969 by Gujarat State Fertilizers and Chemicals Ltd. (GSFC), at Vadodara with circulation of 69,650 copies per month during 2010-11 in whole Gujarat in which 37,560 are life members. The aim of the magazine is to disseminate and popularize scientific methods of agriculture. In this farm magazine the information of agriculture technology are published as per the need and time of the farmer.
STATEMENT OF THE PROBLEM

The farm magazine is one of the important media to disseminate agricultural information to the farmers of remote areas. In Gujarat, about 28 farm magazines are published in Gujarati language as well as other 22 magazines are also partly covered the agricultural articles in their content. But they differ from each other in terms of presentation of articles and their utility to the farming community.

The subscribers of any farm magazine sometimes read the whole magazine and sometimes they do not even touch the issue. Some read it according to convenient and note-down useful information and also discuss with others, while others do not. Thus, the behavior of reading the magazine differs from individual to individual. It is a fact that the magazine is informative and need satisfying, it will find a place in the hands of the readers.

Moreover, farm magazine is playing an important role in increasing the knowledge regarding agriculture technology. By reading the articles, naturally it is expected that farmers may be motivated to adopt the agriculture technology on their farm. The aim of this magazine is to disseminate and popularize scientific methods of agriculture. In this farm magazine, the information of agriculture technology is published as per the time and need of the farmers. So,
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looking to its popularity, it is necessary to ascertain the impact of KRUSHIJIVAN farm magazine (KFM) on gain in knowledge regarding selected agriculture technology of KFM subscriber farmers. It was necessary as a very few scientific and systematic efforts have been made in the past by researchers in this direction. Therefore, the investigator felt necessary to measure the impact of krushijivan farm magazine pertaining to cognitive domain on subscribers.

Keeping this in view of the importance of farm magazine, the study entitled "IMPACT OF KRUSHIJIVAN FARM MAGAZINE PERTAINING TO COGNITIVE DOMAIN ON SUBSCRIBERS" has been planned.

OBJECTIVES OF THE STUDY

The overall objective of this investigation was to study the impact of Krushijivan farm magazine pertaining to cognitive domain on subscribers of selected agriculture technology of Vadodara districts of Gujarat state.

The specific objectives of the study are as under:

1. To study personal profile of the Krushijivan farm magazine subscriber farmers and non-subscriber farmers.

2. To know the impact of Krushijivan farm magazine in terms of gain in knowledge of the respondents.
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3. To know relationship between gain in knowledge regarding selected agriculture technology and their profile.

4. To seek suggestions from the subscriber farmers of *Krushijivan* farm magazine to make the farm magazine more effective.

SCOPE OF THE STUDY

The present study was cover the impact of Krushijivan farm magazine, knowledge of selected agriculture technology of KFM subscriber farmers as well as suggestions to make the farm magazine more effective.

The study will be of great useful to extension personnel, editors, editorial committee, agricultural journalists, authors, publishers, scientists, research workers, horticulturists, planners, administrators etc. The impact of *KRUSHIJIVAN* farm magazine on KFM subscribers will be most useful to influence the other farmers to become a member of farm magazine on large scale. It will also be thrown the light on making the farm magazine more effective which will be helpful to editors, editorial board, authors, extension personnel, agricultural journalists, scientists, planners, administrators, policy makers etc.

LIMITATIONS OF THE STUDY

In accordance with the time and resources available, the study was conducted subject to the following limitations:

1. The area of present study was confined to only one districts of Gujarat state.
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2. On account of limited time, money, resources and scattering of subscribers, the study was limited only to 60 life members of *Krushijivan* farm magazine and 60 non-subscriber farmers.

3. Some of the selected characteristics of the KFM subscriber farmers and non-subscriber farmers was studied.

4. The study was limited to only selected agriculture technology.

5. Findings drawn in the present study was base on verbal opinion of the respondent farmers as well as their ability to express the information known.

6. The researches relevant to the study was very few to support the study.
II. REVIEW OF LITERATURE

The main purpose of this chapter is to review the literature related to the problem of this study. The literature reviewed so far has clearly revealed that few systematic literature on topic undertaken are available. As the literature having direct bear on different aspects of the present study is limited hence, the reference having indirect bearing are also reviewed. Hence, a brief account of such literature and observations related to the problem understudy has been presented under the following heads:

2.1. To study personal profile of the Krushijivan farm magazine subscriber farmers and non-subscriber farmers.

2.2. To know the impact of Krushijivan farm magazine in terms of gain in knowledge of the respondents.

2.3. To know relationship between gain in knowledge regarding selected agriculture technology and their profile.

2.4. To seek suggestions from the subscriber farmers of Krushijivan farm magazine to make the farm magazine more effective.

PERSONAL, SOCIAL, ECONOMIC, PSYCHOLOGICAL, AND COMMUNICATION CHARACTERISTICS OF THE KFM SUBSCRIBER FARMERS AND NON-SUBSCRIBER FARMERS

There is variation among KFM subscriber farmers and non-subscriber farmers in terms of their Personal, Social,
Review of Literature

Economic, Psychological and Communication characteristics. These characteristics of respondents as independent variables influence the dependent variable. A brief review of past studies related to the selected characteristics is presented in the subsequent paragraphs.

2.1.1 Personal characteristics:

2.1.1.1 Age:

Bhatt (1991) found that majority of the respondents of "KrushiJivan" farm magazine (64.17 per cent) were in middle age group of 31 to 55 years, followed by the old age and the young age group (27.00 per cent and 8.33 per cent) respectively.

Joshi (1993) studied on readership pattern, readability and effectiveness of farm magazine KRUSHIGOVIDYA among the farmers and revealed that majority of the readers (57.00 per cent) were in middle age group.

Nain (2003) found that most of the readers were old age (68.27 per cent).

Soni (2005) indicated that majority of the KFM subscriber farmers and non subscriber farmers (60.00 per cent and 61.25 per cent, respectively) belonged to middle age group.
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2.1.1.2 Education:

Hingu (1995) reported that maximum number of the life members (39.05 per cent) were found to have higher secondary education, followed by 30.48 per cent were found to have secondary education who was the potential readers of KRUSHIGOVIDYA farm magazine.

Sonawane (1997) revealed that the subscribers of Shetkari having secondary or higher education.

Nain (2003) reported that 68.27 per cent readers educated upto high school and above level.

Soni (2005) concluded that nearly half of the KFM subscriber farmers and non-subscriber farmers (45.00 per cent and 48.75 per cent, respectively) were educated up to high school to higher secondary level, while nearly two-fifth KFM subscriber farmers (38.75 per cent) had college education against ten per cent in non-subscriber farmers group.

2.1.2 Social characteristics:

2.1.2.1 Social participation:

Nain (2003) found that nearly half (49.03 per cent) of the readers were member of Sugarcane Co-operative Society.

Soni (2005) revealed that a great majority of the KFM subscriber farmers (98.75 per cent) and nearly three-fifth (57.50 per cent) of non-
Review of Literature

subscriber farmers had membership in one and more than one organization.

2.1.3 Economic characteristics:

2.1.3.1 Market intelligence:

Wagle (1996) revealed that majority (76.93 per cent) of the respondents with favorable farm televiewing behavior had high market orientation, followed by 15.38 per cent and 7.69 per cent with medium and low market orientation, respectively.

Soni (2005) reported that great majority KFM subscriber farmers (96.25 per cent) had medium to high level of market intelligence, where a great majority of non-subscriber farmers (97.50 per cent) had low to medium level of market intelligence.

2.1.4 Psychological characteristics:

2.1.4.1 Scientific orientation:

Hingu (1995) reported that majority (72.38 per cent) of the KRUSHIGOVIDYA life members were found in medium scientific orientation group, followed by high and low scientific orientation groups, being 17.14 and 10.48 per cent respectively.

Soni (2005) concluded that a great majority of the KFM subscriber farmers (90.00 per cent) were found to have medium to high level of scientific orientation while a great majority of non-
subscriber farmers (93.75 per cent) were found to have low to medium level of scientific orientation.

2.1.4.2 Innovativeness:

Wagle (1996) revealed that majority (83.08 per cent) of the respondents with favourable farm televiewing behaviour had high level of innovative proneness followed by 9.23 per cent and 7.69 per cent with low and medium level of innovative proneness respectively.

Soni (2005) revealed that a great majority of KFM subscriber farmers (90.00 per cent) had medium to high level of innovativeness, whereas a great majority of non-subscriber farmers (88.75 per cent) had low to medium level of innovativeness.

2.1.4.3 Risk preference:

Hingu (1995) reported that majority (63.81 per cent) of the KURSHIGOVIDYA life members were found in medium risk preference category, followed by high risk preference category (22.86 per cent).

Soni (2005) revealed that a great majority of the KFM subscriber farmers and non subscriber farmers (98.75 per cent and 97.50 per cent, respectively) had medium to high level and low to medium level of risk preference, respectively.

2.1.4.4 Economic motivation:

Hingu (1995) reported that majority of the KRUSHIGOVIDYA life members (70.48 per cent) were found in medium economic motivation,
Review of Literature
followed by 15.24 per cent of the life members with high economic motivation.

Soni (2005) concluded that majority of the KRUSHIGOVIDYA farm magazine subscriber farmers and non-subscriber farmers (68.75 per cent each) had medium level of economic motivation, followed by 23.75 per cent of KRUSHIGOVIDYA farm magazine subscriber farmers and 6.25 per cent of non-subscriber farmers with high level of economic motivation.

2.1.4.5 Reading behavior:

Sadaqath et al. (1998) indicated that 11.64 per cent and 0.68 per cent farmers subscribing the monthly agricultural publication namely Krishiloka and Karnataka Rajya Vevasaya Patrika, respectively.

Gupta et al. (2003) found that 70 to 78 per cent farmers in rice wheat, vegetable. Agricultural horticultural livestock production systems and 94.50 per cent in sugarcane production system reported that they discuss with others after reading newspaper of magazine. As well as majority (56-70 per cent) in all the production systems was found subscribing to this print medium for than 4 years.

Soni (2005) a great majority of KFM subscriber farmers (98.75 per cent) had medium to high level of reading behavior and a great
Review of Literature

majority of non-subscriber farmers (97.50 Per cent ) had to medium level of reading behavior.

2.1.5 Communicational characteristics:

2.1.5.1 Mass media exposure:

Joshi (1993) revealed that majority of the readers of KRUSHIGOVIDYA farm magazine (70.00 per cent) had medium mass media exposure.

Sonawane (1997) found that the subscribers of Shetkari had low to medium mass media exposure.

Wakle et al. (1998) found that among the mass media methods radio, written material and television were used always by 75.00, 25.00 and 20.83 per cent respondents, respectively.

Soni (2005) revealed that a great majority of KFM subscriber farmers (97.50 per cent) had medium to high level of exposure to mass media, while a great majority of (97.50 per cent) non-subscriber farmers had low to medium level of exposure to mass media.

2.1.5.2 Extension participation:

Solanki et al. (1990) revealed that 60.00 per cent of the respondents of correspondence course had medium level participation in various extension activities, while 26.25 per cent and 13.75 per
Review of Literature

cent of the respondents had low and high extension participation respectively.

Hingu (1995) reported that more than three-fifth (63.81 per cent) of the KRUSHIGOVIDYA life members were found in medium extension participation. This was followed by those (21.90 per cent) and 14.29 per cent) who had high and low extension participation respectively.

Soni (2005) found that a great majority of KFM subscriber farmers had (97.50 per cent) medium to high level of extension participation, while a great majority of non-subscriber farmers (97.50 per cent) had low to medium level of extension participation.

2.2 Impact of farm magazine in terms of gain in knowledge of respondents.

Kamaliya and Soni (1998) found that majority (62.91 per cent) of the respondents did not know about the bakery industry before finding the special issue of Bakery published by KRUSHIGOVIDYA, Publication Department, GAU, Anand.

Srivastava and Pandey (1999) indicated that all the adopters had knowledge about soil testing practices, while in non-adopters the majority of farmers (67.50 per cent) had knowledge about soil testing.
Review of Literature

Singh (2000) noted that many farm level production studies showed that the level of farm production is significantly higher on farms where the decision maker is literate than where the decision maker is illiterate.

Gupta et al. (2003) reported that more than 91.00 per cent subscribers got information on agriculture and allied field casually and applied to field casually.

Soni (2005) observed in improving knowledge of selected agriculture technology of the KFM subscriber farmers.

2.3 Relationship between the selected independent variables with knowledge regarding selected agriculture technology.

2.3.1 Personal characteristics and dependent variables:

2.3.1.1. Age and dependent variables:

Chaudhary et al. (2001) observed that age having non-significant but positive correlation with extent of knowledge of improved rice technology.

Thorat (2005) observed that increase or decrease in age of poultry entrepreneurs had not affected the knowledge of respondents in poultry management practices.
Review of Literature

Soni (2005) reported that age had negative and significant relationship with the knowledge indicates that as age increased, the knowledge decreased.

Parmar (2006) concluded that age of paddy growers was significant but negatively correlated with their knowledge about paddy production technology.

2.3.1.2. Education and dependent variables:

Patil and Namasivam (1990) observed positive relationship between education and print media use by farmers.

Farooqui et al. (1993) reported that education of the farmers indicated highly significant relationship with extent of knowledge of water management practices of wheat and summer groundnut crops.

Chaudhari and Soni (1996) reported that education had positive and significant relationship with both knowledge and adoption of drip irrigation system.

Bhagat (2005) reported that there was non-significant relationship between education and indigenous and scientific knowledge of farmers about various uses of neem.

Soni (2005) concluded that the educational level of the KFM subscriber farmers and non-subscriber farmers had positive and
significant relationship with their knowledge of selected agriculture technology.

Parmar (2006) concluded that education of paddy growers was significantly associated with their knowledge about recommended paddy production technology.

2.3.2 Social characteristics and dependent variables

2.3.2.1. Social participation and dependent variables:

Chaudhari and Soni (1996) stated that social participation had positive and significant relationship with both knowledge and adoption of drip irrigation system.

Soni (2005) concluded that the social participation of the KFM subscriber farmers had positive and significant relationship with the extent of adoption of selected agriculture technology.

Parmar (2006) reported that social participation of paddy growers had positive and significant correlation with knowledge level of paddy production technology.

Dhole (2009) indicated that social participation had positive significant correlation with knowledge gain.

2.3.3 Economic characteristics and dependent variables

2.3.3.1. Market intelligence and dependent variables:
Review of Literature

Patel and Sangle (1993) revealed that market orientation had positive and significant relationship with the respondents level of knowledge change.

Soni (2005) concluded that market intelligence of the KFM subscriber farmers and their knowledge had positive and significant relationship.

Bhatt (2006) stated that high degree of market intelligence of dairy farmers had played significant role to improve their knowledge regarding modern practices of animal husbandry.

2.3.4 Psychological characteristics and dependent variables:

2.3.4.1. Scientific orientation and dependent variables:

Soni (2005) concluded that the scientific orientation of the KFM subscriber farmers and their knowledge of selected agriculture technology had positive and significant relationship.

Dhole (2009) indicated that scientific orientation had positive and significant correlation with knowledge gain.

2.3.4.2. Innovativeness and dependent variables:

Gomase et al. (1998) referred that innovativeness influenced the adoption of recommended practices of Kagzi lime.

Soni (2005) concluded that innovativeness of the KFM subscriber farmers had positive and significant relationship with their knowledge.
Review of Literature

Sai (2008) revealed that beneficiary and non beneficiary farmers were differ with innovativeness due to their higher knowledge.

2.3.4.3. Risk preference and dependent variables:

Chaudhary et al. (2001) observed that risk orientation having non-significant but positive correlation with extent of adoption of improved rice technology.

Soni (2005) concluded that the risk preference of the KFM subscriber farmers had positive and significant whereas, non-subscriber farmers had non-significant relationship with the knowledge of selected agriculture technology.

Dhole (2009) reported that risk orientation had positive and significant correlation with knowledge gain.

2.3.4.4. Economic motivations and dependent variables:

Soni (2005) concluded that the economic motivation of the KFM subscriber farmers and non-subscriber farmers was significantly correlated with their knowledge of selected agriculture technology.

Singh (2007) stated that economic motivation had positive significant correlation with knowledge retention.

Dhole (2009) indicated that economic motivation had positive and significant correlation with knowledge gain.
Review of Literature

2.3.4.5. Reading behavior and dependent variables:

Rakholia et al. (1996) concluded that the education, economic motivation and extension participation were most important variables in affecting the reading behavior of the farmers.

Nataraju and Perumal (1996) found that educational status, extension participation, social participation, media participation and media credibility were found to be dominant variables in determining higher level of audience activity.

Soni (2005) concluded that the KFM subscriber farmers and non-subscriber farmers reading behaviour had positive and significant relationship with their knowledge of selected agriculture technology.

2.3.5 Communication characteristics and dependent variables

2.3.5.1 Mass media exposure and dependent variables:

Patel (2005) concluded that there was non-significant relationship between mass media exposure of farmers and their level of indigenous knowledge about medicinal uses of the floras.

Soni (2005) observed that exposure of the KFM subscriber farmers and non-subscriber farmers to mass media had non-significant relationship with their knowledge.

Singh (2007) stated that mass media exposure had positive significant correlation with knowledge.
2.3.5.2 Extension participation and dependent variables:

Soni (2005) stated that extension participation of the KFM subscriber farmers and non-subscriber farmers had positive and significant relationship with their extent of adoption and knowledge of selected agriculture technology.

Parmar (2006) concluded that extension participation of the paddy growers was positive and significant correlated with their knowledge level about paddy production technology.

2.4 Suggestions offered by KFM subscriber farmers to make the

*Krushijivan* farm magazine more effective.

Hingu (1995) reported some important suggestions from the *KRUSHIGOVIDYA* life members to make the magazine more effective and popular were: (1) information regarding different crop cultivation practices should be given in advanced before the season (83.81 per cent), (2) information regarding addresses of different firm and availability of agricultural input should be given (68.57 per cent) and (3) illustrations should be given in articles (61.90 per cent).

Sadaquath *et al.* (1998) suggested that the messages printed must be more attractive, attention drawing through coloured
photographs of technologies which are acceptable by farming community.

Natikar (2001) reported that majority of the subscriber farmers suggested to publish information on commercial crops, integrated pest and disease management, nutritional aspects of fruits and vegetables, information on agro-based subsidiary enterprises to improve the quality and effectiveness of farm magazine.

Manjunath and Balasubramanya (2002) indicated that most of the readers preferred multicoloured cover page (86 per cent) with photos (86 per cent) on thick paper (83 per cent) with the name in the upper 1/3 portion (67.33 per cent).

Amandip Kaur and Kaira (2003) reported that 15.00 per cent of the respondents suggested that information about exotic breeds should be given in monthly activity column.

Nain (2003) reported that the readers suggested timely delivery of periodicals, content according to season, inclusion of indigenous and traditional technologies, specific knowledge regarding input availability, use of colored photographs, simple language, small paragraphs, improved paper quality, more advertisements of quality farm inputs, brief articles.
Review of Literature

Soni (2005) concluded that Articles based on interview of progressive farmer by scientist, farmers' own experience and prizewinner farmer as well as more articles on animal husbandry discipline should be given.
III. THEORETICAL ORIENTATION

This chapter is devoted to the development of theoretical orientation for the study. The review of literature related to the problem of this study given in the preceding chapter helped in formulating theoretical orientation and guidance for selection of variables for the study and operationalization of the concepts. The chapter has been divided and presented in the following sections:

3.1 Conceptual framework of the study

3.2 The conceptual model of the study

3.3 Definitions of some common terms

3.4 Research hypotheses.
Theoretical Orientation

CONCEPTUAL FRAMEWORK OF THE STUDY

3.1.1 Farm magazine:

Information sources play an important role in human resource development. In the field of agriculture, farm magazines serve the farmer readers in three ways: they inform, they guide and they entertain. Nain (2003) reported that the regularly used mass media sources were farm periodicals, radio, television, newspapers and Krushi mela. Among farm publication, farm magazine is one of the most important means to make available research findings to the mass of cultivators regularly.

Kadam (1998) reported that the publications published by the agricultural university are very useful in informing, educating and motivating the farmers to accept new ideas and agricultural practices in order to increase farm production.

Natikar et al. (1995) indicated the effects of reading that most of the respondents gained knowledge after reading (93 per cent), shared knowledge with others (83 per cent), motivated to experiment new ideas (48 per cent) motivated to read more on subject (45 per cent).
Theoretical Orientation

In Gujarat, about 28 farm magazines are published in local language. These are: Krushi Jivan, Krushigovidya, Krushi Vigyan, Narmada Kisan Parivar Patra, Gujarat Kisan, Krushi Kranti, Vavetar, Krushi Karm, Godarshan, Lok Sarvani, Jatan, Kisan Sandesh, Kisan India Patrika, Gujarat Bagayat Vikas, Krushi Ajtak, Tecno Economic Letter, Vivek Gram, Krushi Sandesh, Dhruva, Udyog Sahashik, Viksat, Gram Swaraj, Panchayati Raj, Buddhiman Kisan Patrika, Krushi Pashu Darshan, Khetini Vat, Krushi Prabhat, Krushivisva Vibhag.

KRUSHIJIVAN farm magazine is popular monthly farm magazine which is publishing regularly since last 42 years. The first issue of this magazine was published in 1969.

The main objective:

The main objective of the KRUSHIJIVAN farm magazine is to provide the latest improved and scientific methods of agriculture and allied subjects to the farming community of the Gujarat state by providing farm literature in very digestible and understandable language.
Theoretical Orientation

The magazine is directly related to boost up the agricultural production by giving latest agricultural information as per the various research recommendations of the agricultural universities of Gujarat state. The articles related to latest technical information about agriculture and allied fields like animal husbandry, horticulture, dairy, forestry, fishery, agricultural engineering, home science, bakery, etc. were published in the magazine. The articles are published as per suitable time and season for the benefit of the farmers. Most of all the articles are written by agricultural scientists/experts with the research recommendations.

The articles published in this magazine are very useful to the farmers as well as extension workers, students and to all those who are related with agricultural enterprise.

Moreover, to have more and clear understanding, the photographs as well as drawings of the related articles has been introduced in the KRUSHIJIVAN.
Theoretical Orientation

Under the part of agricultural extension activities, the efforts are being made through *KRUSHI JIVAN* farm magazine to improve the agricultural production by providing knowledge regarding agriculture technology. Through the use of information given in *KRUSHI JIVAN* farm magazine, it would be assumed that knowledge of the KFM subscriber farmers in respect to improved agricultural technology can be increased (Natikar *et al.*, 1995; Farrington *et al.*, 1998 and Kadam, 1998). The various factors, especially the personal, social, economic, psychological and communication have great influence on farmers gain in knowledge of improved agricultural technology.

3.2 The Conceptual model of the study

The conceptual framework was given in preceding section may be presented paradigmatically which has been developed during the course of study. The model depicted in Fig.1 is tentative and generalized. The model showed postulated relationship between variable based on discussion and assumption made earlier. The model explained that the selected characteristics of the KFM subscriber farmers influenced their knowledge regarding selected agriculture technology.

3.3 DEFINITIONS OF SOME COMMON TERMS
Theoretical Orientation

1. Impact:
   Webster describes the impact as the force, impressions or operation of one-thing on the other, affect a forceful control and collusion. In simple words, it is the effect of one on the other.

2. Farm magazine:
   A publication appearing at regular intervals, containing special material written by different writers on agriculture and its related discipline.

3. Subscriber farmer:
   Subscriber farmer means a person who became a subscriber of a farm publication. For the study, a farmer who became a subscriber of a Krushijivan farm magazine for the period of life time was considered as subscriber farmer.
Theoretical Orientation

V. COMMUNICATIONAL
X₁₀ Mass media exposure

INDEPENDENT VARIABLE

GAIN IN KNOWLEDGE OF SELECTED AGRICULTURE TECHNOLOGY

DEPENDENT VARIABLE

Fig.1. CONCEPTUAL MODEL OF THE STUDY
Theoretical Orientation

4. **Social participation:**
   It refers to the degree of involvement of respondents in formal organizations either as a member or office bearer.

5. **Market intelligence:**
   It is referred to the judgment taken by an individual farmer to sell his produce for better price by analyzing various prevailing infrastructure and market intelligent.

6. **Scientific orientation:**
   It is the degree to which a farmer is oriented to the use of scientific methods in decision making in relation to their adoption behavior.

7. **Innovativeness:**
   It is the degree to which an individual relatively earlier in adopting new ideas than other members of his social system.

8. **Risk preference:**
   It is the degree to which a farmer is oriented towards encountering risks and uncertainty in adopting any new idea or innovations.

9. **Economic motivation:**
   It is occupational success in terms of profit maximization and the relative value an individual places on economic ends.

10. **Reading behavior:**
    Reading behavior has been operationally defined as a kind of style prevalent in reading farm literature.

11. **Knowledge:**
    Knowledge means those behaviors and test situations which emphasizes the remembering either by reorganization or recall of ideas, material or phenomena.

12. **Mass media exposure:**
    It is defined as the nature and frequency of farmers' involvement in different mass media such as newspaper, magazine, radio, television etc.
Theoretical Orientation

13. **Extension participation:**
   It refers to the degree of involvement of farmers in extension educational activities.

14. **Suggestions:**
   The ways and means of opinions as suggested by the KFM subscriber farmers to make the Krushijivan farm magazine more effective are considered as the suggestions.

15. **Cognitive domain:**
   It is related to mind and the communication takes place at the mental stage by listening. Cognitive theorists have shown that people learn by perceiving, comprehending and conceptualising the problem.

   The cognitive domain involves knowledge and the development of intellectual skills. This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities and skills. There are six major categories starting from the simplest behavior to the most complex. The categories can be thought of as degrees of difficulties. That is, the first ones must normally be mastered before the next ones can take place. The cognitive **domain** contains **learning** skills predominantly related to mental (thinking) processes. Learning processes in the cognitive domain include a hierarchy of skills involving processing information, constructing understanding, applying **knowledge**, solving problems, and conducting **research**. The cognitive **domain** includes skill clusters that organize a complete,
Theoretical Orientation

concise, and complementary listing of the learning skills most critical for each process. Teachers and learners need to understand the hierarchy of processes and skills within the cognitive domain so they appreciate prerequisite skills for learning as well as the way these skills need to be transformed to master more complicated elements of discipline-specific concept inventories. Development of learning skills should never be taken for granted in teaching or learning new content. Skills associated with lower-level processes should be introduced in foundation courses and elevated in intermediate-level coursework. Skills associated with higher-level processes should be thoughtfully introduced and reinforced in upper-division courses.

3.4 RESEARCH HYPOTHESES (STATED IN NULL FORM)

In the view of specific object of study, null hypothesis was formulated for statistical testing.

**Ho**=There was no relationship between personal, social, economical, psychological, communicational characteristics of *Krushijivan* farm magazine subscribers and gain in knowledge regarding selected agriculture technology.

**H1**=There was no difference in knowledge level of KFM subscriber and non subscriber farmers of selected agriculture technology.
IV. RESEARCH METHODOLOGY

This chapter deals with the description of procedure followed for carrying out this investigation. It contains the research design, the tools and techniques including interview schedule employed for data collection. The selection of universe and sampling techniques for investigation as well as devices used for analysis are also explained in this chapter under following sub heads:

4.1 Area of the study

4.2 Research design

4.3 Sampling procedure

4.4 Selection of variables

4.5 Operationalisation and measurement of independent variables

4.6 Operationalisation and measurement of dependent variables

4.7 Suggestions from the KFM subscriber farmers to make the KRUSHIJIVAN farm magazine more effective

4.8 Method of data collection

4.9 Statistical tools used

4.1 Area of the study

For any social research involving farmers as the unit of study direct two way communication between the researcher and respondents is a must to build up good rapport and to ensure free and frank dialogue and get satisfactory responses. With this basic
Research Methodology

consideration in view Gujarat State from where the researcher hails, was purposively selected for the study so that familiarity with the area, people and language would be helpful to the researcher in collecting needed data for this study.

The present study was carried out in Vadodara district of the Gujarat State as it possess more number of life members of KFM in middle Gujarat i.e. 3074 life members according to the information given by Gujarat State Fertilizers and Chemical Ltd, Vadodara, (See Appendix-II). These districts were purposively selected for the study in favour of following reason:

1. The highest numbers of life members of KRUSHIJIVAN farm magazine are presently exist in Vadodara district.

2. The subscriber farmers of KRUSHIJIVAN farm magazine belongs to Vadodara districts where GSFC is located.

3. The investigator belongs to same area and hence he is familiar with local situation which may helpful him to develop rapport and collect perfect information.

4.2 Research Design

This study compares the KFM subscriber farmers and non-subscriber farmers. The study is concerned with identifying the
Research Methodology

characteristics of respondents which influence on change in knowledge regarding selected agriculture technology.

Ex-post-facto research design was used for the study. Kerlinger (1976) stated that ex-post-facto research design is worthy to apply when the independent variables have already acted upon.

4.3 Sampling procedure

4.3.1 Selection of talukas:

Vadodara district is composed of twelve talukas, namely Chhotaudepur, Dabhoi, Jetpur pavi, Karjan, Kavant, Naswadi, Padra, Sankheda, Savli, Shinor, Vadodara and Vaghodiya. Among these talukas, Dabhoi and Sankheda were selected purposively for the study as they possessed more number of KFM subscribers i.e. 200, and 199 respectively except Vadodara taluka. Vadodara taluka was possessed more number of KFM subscriber in Vadodara city having urban effect.

4.3.2 Selection of villages:

The list of the KFM subscriber farmers of selected talukas were prepared villagewise on ascending order. Then the seven villages having more than five KFM subscriber farmers were selected purposively from each talukas, which was depicted in Table 1. Out of these two talukas KFM subscriber farmers, 30 subscriber farmers of
Research Methodology

KFM of each district were selected from respective villages with the help of proportionate random sampling technique. At the same time equal number of non-subscriber farmers were selected randomly from the same villages of each district by obtaining list of farmers through panchayat offices. Thus, for the investigation, 60 KFM subscriber farmers and 60 non-subscriber farmers were selected as respondents which was constitute a sample size of 120 respondents as shown in Fig. 1 and Table 1.

FIG 2
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of District</th>
<th>Name of Taluka</th>
<th>Name of Village</th>
<th>No. of KFM subscriber farmers</th>
<th>Randomly selected KFM subscriber farmers</th>
<th>Randomly selected non-subscribers/farmers</th>
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### Research Methodology

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<th>Sr. No.</th>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Table shown in parentheses are no. of KFM subscriber farmers

### SELECTION OF VARIABLES

The selection of variables included in the study was done on the basis of an extensive review of literature on the subject, in consultation with experts and from previous studies taken up on the related subjects. Only those variables which were found to have most
Research Methodology

Relevance to the present investigation were finally selected for the study. The list of selected variables is as under:

Table no. 2:
Selection of variables and their measurements

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of the variable</th>
<th>Measurement Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Independent variables</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Age</td>
<td>Chronological age of the respondents.</td>
</tr>
<tr>
<td>2</td>
<td>Education</td>
<td>Structured schedule was developed.</td>
</tr>
<tr>
<td>3</td>
<td>Social participation</td>
<td>Structured schedule was developed.</td>
</tr>
<tr>
<td></td>
<td><strong>Economical characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Market intelligence</td>
<td>Structured schedule was developed.</td>
</tr>
<tr>
<td></td>
<td><strong>Psychological characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Economic motivation</td>
<td>Scale developed by Supe (1969) was used with due modifications.</td>
</tr>
<tr>
<td>6</td>
<td>Scientific orientation</td>
<td>Scale developed by Patel (2009) was used with due modifications.</td>
</tr>
<tr>
<td>7</td>
<td>Risk orientation</td>
<td>Scale developed by Patel (2009) was used with due modifications.</td>
</tr>
<tr>
<td>8</td>
<td>Reading behavior</td>
<td>Structured schedule was developed</td>
</tr>
<tr>
<td>9</td>
<td>Innovativeness</td>
<td>Scale developed by sing (1971) was used</td>
</tr>
<tr>
<td></td>
<td><strong>Communicational characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Extension participation</td>
<td>Scale developed by siddharaimaiah and jalihal (1983) was used.</td>
</tr>
<tr>
<td>11</td>
<td>Mass media exposure</td>
<td>Structured schedule was developed</td>
</tr>
</tbody>
</table>


**Research Methodology**

<table>
<thead>
<tr>
<th>B.</th>
<th>Dependent variable</th>
<th>Measurement Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gain in Knowledge regarding selected agriculture technology.</td>
<td>Structured schedule was developed.</td>
</tr>
</tbody>
</table>

**OPERATIONALISATION AND MEASUREMENT OF INDEPENDENT VARIABLES**

**4.5.1 Socio Personal variables :**

**4.5.1.1 Age:**

Age of the respondents was operationalised as the number of completed years at the time of interview. The respondents were classified into three groups and the scoring system followed was as under:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Young age (Up-to 30 years)</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Middle age (31 to 55 years)</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Old age (Above 55 years)</td>
<td>3</td>
</tr>
</tbody>
</table>

**4.5.1.2 Education :**

It refers to the number of formal education years completed by the respondents. The respondents were classified into five categories. The scoring system followed was as under:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Illiterate</td>
<td>0</td>
</tr>
<tr>
<td>2.</td>
<td>Primary education (up to 7th standard)</td>
<td>1</td>
</tr>
<tr>
<td>3.</td>
<td>Secondary education (8th to 10th standard)</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>Higher secondary (11th and 12th standard)</td>
<td>3</td>
</tr>
</tbody>
</table>
4.5.1.3 Social participation:

Social participation in the present study was operationalized as the degree of involvement of respondents in formal organizations either as a member or holding position in organization. It was measured with the help of scoring the items as follow:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>No membership</td>
<td>0</td>
</tr>
<tr>
<td>2.</td>
<td>Membership in one organization</td>
<td>1</td>
</tr>
<tr>
<td>3.</td>
<td>Membership in more than one organizations</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>Holding position in an organization</td>
<td>3</td>
</tr>
</tbody>
</table>

4.5.2 Economic variables:

4.5.2.1 Market intelligence:

It is referred to the judgement taken by an individual farmer to sell his produce for better price by analyzing various prevailing infrastructure and market intelligentia.

The structured schedule of market intelligence was developed. It was measured with score assigned to each statement which have been given in Appendix-I.

The score was calculated for each respondent by summing up the score of all statements. After that the respondents were grouped into three categories viz., low (below Mean – S.D.), medium (Mean ± S.D.) and high (above Mean + S.D.).
4.5.3 Psychological variables:

4.5.3.1 Economic motivation:

Economic motivation is defined as occupational success in terms of profit maximization and the relative value an individual places on economic ends. The degree of economic motivation of the respondents was measured with the help of economic motivation scale developed by Supe (1969). The scale consisted of six statements in which statement number six was negative while the rest were positive. The responses of the respondents were obtained against each item in terms of their agreements or disagreements with statement on five continuums ranging from strongly agree to strongly disagree. The positive and negative statements were scored as under.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Negative</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

The respondents were classified into three categories on the basis of mean and standard deviation viz., low economic motivation (below Mean – S.D.), medium economic motivation (in between Mean ± S.D.) and high economic motivation (above Mean + S.D.).
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4.5.3.2 Scientific orientation:

It is characterized by a belief in science and scientific approach to solve the problems in farming. The scale has been constructed to measure the degree to which the farmers are oriented to use scientific methods in farming and decision making by Patel (2009). The said scale has been adopted for this study. The scale consisted of fourteen statements, out of which the statement number 2, 5, 7, 9, 10, 11, 13 and 14 were positive, and statement number 1, 3, 4, 6, 8, and 12 were negative. The responses of the respondents were obtained against each statement in terms of their agreement or disagreement with the statement on a five-point continuum ranging from strongly agree to strongly disagree. The scale has been appended in the Appendix I. The positive and negative statements were scored as follows:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Negative</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

The respondents were classified into three categories on the basis of mean and standard deviation viz., low scientific orientation (below Mean – S.D.), medium scientific orientation (in between Mean ± S.D.) and high scientific orientation (above Mean + S.D.).
Research Methodology

4.5.3.3 Risk preference:

It refers to the degree to which a KFM subscriber farmer and non-subscriber farmer is oriented towards risk and uncertainty and has a courage to face the problems in farming. This was measured with the help of risk preference scale developed by Patel (2009). The scale consisted of ten statements with seven positive and three negative statements. The responses of the respondents were obtained against each statement in terms of their agreement or disagreement. The positive and negative statements were scored as follows:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Negative</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

The respondents were grouped into three categories viz., low (below Mean – S.D.), medium (in between Mean ± S.D.) and high (above Mean + S.D.). The scale has been appended in the Appendix I.

4.5.3.4 Reading behaviour:

To know the reading behaviour of the respondents, schedule was prepared after reference to the literature. The response of the respondents were recorded on the schedule and frequency and percentage were calculated. Reading behaviour of the farmer was measured with score assigned to each characteristics which have been given in Appendix-I.
Research Methodology

All the respondents were categorized into three levels of reading behaviour viz., low (below Mean – SD), medium (in between Mean ± SD) and high (above Mean + SD).

4.5.3.5 Innovativeness:

Sing (1971) defined innovativeness as the degree to which an individual is relatively earlier in adopting new ideas than other members of his social system. In this study, innovativeness was operationalised as the extent to which an individual had acquired an awareness of the need to be innovative. The person who felt the greatest need to change would be the first to innovate.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>As soon as it comes to my knowledge, I have adopted the innovation</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>Having seen the success of others, I have adopted the innovation</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>I prefer to wait before adoption of innovation</td>
<td>1</td>
</tr>
</tbody>
</table>

The method of scoring for innovativeness adopted by Singh (1971) was followed which was given in Appendix-IV. Based on the score obtained by the respondents by any one of the response, they were classified as low, medium and high innovative levels. The maximum score one could obtain was three and the minimum score was one, maximum score denotes high innovativeness and minimum score denotes low innovativeness.
4.5.4 Communication variables:

4.5.4.1 Extension participation:

Siddharaimaiah and Jalihal (1983) Extension participation refers as the degree of active involvement of the farmers in various formal and non formal educational/extension activities including individual contact, group contact and mass contact methods with a view to obtain information, knowledge and skill related to agriculture and allied fields.

A list of 7 different extension activities (given in appendix I) in which farmers generally participate was prepared from available literature and assigned one score to each activity to assess the extension participation. The level of extension participation of individual respondent was calculated by summing up actual scores he received. Mean and standard deviation was calculated and finally respondent were classified in three groups.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Category</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Extension participation</td>
<td>&lt; X – S.D.</td>
</tr>
<tr>
<td>2.</td>
<td>Medium extension participation</td>
<td>In between X ± S.D.</td>
</tr>
<tr>
<td>3.</td>
<td>High extension participation</td>
<td>&gt;X + S.D.</td>
</tr>
</tbody>
</table>

4.5.4.2 Mass media exposure:

This referred to the frequency of reading newspaper, farm magazines and other literature viz. leaflets, pamphlets, folder etc.
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relating to agriculture as well as use of radio and television. This variable was quantified by assigning score as follows (See Appendix-I):

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Frequency of using mass media by participants</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Always</td>
<td>4</td>
</tr>
<tr>
<td>2.</td>
<td>Frequently</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>Occasionally</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>Never</td>
<td>1</td>
</tr>
</tbody>
</table>

The respondents were grouped into three categories on the basis of mean and SD viz., low (below Mean-SD), medium (in between Mean ± SD) and high (above Mean + SD).

4.6 OPERATIONALISATION AND MEASUREMENT OF DEPENDENT VARIABLES

4.6.1 Gain in Knowledge of regarding selected agriculture technology:

Knowledge is the degree to which an individual is exposed to existence of innovation and gain some understanding necessary to use an innovation properly. To measure the knowledge of respondents, seven selected agriculture technology was selected from the articles published in 36 issues of KRUSHIJIVAN farm magazine during the year 2005, 2006, 2007, 2008 and 2009. A schedule was developed with the help of crop scientists, agronomists, horticulturists, and extension personnel. Regarding Seven selected agriculture technology total fifty questions (4, 10, 12, 6, 6, 4, and 8, respectively) were framed
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(See Appendix I). The one score was assigned for correct response. Zero score was given to no response or incorrect response. The summated theoretical score range from 0 to 50.

The correct answers were tick-marked. The total number of tick-marked items was taken as the knowledge score obtained by an individual respondent. The knowledge score was calculated as sum of the scores of correct responses.

For to find out knowledge gain, first to calculate the knowledge mean score of the KFM subscribers and non-subscribers and then work out difference and percentage.

4.7 SUGGESTIONS FROM THE KFM SUBSCRIBER FARMERS TO MAKE THE KRUSHIJIVAN FARM MAGAZINE MORE EFFECTIVE

An attempt was also made to know the suggestions of KFM subscriber farmers to make the KRUSHIJIVAN farm magazine more effective. The suggestions offered by the respondents were marked in interview schedule. Number of respondents making the same suggestion(s) were counted in frequency and percentage.

The suggestion were classified into two groups viz., most important suggestion and less important suggestion on the basis above 50 per cent and below 50 per cent frequency of the respondents, respectively.
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4.8 METH-OD OF DATA COLLECTION

Data were collected with the help of interview schedule along with the suitable scale for measurement of dependent and independent variables. The interview schedule was prepared keeping in view the objectives of the study. The interview schedule was translated into Gujarati language and pre-tested in the field on a separate twenty non-sampled respondents. On the basis of pre-testing, necessary modifications were made in the final draft and was used as the instrument for data collection. The respondents were contacted personally at their work spot or at their residence in an informal way.

4.9 STATISTICAL TOOLS USED

The following statistical tools were used in the present study:

4.9.1 Frequency and percentage:

Simple comparisons was made on the basis of frequency and percentage.

4.9.2 Arithmetic mean:

This technique was used for classification of respondents in the different categories

4.9.1 Standard deviation:
Research Methodology

This technique was used for classification of respondents into different categories. It was obtained by the square root of the average of the square deviation from mean by the following formula:

\[
S.D. = \sqrt{\frac{\sum(X_i - \bar{X})^2}{n-1}}
\]

Where,

- S.D. = Standard deviation
- \(\sum\) = Summation
- \(X_i\) = Individual score
- \(\bar{X}\) = Mean of the sample
- \(n\) = Total number of respondents

3.6.4. Coefficient of correlation

Coefficient of correlation was calculated to find out the relationship between each of the independent variables and dependent variables by employing the following formula:

\[
r = \frac{\sum XY - \frac{\sum X \sum Y}{n}}{\sqrt{\left[\frac{\sum X^2 - \frac{(\sum X)^2}{n}}{n}\right] \left[\frac{\sum Y^2 - \frac{(\sum Y)^2}{n}}{n}\right]}}
\]
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Where,

\[ r = \text{correlation coefficient} \]
\[ X = \text{Independent variable} \]
\[ Y = \text{Dependent variable} \]
\[ n = \text{Total number of respondents} \]
\[ \Sigma = \text{Summation} \]

4.9.5. 't' test:-

To ascertain the difference between gain in knowledge of magazine subscriber and non-subscriber farmers, Two sample independent 't'-test was used.

\[
t = \frac{\bar{X} - \bar{Y}}{S_{\bar{X} - \bar{Y}}}
\]

Where
\[
S_{\bar{X} - \bar{Y}} = \sqrt{\left( \frac{1}{n_1} + \frac{1}{n_2} \right) S_p^2}
\]

\[ S_p^2 = \text{Pooled variance (60^{th} sample)} \]
\[
S_p^2 = \frac{SS_1 + SS_2}{n_1 + n_2 - 2} = \frac{\left| n_1 - 1 \right| S_1^2 + \left| n_2 - 1 \right| S_2^2}{n_1 + n_2 - 2}
\]
V. RESULTS AND DISCUSSION

The information related to this study was collected from the KFM subscriber farmers and non-subscriber farmers by means of personal interview using a well structured interview schedule. The collected information was classified, tabulated and analyzed in light of the objectives of the study. The facts and findings derived after analyzing the information have been presented in this chapter under following major heads:

5.1 Personal profile of the *Krushijivan* farm magazine subscriber farmers and non-subscriber farmers.

5.2. Impact of *Krushijivan* farm magazine in terms of gain in knowledge of the respondents.

5.3. Relationship between gain in knowledge regarding selected agriculture technology and their profile.

5.4. Suggestions from the subscriber farmers of *Krushijivan* farm magazine to make the farm magazine more effective.

5.1 PERSONAL, SOCIAL, ECONOMIC, PSYCHOLOGICAL AND COMMUNICATION CHARACTERISTICS OF KFM SUBSCRIBER FARMERS AND NON-SUBSCRIBER FARMERS

The extent of adoption of selected agriculture technology and techno-economic change are influenced by different characteristics of the KFM subscriber farmers and non-subscriber farmers. It was beyond the scope of the present study to include all important characteristics of the
Results and Discussion

respondents. However, some important characteristics of KFM subscriber farmers and non-subscriber farmers were selected and classified into five groups viz., personal, social, economic, psychological and communication characteristics. The findings of these characteristics have been presented in the following sections:

5.1.1 Personal characteristics:

5.1.1.1 Age:

Physical and psychological development of an individual is related to his age. It influences on the interests and needs of an individual. It also plays a vital role on future goals and expectations and thereby it helps in developing positive attitude towards adoption of new technology.

The respondents were asked to indicate their age in complete years and classified into three groups as shown in Table 3 and Fig.3.

TABLE 3
DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR AGE

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Category</th>
<th>KFM subscriber farmers (n=60)</th>
<th>Non-subscriber farmers (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Per cent</td>
</tr>
<tr>
<td>1</td>
<td>Young (up to 30 years)</td>
<td>05</td>
<td>8.34</td>
</tr>
<tr>
<td>2</td>
<td>Middle (31 to 50 years)</td>
<td>36</td>
<td>60.00</td>
</tr>
<tr>
<td>3</td>
<td>Old (Above 51 years)</td>
<td>19</td>
<td>31.66</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>60</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Results and Discussion

Perusal of the Table 3 indicated that majority of the KFM subscriber farmers and non-subscriber farmers (60 per cent and 63.33 per cent, respectively) belonged to middle age group. Nearly one-third of the KFM subscriber farmers and non-subscriber farmers (31.66 per cent and 28.33 per cent respectively) belonged to old age group, whereas 8.34 per cent each from KFM subscriber farmers and non-subscriber farmers belonged to young age group. This revealed that the great majority of KFM subscriber farmers and non-subscriber farmers were found in middle and old age categories.

The probable reason for middle and old age dominating respondents can be that the parental occupation and these were the major groups actively engaged in farming and being responsible for maintaining their families. They were mostly decision makers in farming. The another reason might be that in joint family system the name of land holder till continued either from old age or middle age members of the family in revenue record.

This finding is in conformity with those of Bhatt (1991), Joshi (1993) and Soni (2005) and differed with Nain (2003).

Education :

Education in a society is a primary condition for its socio-economic development. Any programme of development cannot succeed unless the society gets educated and the individual becomes aware of their own
Results and Discussion

needs and a need for development. Education of farmers is supposed to play pivotal role in understanding of new agriculture technology. keeping this in view, the level of education of respondents was studied and they were categorized as shown in Table 4 and Fig.4

As revealed from Table 4 only four (6.70 per cent) non-subscriber farmer can illiterate while there was no respondent from KFM subscriber farmers group. On the other hand, 11.70 per cent and 31.70 per cent of the KFM subscriber farmers and non-subscriber farmers had education up to primary level respectively. While 23.30 per cent and 30.00 per cent of the KFM subscriber farmers and non-subscriber farmers had education up to high school level. 28.30 per cent KFM subscriber farmers and 18.30 per cent of non-subscriber farmers had studied up to higher secondary level of education. Among the KFM subscriber farmers, more than one-third (36.70 per cent) and only 13.30 per cent of non-subscriber farmers were educated up-to college level.

**TABLE 4**

**DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR EDUCATION**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Category</th>
<th>KFM subscriber farmers (n=60)</th>
<th>Non-subscriber farmers (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Per cent</td>
</tr>
<tr>
<td>1</td>
<td>Illiterate</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>2</td>
<td>Primary education (upto VII Std.)</td>
<td>07</td>
<td>11.70</td>
</tr>
<tr>
<td>3</td>
<td>High school</td>
<td>14</td>
<td>23.30</td>
</tr>
</tbody>
</table>
## Results and Discussion

<table>
<thead>
<tr>
<th>(VIII to X Std.)</th>
<th>4</th>
<th>Higher Secondary (XI and XII Std.)</th>
<th>5</th>
<th>College education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17</td>
<td>28.30</td>
<td>11</td>
<td>18.30</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>36.70</td>
<td>08</td>
<td>13.30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>60</td>
<td>100.00</td>
<td>60</td>
<td>100.00</td>
</tr>
</tbody>
</table>

From the above discussion, it can be concluded that nearly half of the KFM subscriber farmers and non-subscriber farmers (51.60 per cent and 48.30 per cent, respectively) were educated up to high school to higher secondary level, while nearly two-fifth KFM subscriber farmers (36.70 per cent) had college education against 13.30 per cent in non-subscriber farmers group. This might be fact that rural people understand the importance of education for their personal development and availability of school and college facilities nearby rural area.

Moreover, it is an accepted fact that higher the education, greater would be the knowledge gained by the farmers. The better educated farmer will have more chances of exposing to different print media like newspapers, farm magazines, leaflets etc. when compared to illiterate farmers.

The finding is in line with the findings of Hingu (1995) and Soni (2005).
Results and Discussion

5.1.2 Social characteristics:

5.1.2.1 Social-participation:

It is well recognized fact that membership of respondents in various organizations indicates their social participation status in the farming community. Involvement of farmers in various organizations indicates their interaction within and outside the local environment. It may help the individual to broaden his thinking and to judge the things in right perspective. Moreover, the social participation provides an opportunity to exchange their ideas, information and helps them in getting information about farm innovative. Thus, to know the participation of farmers in various organizations the information was gathered and classified as shown in Table 5 and Fig.5.

**TABLE 5**
**DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR SOCIAL PARTICIPATION**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Category</th>
<th>KFM subscriber farmers (n=60)</th>
<th>Non-subscriber farmers (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Per cent</td>
</tr>
<tr>
<td>1</td>
<td>No membership</td>
<td>01</td>
<td>1.60</td>
</tr>
<tr>
<td>2</td>
<td>Membership in one organization</td>
<td>22</td>
<td>36.70</td>
</tr>
<tr>
<td>3</td>
<td>Membership in more than one organization</td>
<td>19</td>
<td>31.70</td>
</tr>
<tr>
<td>4</td>
<td>Holding position in an organization</td>
<td>18</td>
<td>30.00</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>60</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Results and Discussion

It is evident from Table 5 that only one (1.60 per cent) KFM subscriber farmer and about two-fifth (40.00 per cent) of non-subscriber farmers were found in no membership category. Nearly one-third (36.70 per cent) of KFM subscriber farmers and (26.70 per cent) of non-subscriber farmers were having membership in one organization while nearly one-third (31.70 per cent) of KFM subscriber farmers and one-fifth (20.00 per cent) of non-subscriber farmers having membership in more than one organization and (30.00 per cent) of subscriber and (13.30 per cent) non-subscriber having holding position in an organization, respectively.

It is obvious from the foregoing discussion that a majority of the KFM subscriber farmers (68.40 per cent) and nearly half (46.70 per cent) of non-subscriber farmers had membership in one and more than one organization and nearly one-third (30.00 per cent) of KFM subscriber farmers and one-fifth (13.30 per cent) of non-subscriber farmers were office-bearers. It means KFM subscriber farmers were found highly participation in organizations against non-subscriber farmers group.

A farmer with better social participation would have more possibilities to interact with variety of people that could lead to more audience activity. The possible explanation for such finding might be that respondents might have felt village organization as an important service
Results and Discussion

oriented and social contact oriented organization and different kind of co-operative sectors existing in rural area.

The finding is in concurrence with the findings reported by Nain (2003) and Soni (2005).

5.1.3 Economic characteristics:

Market intelligence:

Market intelligence is referred to the judgement taken by an individual farmer to sell his produce for better price by analyzing various prevailing infrastructure and market facilities.

The data regarding level of market intelligence are presented in Table 6 and Fig.6.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Level of market intelligence</th>
<th>KFM subscriber farmers (n=60)</th>
<th>Non-subscriber farmers (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Per cent</td>
<td>Number</td>
</tr>
<tr>
<td>1</td>
<td>04</td>
<td>6.60</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>40</td>
<td>66.70</td>
<td>38</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
<td>26.70</td>
<td>05</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.00</td>
<td>60</td>
</tr>
</tbody>
</table>

Mean = 5.09  SD=2.38

The data displayed in Table 6 clearly indicates that majority of the KFM subscriber farmers and non-subscriber farmers had medium level of market intelligence (66.70 per cent and 63.30 percent, respectively)
Results and Discussion

followed by slight more than fourth (26.70 per cent) of KFM subscriber farmers and a few (8.30 per cent) of non-subscriber farmers had high level of market intelligence. While very few (6.60 per cent) of KFM subscriber farmers and more than fourth (28.40 per cent) of non-subscriber farmers had low level of market intelligence.

Therefore, it can be concluded that a great majority KFM subscriber farmers (93.40 per cent) had medium to high level of market intelligence where a great majority of non-subscriber farmers (91.70 per cent) had low to medium level of market intelligence.

The finding is in concurrence with the findings reported by Wagle (1996) and Soni (2005).

5.1.4 Psychological characteristics :

5.1.4.1 Scientific orientation :

Adoption of innovation requires decision by an individual. The decision making process is dependent upon the psychological factors like scientific orientation of the farmers. Therefore, scientific orientation factor was included in the study.

The data regarding scientific orientation of the respondents were categorized into three groups as shown in Table 7 and Fig.7.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Level of scientific orientation</th>
<th>KFM subscriber farmers (n=60)</th>
<th>Non-subscriber farmers (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 7
DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR SCIENTIFIC ORIENTATION

n=120
Results and Discussion

<table>
<thead>
<tr>
<th>Level</th>
<th>Number</th>
<th>Per cent</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (Below 38 score)</td>
<td>08</td>
<td>13.30</td>
<td>17</td>
<td>28.30</td>
</tr>
<tr>
<td>Medium (38 to 54 score)</td>
<td>41</td>
<td>68.30</td>
<td>40</td>
<td>66.70</td>
</tr>
<tr>
<td>High (Above 54 score)</td>
<td>11</td>
<td>18.40</td>
<td>03</td>
<td>5.00</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.00</td>
<td>60</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Mean = 45.82  SD=7.95

It is apparent from Table 7 that majority of the KFM subscriber farmers and non-subscriber farmers (68.30 per cent and 66.70 per cent) fell under the category of medium scientific orientation followed by (18.40 per cent) KFM subscriber farmers and a very few (5.00 per cent) non-subscriber farmers had high level of scientific orientation while only 13.30 per cent KFM subscriber farmers and 28.30 per cent non-subscriber farmers had low level of scientific orientation.

From the above discussion, it can be concluded that a great majority of the KFM subscriber farmers (86.70 per cent) were found to have medium to high level of scientific orientation while a great majority of non-subscriber farmers (95.00 per cent) were found to have low to medium level of scientific orientation.

It means that a large majority of the KFM subscriber farmers had medium to high level of faith in science and improved technology than non-subscriber farmers group.

This finding is in concurrence with the finding reported by Hingu (1995) and Soni (2005).
Results and Discussion

5.1.4.2 Innovativeness:

Innovativeness is the degree to which an individual interest and desire to seek changes in farming technique and to introduce each change into his own operation as and when found practicable and feasible. Keeping this fact in view, innovativeness was studied and data with this regards are presented in Table 8 and Fig.8.

**TABLE 8**

DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR INNOVATIVENESS

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Level of innovativeness</th>
<th>KFM subscriber farmers (n=60)</th>
<th>Non-subscriber farmers (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Per cent</td>
</tr>
<tr>
<td>1</td>
<td>Low (1 score)</td>
<td>04</td>
<td>6.70</td>
</tr>
<tr>
<td>2</td>
<td>Medium (2 score)</td>
<td>21</td>
<td>35.00</td>
</tr>
<tr>
<td>3</td>
<td>High (3 score)</td>
<td>35</td>
<td>58.30</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>60</td>
<td>100.00</td>
</tr>
</tbody>
</table>

A perusal of the Table 7 revealed that only six per cent of the KFM subscriber farmers and nearly fifty (46.70 per cent) of non-subscriber farmers had low level of innovativeness followed by 35.00 per cent of KFM subscriber farmers and 41.70 per cent of non-subscriber farmers had medium level of innovativeness followed by majority (58.30 per cent) of
Results and Discussion

KFM subscriber farmers and little more than ten per cent (11.60 per cent) of non-subscriber farmers had high level of innovativeness.

From the above facts, it can be concluded that a great majority of KFM subscriber farmers (93.30 per cent) had medium to high level of innovativeness whereas a great majority of non-subscriber farmers (88.40 per cent) had low to medium level of innovativeness.

The reason might be their high level of education for higher level of innovativeness.

This finding is in concurrence with the finding reported by Wagle (1996) and Soni (2005).

Risk preference:

Risk preference may be described as the degree to which the farmer prefers to bear risk and uncertainty in adoption of improved agricultural technology. Hence, it has importance in adoption behaviour of the farmers.

Keeping this in view, the risk preference of the respondents were studied. On the basis of data regarding risk preference, respondents were classified as shown in Table 9 and Fig.9.

Data presented in Table 9 shows that a majority of the KFM subscriber farmers and non-subscriber farmers had medium risk preference (65.00 per cent and 76.70 per cent, respectively) whereas 3.30 per cent and 20.00 per cent had low risk preference, respectively. In case
Results and Discussion

of high risk preference, KFM subscriber farmers and non-subscriber farmers were found 31.70 per cent and 3.30 per cent, respectively.

TABLE 9
DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR RISK PREFERENCE

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Level of risk preference</th>
<th>KFM subscriber farmers (n=60)</th>
<th>Non-subscriber farmers (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Per cent</td>
</tr>
<tr>
<td>1</td>
<td>Low (Below 33 score)</td>
<td>02</td>
<td>3.30</td>
</tr>
<tr>
<td>2</td>
<td>Medium (33 to 42 score)</td>
<td>39</td>
<td>65.00</td>
</tr>
<tr>
<td>3</td>
<td>High (Above 42 score)</td>
<td>19</td>
<td>31.70</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>60</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Mean=37.53, SD=4.51

It can therefore be concluded that a great majority of the KFM subscriber farmers and non-subscriber farmers (96.70 per cent each, respectively) had medium to high level and low to medium level of risk preference, respectively.

It means that majority of the farmers were oriented towards encountering risk on uncertainty in adopting agricultural innovations.

Similar results were obtained by Hingu (1995) and Soni (2005).

5.1.4.3 Economic motivation:

Economic motivation is occupational success in terms of profit maximization and the relative value an individual places on economic
Results and Discussion
ends. It has unique importance in adoption of improved agricultural technology by the farmers. Keeping this in view, the economic motivation of the respondents were studied. On the basis of the data regarding economic motivation, respondents were classified as shown in Table 10 and Fig.10.

**TABLE 10**
**DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR ECONOMIC MOTIVATION**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Level of economic motivation</th>
<th>KFM subscriber farmers (n=60)</th>
<th>Non-subscriber farmers (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Per cent</td>
</tr>
<tr>
<td>1</td>
<td>Low (Below 18 score)</td>
<td>03</td>
<td>5.00</td>
</tr>
<tr>
<td>2</td>
<td>Medium (18 to 22 score)</td>
<td>44</td>
<td>73.30</td>
</tr>
<tr>
<td>3</td>
<td>High (Above 22 score)</td>
<td>13</td>
<td>21.70</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>60</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Mean=19.62 SD=2.14

An evident from Table 10 that majority of the KFM subscriber farmers and non-subscriber farmers (73.30 per cent and 75.00 per cent respectively) had medium level of economic motivation, followed by 21.70 per cent of KFM subscriber farmers and 3.30 per cent of non-subscriber farmers with high level of economic motivation while, 5.00 per cent and 21.70 per cent KFM subscriber farmers and non-subscriber farmers had low level of economic motivation respectively.
Results and Discussion

From the aforesaid discussion it can be concluded that, a great majority of KFM subscriber farmers (95.00 per cent) had medium to high level whereas a great majority of non-subscriber farmers (96.70 per cent) had low to medium level of economic motivation. The probable reason for above situation might be due to fact that majority of the respondents might have worked towards higher yields and economic profit by growing high yielding cash crop as well as developed other sources of income from other than agriculture as additional income.

Similar results were obtained by Hingu (1995) and Soni (2005).

Reading behaviour:

Reading literature is an important part of self study. Farmers generally vary in their reading behaviour. Reading behaviour has been operationally defined as a kind of style prevalent in reading farm literature. It is an important factor which influences on gain in knowledge about improved agricultural technology through farm literature. It is therefore, important to study the reading behaviour of the respondents.

An effort has been made to know the level of reading behaviour of the respondents. The data in this regards are presented in Table 11 and Fig.11.

<table>
<thead>
<tr>
<th>TABLE 11</th>
<th>DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR LEVEL OF READING BEHAVIOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=120</td>
<td></td>
</tr>
</tbody>
</table>
Results and Discussion

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Level of reading behaviour</th>
<th>KFM subscriber farmers (n=60)</th>
<th>Non-subscriber farmers (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Per cent</td>
</tr>
<tr>
<td>1</td>
<td>Low (Below 6 score)</td>
<td>01</td>
<td>1.70</td>
</tr>
<tr>
<td>2</td>
<td>Medium (6 to 10 score)</td>
<td>39</td>
<td>65.00</td>
</tr>
<tr>
<td>3</td>
<td>High (Above 10 score)</td>
<td>20</td>
<td>33.30</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>60</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Mean = 7.61 \( \text{SD} = 2.06 \)

The information presented in Table 11 reveals that only one (1.70 per cent) of KFM subscriber farmer and 31.70 per cent of non-subscriber farmers were in the category of low level of reading behaviour while 65.00 per cent of KFM subscriber farmers and 63.30 per cent of non-subscriber farmers had medium level of reading behaviour whereas 33.30 per cent of KFM subscriber farmers and only three (5.00 per cent) of non-subscriber farmers had high level of reading behaviour, respectively.

To epitomize the result of the study it can be stated that a great majority of KFM subscriber farmers (98.30 per cent) had medium to high level of reading behaviour and a great majority of non-subscriber farmers (95.00 per cent) had low to medium level of reading behaviour.

This finding is in corroboration with finding of nain (2003), Gupta et al. (2003), and Soni (2005).
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5.1.5 Communication characteristics:

5.1.5.1 Mass media exposure:

This referred to the frequency of reading newspaper, magazines, visits of *krushi mela* and exhibition *etc.* relating to agriculture as well as use of radio, television and internet. The information regarding mass media exposure were collected and classified into three groups are presented in Table 12 and Fig.12.

**TABLE 12**
DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR LEVEL OF MASS MEDIA EXPOSURE

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Category</th>
<th>KFM subscriber farmers (n=60)</th>
<th>Non-subscriber farmers (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Per cent</td>
</tr>
<tr>
<td>1</td>
<td>Low exposure (Below 13 score)</td>
<td>02</td>
<td>3.30</td>
</tr>
<tr>
<td>2</td>
<td>Medium exposure (13 to 18 score)</td>
<td>44</td>
<td>73.30</td>
</tr>
<tr>
<td>3</td>
<td>High exposure (Above 18 score)</td>
<td>14</td>
<td>23.40</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>60</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Mean = 15.37
SD = 2.84

A glance over the data in Table 12 reveals that more than three-fifth of the KFM subscriber farmers and non-subscriber farmers had medium exposure to mass media (73.30 per cent and 66.70 per cent, respectively) whereas 23.40 per cent of KFM subscriber farmers and only 5.00 per cent of non-subscriber farmers had high exposure to mass media followed by
only 3.30 per cent of KFM subscriber farmers and 28.30 per cent of non-subscriber farmers had low exposure to mass media.

Concluding the fact, it was observed that a majority of the respondents had medium level of mass media exposure. Furthermore, a great majority of KFM subscriber farmers (96.70 per cent) had medium to high level of exposure to mass media while a great majority of (95.00 per cent) non-subscriber farmers had low to medium level of exposure to mass media.

The probable reason might be better economic condition and higher education level of the respondents.

This finding is in line with finding of Joshi (1993), Sonawane (1997), Wakle et at. (1998) and Soni (2005).

5.1.5.2 Extension participation:

Active involvement of farmers in various extension activities play an important role in developing knowledge and skill as well as in forming a favourable attitude towards agricultural innovations, which ultimately led them to adopt new technology. It was therefore, decided to include, extension participation of farmers as an independent variable for the study. On the basis of collected information, the respondents were categorized into three groups as shown in Table 13 and Fig.13.

| TABLE 13 |
| DISTRIBUTION OF RESPONDENTS ACCORDING | 63 |
Results and Discussion

TO THEIR EXTENSION PARTICIPATION

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Level of extension participation</th>
<th>KFM subscriber farmers (n=60)</th>
<th>Non-subscriber farmers (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Per cent</td>
</tr>
<tr>
<td>1</td>
<td>Low (Below 2 score)</td>
<td>06</td>
<td>10.00</td>
</tr>
<tr>
<td>2</td>
<td>Medium (2 to 6 score)</td>
<td>37</td>
<td>61.70</td>
</tr>
<tr>
<td>3</td>
<td>High (Above 6 score)</td>
<td>17</td>
<td>28.30</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>60</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Mean=3.93 SD=1.85

It is observed from the data presented in Table 13 that nearly two-fifth of the respondents from both the groups had medium level of extension participation (61.70 per cent and 58.30 per cent, respectively) whereas 28.30 per cent of the KFM subscriber farmers and only 5.00 per cent of non-subscriber farmers had high level of extension participation followed by only 10.00 per cent of the KFM subscriber farmers and 36.70 per cent had low level of extension participation, respectively.

The foregoing discussion led to conclude that majority of the respondents had medium level of extension participation. Furthermore, a great majority of KFM subscriber farmers had (90.00 per cent) medium to high level of extension participation while a great majority of non-subscriber farmers (95.00 per cent) had low to medium level of extension participation.
Results and Discussion

It is obvious that the contact with extension agency would certainly help a farmer to acquire more knowledge on farm technologies. Higher the extension participation greater would be their exposure to print materials.

The probable reason for above finding may be their higher education, frequent extension contacts, favourable attitude towards farm literature and some degree of economic gain.

The finding is in conformity with the findings reported by Solanki et al. (1990), Hingu (1995) and Soni (2005).

5.2 Impact of Krushijivan farm magazine in terms of gain in knowledge of the respondents

The knowledge plays an important role in covert as well as overt behaviour of an individual. Once the knowledge is acquired, it produces changes in the thinking process of an individual which would lead to further changes in attitude and helps the farmers in making rational decisions. It is prerequisite for adoption of any agricultural innovation. A higher knowledge of technical nature of improved agricultural technology would lead to a higher adoption possibly because knowledge is inert. Knowledge of farmers plays an important role in adoption of improved agricultural technology. With this view, attempt has been made to determine the level of knowledge of respondents.

TABLE 14
Results and Discussion

**IMPACT OF KRUSHIJIVAN FARM MAGAZINE IN TERMS OF GAIN IN KNOWLEDGE OF THE RESPONDENTS**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Knowledge mean score</th>
<th>Difference</th>
<th>Per cent Increase</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Subscriber (n=60)</td>
<td>Non-subscribers (n=60)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>35.93</td>
<td>25.48</td>
<td>10.45</td>
<td>(41.01%)</td>
</tr>
</tbody>
</table>

** Significant at 0.01 level of probability

Perusal of the Table 14 indicated that KFM subscriber farmers had 35.93 knowledge mean score while non-subscriber farmers had 25.48 knowledge mean score. Their knowledge mean score difference had 10.45, it means that subscriber farmers who read the farm magazine they had increase 41.01% knowledge as compared to non-subscriber farmers. Then, t-value had positive and significant relationship with gain in knowledge.

The calculated 't' value (9.724) shown in Table 13 indicates highly significant impact on gain in knowledge of selected agriculture technology of the KFM subscriber farmers.

It means that significant impact of KRUSHIJIVAN farm magazine was observed in improving knowledge of selected agriculture technology of the KFM subscriber farmers. The probable reason for above finding might be the membership of KRUSHIJIVAN farm magazine could have
Results and Discussion

expanded their knowledge regarding improved agricultural practices and more extension as well as social participation.

Hence, the null hypothesis (H₁) in case of knowledge regarding selected agriculture technology was rejected.

The present finding is in conformity with the findings of Sing (2000), Gupta et al. (2003) and Soni (2005).

5.3 Relationship between independent variables and gain in knowledge of selected agriculture technology:

The results of relationship are presented in Table 15.

<table>
<thead>
<tr>
<th>TABLE 15</th>
<th>RELATIONSHIP OF INDEPENDENT VARIABLES WITH GAIN IN KNOWLEDGE OF SELECTED AGRICULTURE TECHNOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Independent Variables</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>I.</td>
<td><strong>PERSONAL CHARACTERISTICS</strong></td>
</tr>
<tr>
<td>1.</td>
<td>Age</td>
</tr>
<tr>
<td>2.</td>
<td>Education</td>
</tr>
<tr>
<td>II.</td>
<td><strong>SOCIAL CHARACTERISTIC</strong></td>
</tr>
<tr>
<td>1.</td>
<td>Social participation</td>
</tr>
<tr>
<td>III.</td>
<td><strong>ECONOMIC CHARACTERISTIC</strong></td>
</tr>
<tr>
<td>1.</td>
<td>Market intelligence</td>
</tr>
</tbody>
</table>
Results and Discussion

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Gain in knowledge of Selected agriculture technology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correlation coefficient of KFM subscriber farmers</td>
</tr>
<tr>
<td></td>
<td>n=60</td>
</tr>
</tbody>
</table>

### IV. PSYCHOLOGICAL CHARACTERISTICS

1. Scientific orientation | 0.5982**
2. Innovativeness | 0.5223**
3. Risk-preference | 0.3223*
4. Economic motivation | 0.6829**
5. Reading behaviour | 0.7123**

### V. COMMUNICATIONAL CHARACTERISTICS

1. Mass media exposure | 0.2213NS
2. Extension participation | 0.7318**

* Significant at 0.05 level of probability
** Significant at 0.01 level of probability
NS Non-Significant

5.3.1 Relationship between personal characteristics and gain in knowledge of selected agriculture technology:

**Age and gain in knowledge:**

The data in Table 15 and graphically depicted in Fig.14 were used to test the null hypothesis (H0) that there is no relationship between the age and gain in knowledge.

The calculated correlation coefficient ($r=-0.4919**$) values were negative and significant at 0.01 level. Hence, the null hypothesis was rejected. Therefore, it can be concluded that the age of the respondents had negative and significant relationship with their gain in knowledge of selected agriculture technology.
Results and Discussion

The age had negative and significant relationship with the gain in knowledge indicates that as age increased, the knowledge gain decreased and the age is the factor which determines the zeal, aptitude and hard work required for determining effectiveness in any activity. The old age farmers, generally less risk taking capacity, innovativeness and enthusiastic than the young farmers. Youngster are always seek to have new things and work for excellence in the life. This could be a reason for negative relationship between age of the KFM subscriber farmers and their gain in knowledge of selected agriculture technology.

This finding is in line with the findings reported by Soni (2005) and Parmar (2006) while differed with Chaudhary et al. (2001) and Thorat (2005).

*Education and gain in knowledge* :

The data in Table 15 and graphically depicted in Fig.14 were used to test the null hypothesis (H0) that there is no relationship between the education and extent of adoption.

It can be apparent from the data that the calculated correlation coefficient \(r=0.7268^{**}\) values were significant at 0.01 level with the education. Hence, the null hypothesis (H0) was rejected.
Results and Discussion

It can be concluded that the educational level of the KFM subscriber farmers had positive and significant relationship with their knowledge gain of selected agriculture technology.

The probable reason might be fact that education is the production of desirable changes in human behaviour. It helps the individual to make progress in right direction. Education might have helped in getting more information by use of mass media like printed literature, namely farm magazines etc. having recent information regarding new innovation. These factors might have influenced the respondents to know selected agriculture technology.

This finding is in conformity with the findings of the Chaudhary et al. (1996), Soni (2005) and Parmar (2006).

5.3.2 Relationship between social characteristics and gain in knowledge of selected agriculture technology:

Social participation and gain in knowledge:

The data in the Table 15 and graphically depicted in Fig.14 were used to test the null hypothesis (H0) that there is no relationship between social participation of the respondents and their extent of adoption. The calculated correlation coefficient (r = 0.6862**) values were positive and significant at 0.01. Hence, the null hypothesis was rejected.

It can be concluded that the social participation of the respondents had positive and significant relationship with knowledge gain of selected agriculture technology.
Results and Discussion

agriculture technology. Social participation always Motivate the people to remain in touch with the development of science and technology. Nobody loose his status among their fellow friends. Social participation might have played an important role into getting acquaint with various extension agencies. More participation in various organizations might have lead to contacts of various sources of information which might have helped them to get exposure and share knowledge regarding selected agriculture technology with other farmers.

The results of the study were corroborated with the findings of Chaudhari and Soni (1996), Parmer (2006) and Dhoe (2009).

5.3.3 Relationship between economic characteristics and gain in knowledge:

Market intelligence and gain in knowledge:

The data in Table 15 and graphically depicted in Fig.14 were used to test the null hypothesis (H0) that there is no relationship between market intelligence of the respondents and their gain in knowledge. The calculated correlation coefficient (r=0.3880**) values of the respondents were positive and significant at 0.01 level. Therefore, the null hypothesis was rejected.

It can be concluded that market intelligence of the KFM subscriber farmers and their knowledge gain had positive and significant relationship. It indicated that the respondents had more awareness about
marketing due to favourable attitude towards farm literature, well reading
behaviour, higher exposure to mass media, more extension participation
and social participation, etc.

Similar result was also observed by Patel and Sangle (1993) Soni

5.3.4 Relationship between psychological characteristics and gain in
knowledge of selected agriculture technology:

Scientific orientation and gain in knowledge:

The data in Table 15 and graphically depicted in Fig.14 were used
to test the null hypothesis ($H_0$) that there is no relationship between
scientific orientation and gain in knowledge.

The calculated correlation coefficient ($r = 0.5982$) values were
positive and significant at 0.01 level. Therefore the null hypothesis was
rejected.

It can be concluded that the scientific orientation of the
respondents and their gain in knowledge of selected agriculture
technology had positive and significant relationship. It showed that the
KFM subscriber farmers having higher scientific orientation thereby
having higher knowledge of selected agriculture technology.

The possible reasons might be that the KFM subscriber farmers
with higher education favourable attitude towards farm literature, higher
level of reading behaviour which attempt to acquire more knowledge
Results and Discussion

regarding selected agriculture technology, higher income, higher social and extension participation, active involvement in various extension programmes might have help to develop progressiveness and wider outlook, leading to higher contacts with outside world and in creation of scientific mentality and it is quite true that scientifically oriented farmers are likely to have more inclination to use scientific methods in farming which led them for higher knowledge of selected agriculture technology.

Similar result was also observed by Soni (2005) and Dhole (2009).

Innovativeness and gain in knowledge:

The data in Table 15 and graphically depicted in Fig.14 were used to test the null hypothesis (H₀) that there was no relationship between innovativeness of the respondents with their gain in knowledge.

The correlation coefficient (r=0.5223**) values were positive and significant at 0.01 level. Therefore, the null hypothesis was rejected.

It can be concluded that innovativeness of the KFM subscriber farmers had positive and significant relationship with their knowledge gain. It indicated that higher innovative level of the farmers, higher would be their knowledge gain of selected agriculture technology. It means that those who had more innovativeness, more eager to know advanced technology in agriculture.

The findings gets support from the finding of Gomase et al. (1998), Soni (2005) and Sai (2008).
Results and Discussion

5.3.4.3 Risk preference and gain in knowledge:

The data in Table 15 and graphically depicted in Fig.14 were used to test the null hypotheses (H₀) that there was no relationship between risk preference and their gain in knowledge.

The correlation coefficient (r=0.3223) values were positively significant at 0.05 level. Hence, the null hypothesis was rejected.

It can be concluded that the risk preference of the KFM subscriber farmers had positive and significant with the knowledge gain of selected agriculture technology. It means that higher risk preference among the KFM subscriber farmers, higher would be their gain in knowledge of selected agriculture technology. It might be due to higher annual income and sound economic position of the KFM subscriber farmers.

The finding was in line with Chaudhary et al. (2001), Soni (2005) and Dhole (2009).

Economic motivation and gain in knowledge:

The data in Table 15 and graphically depicted in Fig.14 were used to test the null hypothesis (H₀) that there is no relationship between economic motivation and their gain in knowledge.

The correlation coefficient (r=0.6829**) values were significant at 0.01 level. So the null hypothesis was rejected.

It can be concluded that the economic motivation of the KFM subscriber farmers was significantly correlated with their knowledge gain.
**Results and Discussion**

of selected agriculture technology. The possible reason might have been that the farmers had better education, better contact with extension agencies, and better social as well as extension participation. So when all these variables act together they motivated them to improve economic activities and economically motivated farmers are oriented towards maximization of profit from farming. They might have considered farming as an enterprise and it is quite true in case of respondents for their knowledge gain of selected agriculture technology.

Similar results were observed by Soni (2005), Singh (2007) and Dhole (2009).

**Reading behaviour and gain in knowledge:**

The data in Table 15 and graphically depicted in Fig.14 were used to test the null hypothesis ($H_0$) that there is no relationship between reading behaviour of the respondents and their gain in knowledge.

The correlation coefficient ($r=0.7123^{**}$) values were positively significant at 0.01 level. Therefore, the null hypothesis was rejected.

It can be concluded that the KFM subscriber farmers reading behaviour had positive and significant relationship with their knowledge gain of selected agriculture technology. It is natural that people having good reading heaviour were remain in touch with new technology and preferred to know more improved practices. The higher level of reading
Results and Discussion

behaviour, favourable attitude towards farm literature, more exposure to mass media and more social and extension participation of the respondents were the important factor to gained higher knowledge about selected agriculture technology.

Similar results were observed by Rakholia et al (1996) and Soni (2005).

5.3.5 Relationship between communication characteristics and gain in knowledge of selected agriculture technology:

5.1 Mass media exposure and gain in knowledge:

The data in Table 15 and graphically depicted in Fig.14 were used to test the null hypothesis (H₀) that there is no relationship of mass media exposure by the KFM subscriber with their knowledge gain.

The calculated correlation coefficient (r= 0.2213) values were positive and non-significant for respondents regarding their relationship between mass media exposure and their knowledge gain of selected agriculture technology. Therefore the null hypothesis was accepted.

It can be concluded that exposure of the KFM subscriber farmers to mass media had non-significant relationship with their knowledge gain.

The result is findings of Patel (2005) and Soni (2005) and differed with Singh (2007).
Results and Discussion

5.2 Extension participation and gain in knowledge:

The data in Table 15 and graphically depicted in Fig.14 were used to test the null hypothesis \((H_0)\) that there is no relationship of extension participation by the respondents with their gain in knowledge.

The calculated correlation coefficient \((r=0.7318)\) values were found to be positive and significant at 0.01. Hence, the null hypothesis was rejected.

It can be concluded that extension participation of the KFM subscriber farmers had positive and significant relationship with their knowledge gain of selected agriculture technology. The probable reason might be that the actual participation of farmers in various extension activities might have made them to interact with extension personnel and progressive farmers who had also attended the activities such as demonstration, meeting, training and field day, krushimela, etc. which made them enable to see the new technology in natural setting and also helped to learn and practice the skill. Farmers could have better understanding and clear their doubt about complex practices in relation to their needs, this might have ultimately resulted in gain in knowledge.

Similar results were observed by Soni (2005) and parmar (2006).
Results and Discussion

5.4 SUGGESTIONS FROM THE KFM SUBSCRIBER FARMERS TO MAKE THE KRUSHIJIVAN FARM MAGAZINE MORE EFFECTIVE

The information was also collected regarding the suggestions from the KFM subscriber farmers to make the KRUSHIJIVAN farm magazine more effective as well as popular among the farmer readers. The suggestions were invited and grouped into four heads viz., subjects of article, nature of article, cover page and other suggestions which are presented in table 16 to 19.

5.4.1 Subjects of Article:

TABLE 16

SUGGESTIONS GIVEN BY THE KRUSHIJIVAN FARM MAGAZINE SUBSCRIBER FARMERS ON SUBJECTS OF ARTICLE

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Suggestions</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Article based on interview of progressive farmer by scientist should be given</td>
<td>45</td>
<td>75.00**</td>
</tr>
<tr>
<td>2</td>
<td>Article based on farmers' own experience should be given in a issue</td>
<td>34</td>
<td>56.66**</td>
</tr>
<tr>
<td>3</td>
<td>More than one article should be included on animal husbandry</td>
<td>33</td>
<td>55.00**</td>
</tr>
<tr>
<td>4</td>
<td>Article based on bio-technology should be given</td>
<td>22</td>
<td>36.66*</td>
</tr>
<tr>
<td>5</td>
<td>Article based on farm machinery and implements should be given</td>
<td>8</td>
<td>13.33*</td>
</tr>
<tr>
<td>6</td>
<td>Article based on effect of natural calamities on farming should be given</td>
<td>5</td>
<td>8.33*</td>
</tr>
</tbody>
</table>

** Most important (> 50.00 per cent)       *Less important (< 50.00 per cent)
Results and Discussion

It is apparent from the Table 16 that "Article based on interview of progressive farmer by scientist should be given (75.00 per cent)", "Article based on farmers’ own experience should be given in a issue (56.66 per cent)", and "More than one article should be included on animal husbandry (55.00 per cent)" were the most important suggestions offered by the KFM subscriber farmers for the subjects of article. The less important suggestions were offered by the KFM subscriber farmers were: "Article based on bio-technology should be given (36.66 per cent)", "Article based on farm machinery and implements should be given (13.33 per cent)" and "Article based on effect of natural calamities on farming should be given (8.33 per cent)".

Thus it can be concluded that articles based on interview of progressive farmer by scientist, farmers’ own experience as well as more articles on animal husbandry discipline should be given in KRUSHIJIVAN farm magazine.

The similar finding is obtained by Amandip Kaur and Kaira (2003) and Soni (2005).

5.4.2 Nature of Article:

TABLE 17

SUGGESTIONS GIVEN BY THE KRUSHIJIVAN FARM MAGAZINE SUBSCRIBER FARMERS ON NATURE OF ARTICLE

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Suggestions</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

n=60
Results and Discussion

<table>
<thead>
<tr>
<th></th>
<th>Information based on use of byproducts of farming for income generation should be given in article</th>
<th>39</th>
<th>65.00**</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Marketing and their related information should be given in article</td>
<td>37</td>
<td>61.66**</td>
</tr>
<tr>
<td>3</td>
<td>The economic aspect should be given in article</td>
<td>32</td>
<td>53.33**</td>
</tr>
<tr>
<td>4</td>
<td>Information on government subsidies/services for the farmers should be given</td>
<td>26</td>
<td>43.33*</td>
</tr>
<tr>
<td>5</td>
<td>More photographs/figures should be given in article</td>
<td>19</td>
<td>31.66*</td>
</tr>
</tbody>
</table>

** Most important (> 50.00 per cent)   *Less important (< 50.00 per cent)

It was found from the Table 17 that "Information on based on use of byproducts of farming for income generation should be given in article (65.00 per cent)", "Marketing and their related information should be given in article (61.66 per cent)", "The economic aspect of the subject should be given in each article (53.33 per cent)”, were the most important suggestion offered by the KFM subscriber farmers for nature of article followed by two less important suggestion viz.. "Information on government subsidies/services for the farmers should be given (43.33 per cent)” and "More photographs/figures should be given in article(31.66 per cent)"

Thus it can be inferred that information on use of byproducts, marketing, and economic aspect should be given in a article.

The finding is supported by the findings of those Hingu (1995), Sadaquath et al. (1998) Manjunath and Balasubramanya (2002) and Nain (2003).

5.4.3 Cover page:
Results and Discussion

Cover page is one of the main component that determines the effectiveness of farm magazine.

**TABLE 18**

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Suggestions</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Page number of related photographs should be printed on cover page</td>
<td>34</td>
<td>60.00**</td>
</tr>
<tr>
<td>2</td>
<td>All cover pages should be multicoloured and attractive</td>
<td>26</td>
<td>43.33*</td>
</tr>
</tbody>
</table>

**Most important (> 50.00 per cent)**  *Less important (< 50.00 per cent)

The data in Table 18 indicated that "Page number of related photographs should be printed on cover page (60.66 per cent)" was the most important suggestion whereas "All cover pages should be multicoloured and attractive (43.33 per cent)" was the less important suggestion offered by the KFM subscriber farmers for cover page.

Thus, it can be concluded that the page number of article should be given with photograph on cover page.

This finding is agreement with finding of Manjunath and Balasubramanya (2002) and Nain (2003).

**5.4.3 Other suggestions :**

**TABLE 19**

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Suggestions</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
</table>

n=60
Results and Discussion

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>r</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Magazine should be available everywhere</td>
<td>36</td>
<td>60.00**</td>
</tr>
<tr>
<td>2</td>
<td>Advertising for magazine needed through</td>
<td>32</td>
<td>53.33**</td>
</tr>
<tr>
<td></td>
<td>radio and television during agricultural</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>programme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Camps should be organized in villages for</td>
<td>28</td>
<td>46.66*</td>
</tr>
<tr>
<td></td>
<td>creating awareness about farm magazine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Magazine should be modern by using new</td>
<td>24</td>
<td>40.00*</td>
</tr>
<tr>
<td></td>
<td>technology like colour printing /</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>photographs, lamination etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>The information about admission on</td>
<td>17</td>
<td>28.33*</td>
</tr>
<tr>
<td></td>
<td>agriculture and related fields should</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>be given in magazine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Magazine should be display on internet</td>
<td>13</td>
<td>21.66*</td>
</tr>
</tbody>
</table>

** Most important (> 50.00 per cent)  * Less important (< 50.00 per cent)

The data in Table 19 shows that "Magazine should be available everywhere (60.00 per cent)", and "Advertising for magazine needed through radio and television during agricultural programme (53.33 per cent)" were the offered by KFM subscriber farmers for making the *KRUSHIJIVAN* farm magazine more effective. The less important other suggestions were: "Camps should be organized in villages for creating awareness about farm magazine (46.66 per cent)", "Magazine should be modern by using new technology like colour printing/photographs, lamination etc. (40.00 per cent)", "The information about admission on agriculture and related fields should be given in magazine (28.33 per cent)" and "Magazine should be display on internet (21.66 per cent)".

Thus, it can be concluded that *KRUSHIJIVAN* farm magazine should be available everywhere for farming community as well as the information
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of farm magazine should be given on radio and television to aware the farming community.

This finding is supported by Hingu (1995), Sadaquath et al. (1998), Manjunath and Balasubramanya (2002) and Nain (2003).
VI. SUMMARY AND CONCLUSIONS

This chapter includes in nutshell the summary, conclusions, implications of the study and suggestions for future research.

6.1 Summary

The farm magazine is one of the important media to disseminate agricultural information to the farming community. Among various farm magazine published in Gujarat, KRUSHIJIVAN farm magazine is the oldest farm magazine. It is publishing regularly since May 1969 with the main aim to disseminate and to popularize the scientific methods of agriculture in farming community. There was hardly any research work carried out in past to measure the impact of farm magazine in terms of gain in knowledge of agriculture technology on subscriber farmers. Looking to this, the present investigation was carried out with the following objectives:

The overall objective of this investigation is to study the impact of KRUSHIJIVAN farm magazine pertaining to cognitive domain on subscribers.

6.2 Objective of the study:

The specific objectives of the study are as under:

2.1 To study personal profile of the Krushijivan farm magazine subscriber farmers and non-subscriber farmers.
Summary and Conclusions

2.2. To know the impact of Krushijivan farm magazine in terms of gain in knowledge of the respondents.

2.3. To know relationship between gain in knowledge regarding selected agriculture technology and their profile.

2.4. To seek suggestions from the subscriber farmers of Krushijivan farm magazine to make the farm magazine more effective.

6.3 Methodology

On the basis of literature reviewed related to the research problem, a theoretical orientation was developed for the study. The various concepts were operationalised. Based on assumptions, a tentative conceptual model was developed and with the help of theoretical orientation, the null hypotheses were also formulated in light of the objectives. Ex-post facto research design was applied for the study.

The Vadodara districts of the Gujarat state having more number of life members of KRUSHIJIVAN farm magazine (KFM) were selected for the study. In Vadodara district, Dabhoi, and Sankheda taluka and from each talukas, seven villages were selected as per more number of KRUSHIJIVAN farm magazine life members. The proportionate random sampling was adopted for selection of respondents from each village.
Summary and Conclusions

This 30 KFM subscriber farmers were selected from the seven villages per district. Thus, total 60 KFM subscriber farmers were selected from both the talukas of Vadodara district. The equal number of non-subscriber farmers were selected from the list of Panchayat office. Thus, 60 KFM subscriber farmers and 60 non-subscriber farmers were selected for making a sample size of 120 respondents.

Comparison approach was followed to know the change implicit through the KRUSHIJIVAN farm magazine among the KFM subscriber farmers and non-subscriber farmers. The data were collected from the 120 respondents of 14 villages through personal interview with the help of interview schedule.

The dependent variables undertaken in this study was gain in knowledge of selected agriculture technology. Total 11 independent variables chosen for the study were: age and education as personal variables, social participation as social variables, Market intelligence as economic variables; Scientific orientation, Innovativeness, Risk-preference, Economic motivation, Reading behaviour, as psychological variables and Mass media exposure, Extension participation as communication variables, respectively.

The other dependent and independent variables were measured by using suitable scales and procedures adopted by various
Summary and Conclusions

researchers. An interview schedule was developed by keeping in view the objectives of the study. Before its actual use, it was pre-tested and translated into Gujarati. The data of this study were collected by personal interview with 60 KFM subscriber farmers and 60 non-subscriber farmers from the 14 selected villages. The collected data were classified, tabulated and analysed in order to make the findings meaningful. The statistical measures such as percentage, mean score, standard deviation, coefficient of correlation, two sample independent t-test were used.

6.4 Conclusions:

The following conclusions were drawn based on findings of the study:

6.4.1 Characteristics of the respondents:

1. Majority of the KFM subscriber farmers and non-subscriber farmers (60 per cent and 63.33 per cent, respectively) belonged to middle age group.

2. Nearly half of the KFM subscriber farmers and non-subscriber farmers (51.60 per cent and 48.30 per cent, respectively) were educated up to high school to higher secondary level, while nearly two-fifth KFM subscriber farmers (36.70 per cent) had college education against 13.30 per cent in non-subscriber farmers group.
Summary and Conclusions

3. A majority of the KFM subscriber farmers (68.40 per cent) and nearly half (46.70 per cent) of non-subscriber farmers had membership in one and more than one organization and nearly one-third (30.00 per cent) of KFM subscriber farmers and one-fifth (13.30 per cent) of non-subscriber farmers were office-bearers.

4. A great majority KFM subscriber farmers (93.40 per cent) had medium to high level of market intelligence where a great majority of non-subscriber farmers (91.70 per cent) had low to medium level of market intelligence.

5. A great majority of the KFM subscriber farmers (86.70 per cent) were found to have medium to high level of scientific orientation while a great majority of non-subscriber farmers (95.00 per cent) were found to have low to medium level of scientific orientation.

6. A great majority of KFM subscriber farmers (93.30 per cent) had medium to high level of innovativeness whereas a great majority of non-subscriber farmers (88.40 per cent) had low to medium level of innovativeness.

7. A great majority of the KFM subscriber farmers and non-subscriber farmers (96.70 per cent each, respectively) had
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medium to high level and low to medium level of risk preference, respectively.

8. A great majority of KFM subscriber farmers (95.00 per cent) had medium to high level whereas a great majority of non-subscriber farmers (96.70 per cent) had low to medium level of economic motivation.

9. A great majority of KFM subscriber farmers (98.30 per cent) had medium to high level of reading behaviour and a great majority of non-subscriber farmers (95.00 per cent) had low to medium level of reading behaviour.

10. A majority of the respondents had medium level of mass media exposure. Furthermore, a great majority of KFM subscriber farmers (96.70 per cent) had medium to high level of exposure to mass media while a great majority of (95.00 per cent) non-subscriber farmers had low to medium level of exposure to mass media.

11. A majority of the respondents had medium level of extension participation. Furthermore, a great majority of KFM subscriber farmers had (90.00 per cent) medium to high level of extension participation while a great majority of non-subscriber farmers
Summary and Conclusions

(95.00 per cent) had low to medium level of extension participation.

6.4.2 Impact of KrushiJivan farm magazine in terms of gain in knowledge of the respondents

KFM subscriber farmers had 35.93 knowledge mean score while non-subscriber farmers had 25.48 knowledge mean score. Their knowledge mean score difference had 10.45, it means that subscriber farmers who read the farm magazine they had increase 41.01% knowledge as compared to non-subscriber farmers. Then, t-value (9.724**) had positive and significant relationship with gain in knowledge.

6.4.3 Relationship between independent variables and gain in knowledge of selected agriculture technology:

The independent variables like, education, social participation, market intelligence, scientific orientation, innovativeness, economic motivation, reading behavior, mass media had positive and highly significant correlation with gain in knowledge of KFM subscriber farmers towards selected agriculture technology. The variable like age had shown negative and highly significant relationship with gain in knowledge and risk preference and mass media exposure had significant and non-significant relationship with gain in knowledge of
Summary and Conclusions
the KFM subscriber farmers towards selected agriculture technology respectively.

SUGGESTIONS FROM THE KFM SUBSCRIBER FARMERS TO MAKE THE KRUSHIJIVAN FARM MAGAZINE MORE EFFECTIVE

The most important suggestions were offered by the KFM subscriber farmers to make the KRUSHIJIVAN farm magazine more effective were:

1. Subjects of Article:

"Article based on interview of progressive farmer by scientist should be given (75.00 per cent)", "Article based on farmers' own experience should be given in a issue (56.66 per cent)", and "More than one article should be included on animal husbandry (55.00 per cent)" were the most important suggestions offered by the KFM subscriber farmers for the subjects of article.

2. Nature of Article:

"Information on based on use of byproducts of farming for income generation should be given in article (65.00 per cent)", "Marketing and their related information should be given in article (61.66 per cent)", "The economic aspect of the subject should be given in each article (53.33 per cent)" were the most important suggestion offered by the KFM subscriber farmers for nature of article.
Summary and Conclusions

3. Cover page:

"Page number of related photographs should be printed on cover page (60.66 per cent)" was the most important suggestion offered by the KFM subscriber farmers for cover page.

4. Other suggestions:

"Magazine should be available everywhere (60.00 per cent)", and "Advertising for magazine needed through radio and television during agricultural programme (53.33 per cent)" were the offered by KFM subscriber farmers for making the KRUSHIJIVAN farm magazine more effective.

6.5 Action Implication

When, it is said and done the question of the action oriented men to provide some concrete steps remains to be answered. Based on the findings of the study one can safely recommend following action implication:

1. The finding of this study would facilitated in knowing the characteristics of the KFM subscriber farmers and non-subscriber farmers, which will serve as a guidance for the planners, extension agencies, editors and scientists for planning and implementing such type of study.
Summary and Conclusions

2. Since, the distribution of the KFM subscriber farmers and non-subscriber farmers had fell under medium level of category with respect to personal, social, economic, psychological and communication characteristics studied, it implies that the KFM subscriber farmers of Vadodara district is in advance phase. Hence, the intensity of extension efforts should be based on modifying and manipulation in best possible way in developing an extension strategy to bring desired behavioural changes.

3. The findings of this study indicated that the gain in knowledge of KFM subscriber farmers about selected agriculture technology contributed significantly to the prediction of the gain in knowledge of selected agriculture technology. Hence, the extension agencies/personnel, SAUs, State Department of Agriculture, NGOs, fertilizer companies etc. should take note on this while deciding contents of farm magazine for peasantry to increasing and improving the knowledge of improved agriculture technology.

4. The results of this study, particularly the relationship between characteristics of the KFM subscriber farmers with gain in knowledge of selected agriculture technology would help the extension workers, editors, scientists and authors and their
Summary and Conclusions

organization in understanding the factors affecting the gain in knowledge of improved agricultural technology due to impact of KRUSHIJIVAN farm magazine.

5. The suggestions of the KFM subscriber farmers with regards to make KRUSHIJIVAN farm magazine more effective were: articles based on interview of progressive farmer by scientist, farmers' own experience and more articles on animal husbandry discipline should be given, information on use of byproducts, marketing, economic aspect and government subsidies/services as well as more photographs/figures should be given in a article, and KRUSHIJIVAN farm magazine should be available everywhere for farming community. Therefore, SAUs, State Department of Agriculture, Fertilizer companies, editors, publishers, scientists, authors etc. should pay attention to employ sincere efforts jointly.

Suggestions For Future Research

The present study has beamed on the new area for further research work. In the light of findings of the study, following studies can be taken:

1. Such type of studies may be conducted with more variables and more objectives which are not included in this study.
Summary and Conclusions

2. Similar research may be conducted to measure the impact of other farm magazine.

3. A comparative study to know the impact of farm magazine and other farm literature should be undertaken.

4. The area of research could be extended further and significantly large number of farmers could be studied to draw valid conclusions.

5. Such studies should be repeated after some lapse of time.

6. This study opens new vistas for studies related to farm journalism involving writers, editors, publishers, administrators, etc.
REFERENCES


References


References


References


References


INTERVIEW SCHEDULE

IMPACT OF KRUSHIJIVAN FARM MAGAZINE PERTAINING TO COGNITIVE DOMAIN ON SUBSCRIBERS

Respondent No.: __________
Name of the farmer: _______________________________________
Village: ________  Taluka: ________ District: ____________

PART I
GENERAL INFORMATION REGARDING SELECTED CHARACTERISTICS

1. **Age (in completed years)** :  
2. **Education** :  
3. **Social participation** :  

   Please indicate the name of organization(s) in which you hold position/membership.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Organization</th>
<th>Membership</th>
<th>Position held</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Village Panchayat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Taluka Panchayat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>District Panchayat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Co-operative Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Milk Producers’ Co-operative Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>District Co-operative Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Youth Club</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Participatory Irrigation Management Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Group member of ATMA project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Any other (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. **Market Intelligence:**

Here are some statements, kindly say Yes / No for the same

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Statements</th>
<th>Yes(1)</th>
<th>No(0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Knowing the better market locale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Choosing the right crop which has more demand in the market.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Choosing the right cropping pattern which fetch more export value
4. Avoiding middle man in the marketing channel
5. Selling produce after converting it into value added products
6. Selection of crops which has higher cost benefit ratio
7. Aware of browsing agriculture produce market details from the internet
8. Export to other States/Countries
9. Knowing market demand of different produces
10. Grading before selling

5. Economic Motivation:

Please state your opinion about the following statements by putting tick (✓) mark.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>UD</th>
<th>DA</th>
<th>SDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.+</td>
<td>A farmer should work towards higher yields and economic profits.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.+</td>
<td>The most successful farmer is one who makes the maximum profit.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.+</td>
<td>A farmer should try any new farming idea which may earn him more money.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.+</td>
<td>A farmer should grow high yielding cash crop to increase monetary profits in comparison to growing food crops for home consumption.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.-</td>
<td>A farmer must earn his living but the most important thing in life can’t be defined in economic terms.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.-</td>
<td>For better economic position a farmer have to develop other sources of income, other than agricultural.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SA = Strongly Agree, A= Agree, UD= Undecided, DA= Disagree, SDA= Strongly Disagree

6. Scientific Orientation:

Please read carefully each of the following statements and furnish your views regarding scientific orientation by putting tick (✓) mark.
<table>
<thead>
<tr>
<th>Sr.</th>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>UD</th>
<th>DA</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Scientific methods of farming always confuse me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Quality crop production is possible through use of science.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Adoption of new scientific agricultural methods is problematical process.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Scientific methods of farming are very impractical.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Profitable agricultural production is possible intervention of science and technology.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Application of science in farming means wastage of time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>I like to prefer agricultural scientific methods of crop production</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>I believe in traditional method of farming.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>In my opinion use of science in agriculture means fruitful results.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Sustainable agriculture is possible through application of science in agriculture.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Agricultural scientific methods increase crop production.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Agricultural scientific methods require high infrastructural facilities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SA = Strongly Agree, A = Agree, UD = Undecided, D = Disagree, SD = Strongly Disagree

7. **Risk Orientation:**

Please read carefully each of the following statements and furnish your views regarding risk orientation by putting tick (✓) mark.
### Appendix

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>UD</th>
<th>DA</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.+</td>
<td>I am confident on my ability to take challenges for any type of agricultural risk.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.-</td>
<td>I don't like to use any agricultural risk creating methods.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.+</td>
<td>I am ready to bear risk for high profit in agriculture.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.+</td>
<td>I like to take challenge in adopting costly agricultural methods.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.-</td>
<td>I like to follow only those methods which are successfully accepted by other farmers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.+</td>
<td>I feel people with in tented risk bearing capacity are always stepping the top.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.-</td>
<td>I feel fear that something unexpected might damage my plans of adopting new Agricultural technology.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.+</td>
<td>I can minimize the consequence of risk in agriculture by proper planning.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.+</td>
<td>I can reduce the effect of any risk in agriculture by proper execution.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I feel that accepting realistic risk in agriculture is not always hazardous resolution.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SA** = Strongly Agree, **A** = Agree, **UD** = Undecided, **D** = Disagree, **SD** = Strongly Disagree

### 8. Reading behaviour:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Item</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Purpose of reading the farm literature</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Reading as a habit</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>b. For time passing</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>c. To gain knowledge</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>Reading habit of the farm literature</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Read it according to convenience</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>b. Read it at a time</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Time spared for reading</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Weekly one hour or less</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>b. Weekly more than one hour</td>
<td>2</td>
</tr>
</tbody>
</table>
### 4. Use of information read

<table>
<thead>
<tr>
<th>Item</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily one hour or less</td>
<td>3</td>
</tr>
<tr>
<td>Daily more than one hour</td>
<td>4</td>
</tr>
</tbody>
</table>

9. **Innovativeness:**

Kindly furnish your innovativeness by putting tick mark against the following statement with which you are agree.

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Responses</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>As soon as it is brought to my knowledge</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>After I have seen it adopted by other members successfully</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Prefer to wait and take my own time</td>
<td>1</td>
</tr>
</tbody>
</table>

10. **Extension participation:**

Have you participated in any of the following extension activities during last year?

<table>
<thead>
<tr>
<th>Sr.no</th>
<th>Activities</th>
<th>Yes(1)</th>
<th>No(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Conducted demonstration on my farm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td>Had discussion with extension worker</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c)</td>
<td>Participated in field days on farmers field</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d)</td>
<td>Participated in extension meeting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e)</td>
<td>Saw demonstration plot of my neighbour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f)</td>
<td>Participated in krishiMela/Farmers Day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(g)</td>
<td>Visited to agricultural exhibition</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. **Mass media exposure:**

<table>
<thead>
<tr>
<th>Sr.no</th>
<th>Type of exposure</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Always (4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Frequently (3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Occasionaly (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Never (1)</td>
</tr>
<tr>
<td>1</td>
<td>Radio</td>
<td></td>
</tr>
</tbody>
</table>
PART-II

KNOWLEDGE LEVEL OF THE RESPONDENTS REGARDING SELECTED AGRICULTURE TECHNOLOGY

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Selected Agriculture Technology</th>
<th>Correct(1)/Incorrect(0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td><strong>SOIL RELATED QUESTIONS:</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>How do you take the soil sample?</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Where do you send the soil sample for analysis?</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Give the benefits of soil testing.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Have you take soil health card after analysis of your soil sample? Yes/no</td>
<td></td>
</tr>
<tr>
<td>B.</td>
<td><strong>SEED RELATED QUESTIONS:</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Can the seeds of improved variety be sown in next year?</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Give the name of improved variety.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Can the seeds of hybrid variety be sown in next year?</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Give the name of hybrid variety.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Give the benefits of seed treatment.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>State the names of seed bourn diseases?</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>How much quantity of fungicide is required for seed treatment per one kilogram seed?</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Which type of culture treatment is to be applied to seeds of pulses?</td>
<td></td>
</tr>
<tr>
<td>C.</td>
<td><strong>FERTILIZER RELATED QUESTIONS:</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>What are the major nutrients required for growing crop?</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>What is the percentage of nitrogen in urea fertilizer?</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Which chemical fertilizers are used as basal dose?</td>
<td></td>
</tr>
</tbody>
</table>

2. Television
3. Newspaper
4. Farm Magazine
5. Campaign
6. Others


<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Selected Agriculture Technology</th>
<th>Correct(1)/Incorrect(0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ii.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>What is green manuring?</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Give two name of green manures crop. 1.</td>
<td>2.</td>
</tr>
<tr>
<td>6.</td>
<td>What is vermicompost?</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>What is bio-fertilizer?</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Give the name of bio-fertilizers</td>
<td>i.</td>
</tr>
<tr>
<td></td>
<td>ii.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Which micronutrients fertilizer is used for zinc deficiency</td>
<td></td>
</tr>
</tbody>
</table>

**D. IRRIGATION MANAGEMENT RELATED QUESTIONS:**

1. State the benefits of drip/sprinkler irrigation method.
   i.                                                     
   ii.                                                   

2. What is fertigation?

3. State the benefits of fertigation?
   i.                                                   
   ii.                                                  

4. Give the critical stages of any crop for irrigation?

**E. WEED RELATED QUESTIONS:**

1. State the disadvantages of weeds.
   i.                                                   
   ii.                                                  

2. Give the names of monocot weeds.
   i.                                                   
   ii.                                                  

3. Which method is best for weed control?

4. Give the name of one weedicide.

**F. PLANT PROTECTION RELATED QUESTIONS:**

1. What is biological control?

2. Give the name of predator.

3. Give the name of parasite.

4. For what purpose, pheromone trap is used?

**G. VALUE ADDITION:**

1. What is value addition?
### Appendix

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Selected Agriculture Technology</th>
<th>Correct(1)/Incorrect(0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>State the benefits of value addition.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>i.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Give the name of methods for value addition.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>i.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Which certificates is required for the export of value added products?</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Which value added products are made from fruit crops?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>i.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii.</td>
<td></td>
</tr>
</tbody>
</table>

### PART-III

**SUGGESTIONS FROM THE KFM SUBSCRIBER FARMERS TO MAKE THE KRUSHIJIVANHI FARM MAGAZINE MORE EFFECTIVE**

What would you like to suggest for increasing the effectiveness of KRUSHIJIVAN Farm magazine.

A. Subjects of articles :
   a.  
   b.  
   c.  
   d.  

B. Nature of articles :
   a.  
   b.  
   c.  
   d.  

C. Cover page :
   a.  
   b.  
   c.  
   d.  

D. Other suggestions :
   a.  
   b.  
   c.  

8
Appendix

d.
## APPENDIX – II

### DISTRIBUTION OF ‘KRUSHIJIVAN’ LIFE MEMBERS

<table>
<thead>
<tr>
<th>Sr.no.</th>
<th>Name of district</th>
<th>No. of life members</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ahmedabad</td>
<td>2662</td>
</tr>
<tr>
<td>2.</td>
<td>Amreli</td>
<td>2236</td>
</tr>
<tr>
<td>3.</td>
<td>Bharuch</td>
<td>1302</td>
</tr>
<tr>
<td>4.</td>
<td>Banaskantha</td>
<td>1082</td>
</tr>
<tr>
<td>5.</td>
<td>Bhavnagar</td>
<td>2559</td>
</tr>
<tr>
<td>6.</td>
<td>Gandhinagar</td>
<td>486</td>
</tr>
<tr>
<td>7.</td>
<td>Jamnagar</td>
<td>811</td>
</tr>
<tr>
<td>8.</td>
<td>Junagadh</td>
<td>4001</td>
</tr>
<tr>
<td>9.</td>
<td>Kutch</td>
<td>890</td>
</tr>
<tr>
<td>10.</td>
<td>Kheda</td>
<td>2705</td>
</tr>
<tr>
<td>11.</td>
<td>Mahsana</td>
<td>2188</td>
</tr>
<tr>
<td>12.</td>
<td>Panchmahal</td>
<td>755</td>
</tr>
<tr>
<td>13.</td>
<td>Rajkot</td>
<td>2248</td>
</tr>
<tr>
<td>14.</td>
<td>Saberkantha</td>
<td>2071</td>
</tr>
<tr>
<td>15.</td>
<td>Surat</td>
<td>2076</td>
</tr>
<tr>
<td>16.</td>
<td>Surendranagar</td>
<td>2568</td>
</tr>
<tr>
<td>17.</td>
<td>Valsad</td>
<td>1458</td>
</tr>
<tr>
<td>18.</td>
<td><strong>Vadodara</strong></td>
<td><strong>3074</strong></td>
</tr>
<tr>
<td>19.</td>
<td>Others</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>GRAND TOTAL</td>
<td>35472</td>
</tr>
</tbody>
</table>
Fig. 1. CONCEPTUAL MODEL OF THE STUDY
Dabhoi Taluka : 1) Dabhoi, 2) Kudhela, 3) Timbi, 4) Lingsthali, 5) Mandali, 6) Borbar, 7) Vadhvan
Sankheda Taluka : 1) Makani, 2) Bahadarpur, 3) Chikhodra, 4) Bhatpur, 5) Amalpur, 6) Gundich, 7) Aridha

**FIG 2: MAP OF GUJARAT STATE SHOWING SELECTED TALUKAS AND THEIR VILLAGES IN VADODARA DISTRICT UNDER STUDY**
FIG 13: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR EXTENSION PARTICIPATION

KFM subscriber farmers
Non-subscriber farmers
FIG: 3 DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR AGE

- **Young (up to 30 years)**
- **Middle (31 to 50 years)**
- **Old (Above 51 years)**

- KFM subscriber farmers
- Non-subscriber farmers
FIG:4 DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR EDUCATION

- KFM subscriber farmers
- Non-subscriber farmers
FIG 5: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR SOCIAL PARTICIPATION
FIG 6: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR MARKET INTELLIGENCE

- Low (Below 3 score)
- Medium (3 to 7 score)
- High (Above 7 score)

KFM subscriber farmers
Non-subscriber farmers
FIG 7: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR SCIENTIFIC ORIENTATION
FIG 8: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR INNOVATIVENESS

KFM subscriber farmers
Non-subscriber farmers
FIG 9: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR RISK PREFERENCE

- Low (Below 33 score)
- Medium (33 to 42 score)
- High (Above 42 score)

- KFM subscriber farmers
- Non-subscriber farmers
FIG 10: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR ECONOMIC MOTIVATION

![Bar chart showing distribution of KFM subscriber farmers and Non-subscriber farmers according to economic motivation levels.](chart_image)
FIG 11: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR READING BEHAVIOUR
FIG 12: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR MASS MEDIA EXPOSURE
FIG 13: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR EXTENTION PARTICIPATION

- KFM subscriber farmers
- Non-subscriber farmers