



STUDY OF MASS MEDIA SOURCES OF INFORMATION IN PRODUCTIVITY ENHANCEMENT AS PERCEIVED BY FARMERS OF DISTRICT NAUSHAHRO FEROZE

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KeyWords

Education; Land ownership; Media; agricultural information; Farmer's perception.

ABSTRACT

The survey was conducted during 2017 to examine the role of mass media in dissemination of agricultural technology among the farmers of district Naushahro Feroze and the respondents were examined for their demographic characteristics and the aspects related to the role of mass media in dissemination of agricultural technology for productivity enhancement. The research study was conducted in the district of Naushahro Feroze to explore the role of mass media in the development of the agricultural production. The information through mass media include telecasting, broadcasting, print media and personal visits of Agricultural extension services and private institutions for diffusion of new technologies and techniques for improvement in the crops yield. During data collecting it was observed that mostly people live in extended families together with married and unmarried brothers and unmarried sisters under the leadership of their father, who seems the chief of household decision making apart of agricultural activities. In case of education, the data shows that only 31 percent attended formal education system where as religious education obtained through mosques and madrasahs were about 16 percent. In terms of agricultural land ownership, about 75 percent of respondents had personal land ownership, the rest were either share tenants or landless laborers. Majority of the agricultural farmers had more than 10 years crop cultivation experiences. The data reveals that majority of farmers that is 63percent using traditional varieties of seeds. It was reported during the data collection that about 52 percent of respondents get agricultural based knowledge through television followed by radio programs and other print media such as pamphlets, agro-based magazines and newspapers. Majority of respondents that is about 66 percent informed that sources of media was easily accessible, however, the agricultural programs often missed out due to electric outages. The sources such as print media were easily available from the nearest towns. The better timings of such programs on television or radio were suggested from the majority of the respondents between 7.pm to 9.00 pm. The respondents' seemed pessimist when asked about the availability of government agricultural extension services. No visits were reported of the agricultural extension agents in the study areas to guide the farmers from the improved technologies and techniques of crop cultivation and better irrigation applications.

1. INTRODUCTION

Pakistan is predominantly an agricultural country. Although its economy has undergone considerable diversification over the years, yet agriculture is still the largest sector of the economy. With its present contribution to GDP at 20.3%, it accounts for 42.1% of the total employed labour force and is the largest source of foreign exchange earnings (Government of Pakistan, 2016). Inspire of such a great importance, agriculture in Pakistan is developing at a low speed. Khan (2012) revealed that our agricultural production is much lower than many other developing countries of the world. Moreover, there is a big gap between actual yield and attainable potential yield of our crops. It clearly indicates that the available technologies, if adopted by farmers according to the recommendations, can enhance agricultural production considerably. Therefore, there is a dire need to apply science and technology in the field of agriculture. In this context, farmers need adequate information exposure to the latest technologies.

Research has shown that by and large farmers' information exposure is most likely to be an important factor influencing their adoption behaviour. Of course, greater exposure is likely to enhance awareness about the latest recommendations and to lead to farmers putting these recommendations into practice in a precise manner (Muhammad & Garforth, 2015). In order to achieve this objective, the extension agencies are disseminating new technologies through different means including mass media (radio, TV & print media). Personal, face-to-face discussions, which come under individual and group categories, have their own strengths and weaknesses (Purushothaman et al. 2013). One of their limitations is that they cannot cover all farmers of the community. So mass media such as radio, TV and printed materials are only source to reach large number of farmers in less time period. These methods are particularly useful in making large number of people aware of new ideas and practices, or alerting them to sudden emergencies. While the amount of detailed information that can be transmitted by mass media is limited, they can serve an important and valuable function in stimulating farmers' interest in new ideas. Once stimulated or made aware through mass media, farmers may seek additional information from neighbours, friends, extension workers or progressive farmers in the area (Purushothaman et al. 2013).

A similar kind of study conducted in Faisalabad district in 2015 has established that by and large mass media proved relatively popular among the farming community (Muhammad & Garforth, 2015). The cost of extension advice through mass media comes to be considerably low as compared to individual and group methods (Umaru, 2014). However, the mass media involve one-way communication from information source to the receivers. They have some limitations, delayed feedback is one of some disadvantages. The creation awareness among the masses is the first step towards the adoption process. Mass media (electronic & print media) are playing very important role in creating awareness about new agricultural technologies among farmers. Mass media are spreading agricultural technologies to the farmers at faster rate than personal contacts (Mahmood and Sheikh, 2015).

Khushk and Memon (2014) stated that production and distribution of printed material helps farmers in the transfer of new information and technologies. Printing helps in preserving the technologies in the shape of books/booklets, magazines, newspapers and brochures. According to a study conducted in the central Punjab, majority of the farmers consulted pamphlets, magazines, and newspapers for getting the information regarding sugarcane production technologies. A study conducted in the central Punjab showed that more than 56 per cent farmers listened/watched agricultural programmes on radio and television. These were regarded as the most suitable forms of print media for adoption of sugarcane production technologies (Mirani, 2013).

Farm publications have proved to be effective means for dissemination of information, especially to introduce new technologies. Farm publications are also useful for disseminating information among literate farmers (Singh and Laharia, 2011). Radio is a tool for the delivery of quick information. Television is a powerful medium of information exchange in these days. The common electronic media via; radio and TV are regarded as very effective in Communicating the latest knowledge to the farmers. Radio and television are the most effective tools in communication for the support of development (Hussain, 2013 Kapoor (2011) stated that all the respondents regarded print media and fellow farmers as their major sources of agricultural information followed by TV (80.83%) and radio (75%). As far as the correctness of the information was concerned, books/booklets were at the top with 100% positive responses followed by magazines (95%), pamphlets (95%) and posters (90%). The present study is designed to see the role of mass media (radio, TV & print media) in the dissemination of agricultural technologies among farmers.

2. Objectives

1. To identify the effectiveness of mass media as a source of information for transfer of agricultural technologies
2. To determine the level of farmers perception and adoption of agriculture practices disseminated through mass media
3. To suggest and develop effective model of information for productivity enhancement

3. MATERIALS AND METHODS

The study on role of mass media in dissemination of agricultural information was carried out during the year 2017 in district Naushahro Feroze. The majority of the people in the study area are predominantly agricultural farmers who engaged in cultivation of various types of crops and rearing of animals. The study area lies on the border line of Sindh province and hence most of the traditions and cropping patterns are similar to those adopted in Sindh province by the farming communities.



FIGURE 3.1 MAP OF DISTRICT NAUSHAHRO FEROZE

3.2 Sampling procedure & sample size

A multistage sampling technique was used to select five union councils of district Naushahro Feroze, and from each union council, 2 villages were selected and from each village ten farmers were randomly sampled, giving a total sample size of one hundred (100) respondents.

3.3 Data collection methods

The data for this study were generated through the use of structured questionnaires which were administered with the help of trained enumerators. The questionnaires were structured and the questions were mostly to cover relevant information about the general socio-economic characteristics of the farmers, such as age, sex, educational level, farm size, marital status; major sources of media available; level of information utilized; farming experience; house hold size, general problems encountered with media usage and relevancy of information sources.

3.4 Questionnaire Design

Questionnaire was developed in such a way to collect the information from the respondents in the study area. The structured questionnaire was finalized with the consultation of the senior faculty members of the department. The data was collected through personal interview using the questionnaire by the researcher himself to get the valid in-

formation from the respondent farmers. The structured interview schedule contained items concerning personal and collective socio-economic characteristics focusing the objectives of the study.

3.5 Analysis of data

Data was analyzed by calculating means, percentage and Grand point Averages for individual importance. Ranking of the importance were assigned by the researcher based on mean score using Likert scale. The data thus analyzed were interpreted in view of the analysis.

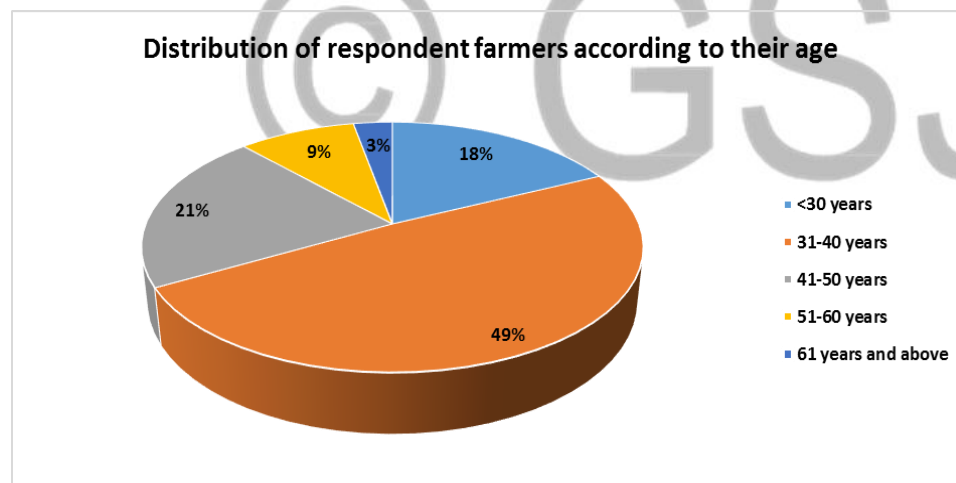
4. Results

The role of mass media in dissemination of agricultural technology among the farmers of district Naushahro Feroze was assessed during the year 2017. The respondents were examined for their demographic characteristics and the aspects related to the role of mass media in dissemination of agricultural technology. The data on various demographic characteristics and other study features are presented in figure 1 to 20 and Fig.1

4.1 Age of respondents

The respondent farmers were categorized in various age groups such as <30 years, 31-40 years, 41-50 years, 51-60 years and 61 years and above and the data are given in Table-1. The data exhibited that majority of the respondents (49%) belonged to the age group of 31-40 years, about 21 percent of the farmers involved in this study area were 41-50 years old; while 18.00 percent of the respondent farmers were below 30 years of age. However, around 9 percent farmers belonged to age group of 51-60 years; while approximately 3 percent of the agriculture farm operators were older than 61 years. The study showed that the selection of respondent farmers in the study area was logically purposeful to involve the farmers of all ages for establishing a balanced sample in relation to their life experience.

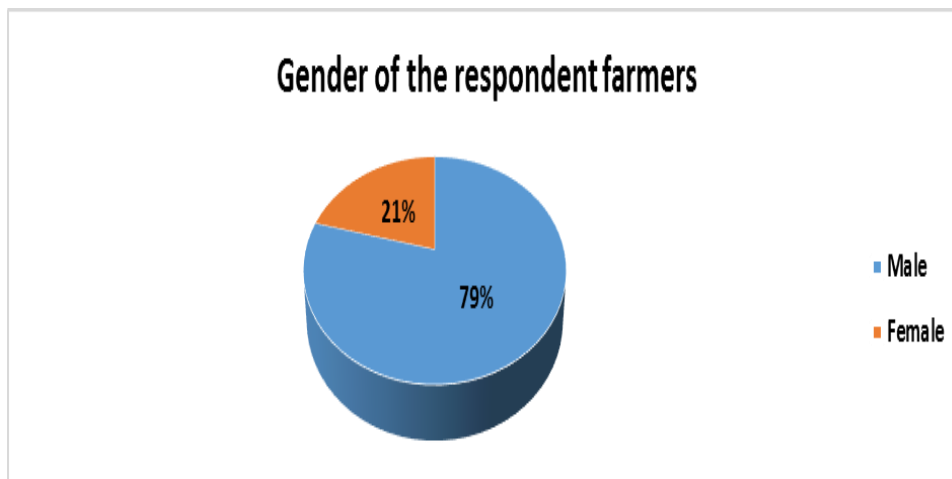
Figure-1 Distribution of respondent farmers according to their age in District Naushahro Feroze N=100



4.2 Gender of respondents

In the rural societies, both man and women shares the agricultural activities and for knowing the extent of gender based share in the farming activities, the general based information of the respondent farmers were also included and the data are presented in Figure-2.

Figure-2 Gender of the respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze N=100

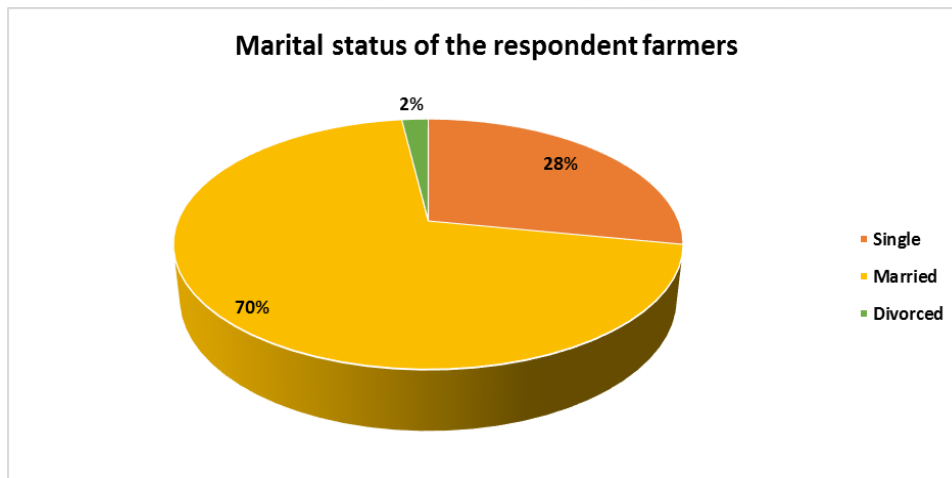


The above table indicates that 79 percent of the respondents were the male households involved in the agricultural farm activities, while the participation of female farm workers was 21 percent. This indicates that almost 1/5th portion of the total strength of the workers involved in agricultural farming was based on the women workers, which is a significant contribution of women in the study area in meeting the household expenses through agriculture farming.

4.3 Marital status

Studying marital status is meant to know status of the people in the society and hence the respondents were categorized as single, married, divorced and widowed. The data on these characteristics are presented in Figure-3.

Figure-3 Marital status of the respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze N=100

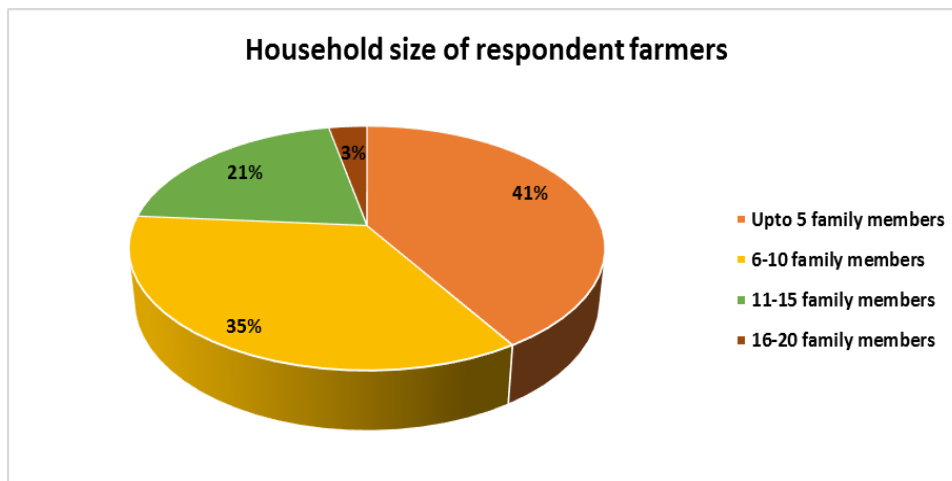


The above data reveal that majority of the respondents (70%) were living a normal married life, and only 28 percent respondents disclosed that they are yet to be married. The data further indicated that 2 percent were noted as divorced respondents.

4.4 Household size of respondents

The respondents were also enquired for their type of family in the household and size of the family. The household size was categorized as upto 5 family members, 6-10, 11-15, 16-20 and more than 21 family members. The information in regards to household size of the respondents in Naushahro Feroze district is shown in Figure-4.

Figure-4 Household size of respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze N=100

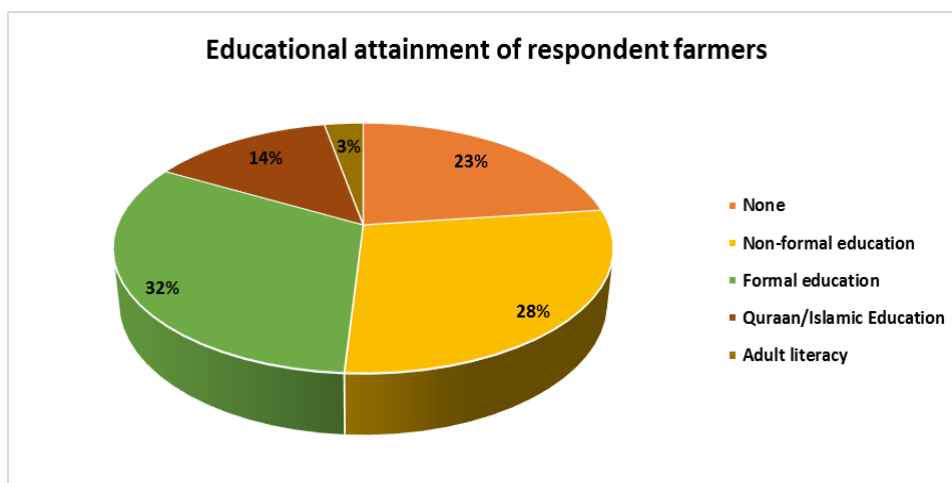


The data in Figure-4 indicated that majority of the respondents (21%) possessed families comprised of 11-15 members, while 35 percent respondents having families with 6-10 family members. Up to 5 family members have been reported by 41 percent respondents and only 3 percent of the respondents reported are 16-20 members in a household. This indicates that there was a strong joint family system in the study area.

4.5 Educational Attainment

The education attainment among the farmers of district Naushahro Feroze was assessed and respondents were distributed for non-formal education, formal education, Quraan/Islamic education, adult literacy and no education (none). The data on the status of educational possessed by various respondents are shown in Figure-5.

Figure-5 Educational attainment of respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze N=100

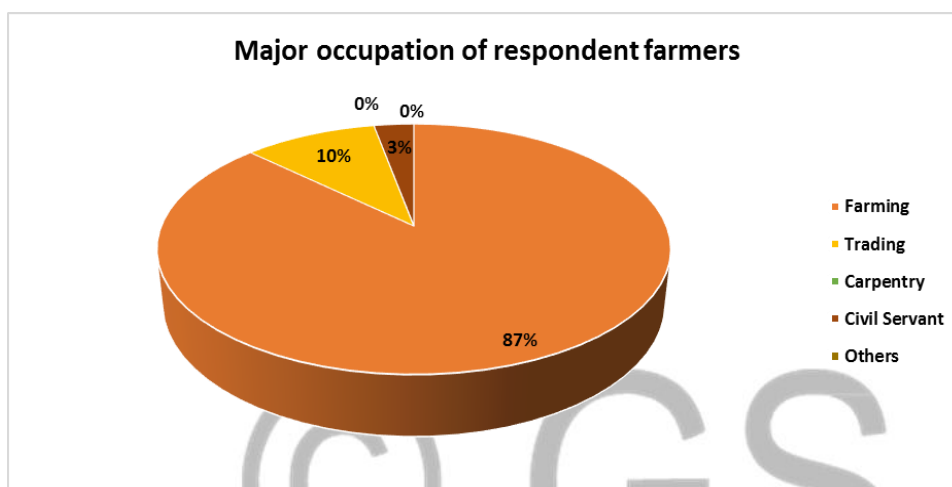


The above figure shows that 32 percent of the farmers possessed formal education and 28 percent of the respondents possessed non-formal education. However, 23 percent of the respondents did not possess any education, while 14 percent possessed religious education; while 3 percent had attended adult literacy programs in the past. This indicates that formal education possessed by even less than 1/3rd of the farmers, while 2/3rd of the having no schooling.

4.6 Major occupation of respondents

The farmers of the Naushahro Feroze district were also asked to perceive on their major occupation and some major occupations were offered including agricultural farming, trading, carpentry, civil servants and others. The perceptions of the respondents on these aspects are shown in Figure-6.

Figure-6 Major occupation of respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze N=100

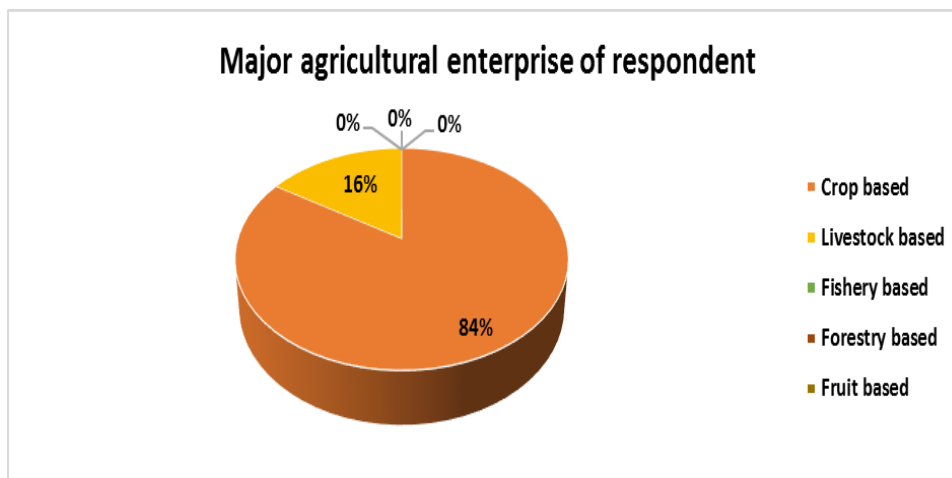


The data in the figure-6 show that a high majority (87.00%) of the respondents involved in the agricultural farming only; while trading was the occupation of 10 percent respondents. However, 3 percent respondents reported that they are civil servants. This indicates that agricultural farming is the dominating occupation of the people in the study area.

4.7 Major agricultural enterprises

The agricultural enterprises comprised of the crop based, livestock based, fisheries based, forestry based and fruit based; and the respondents were enquired for their major agricultural enterprise and the data are given in Figure-7.

Figure-7 Major agricultural enterprise of respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze N=100

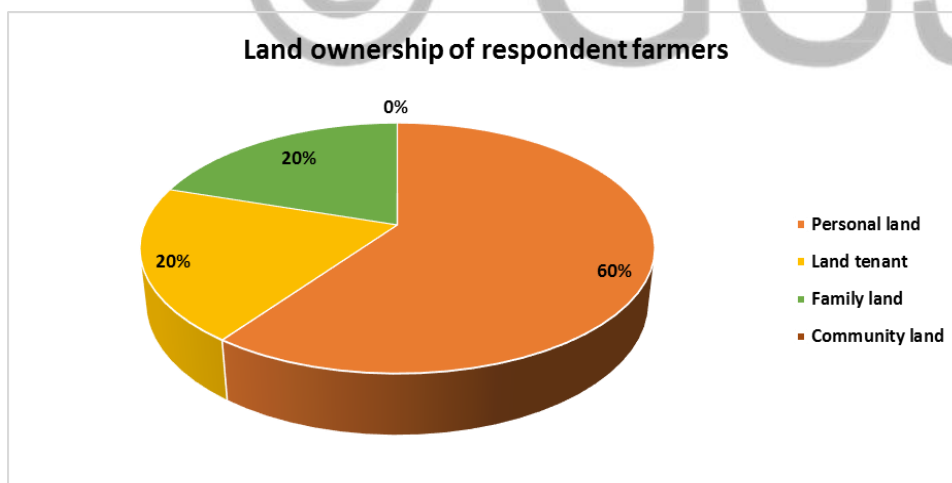


The data in the above figure show that a high majority of the farmers (84.00%) possessed crop based agricultural enterprise, while the remaining 16 percent of the respondent farmers depending on the rearing of livestock enterprise. This indicates that the District Naushahro Feroze is purely a crop based and livestock based economy and most of the farming communities survived and engaged on these enterprises.

4.8 Land ownership status

The land ownership status of the respondents in district Naushahro Feroze was assessed and land ownership status was described as personal land, land tenant, family land and community land. The data in accordance with the responses of the farmers are presented below in Figure-8.

Figure-8 Land ownership of respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze N=100

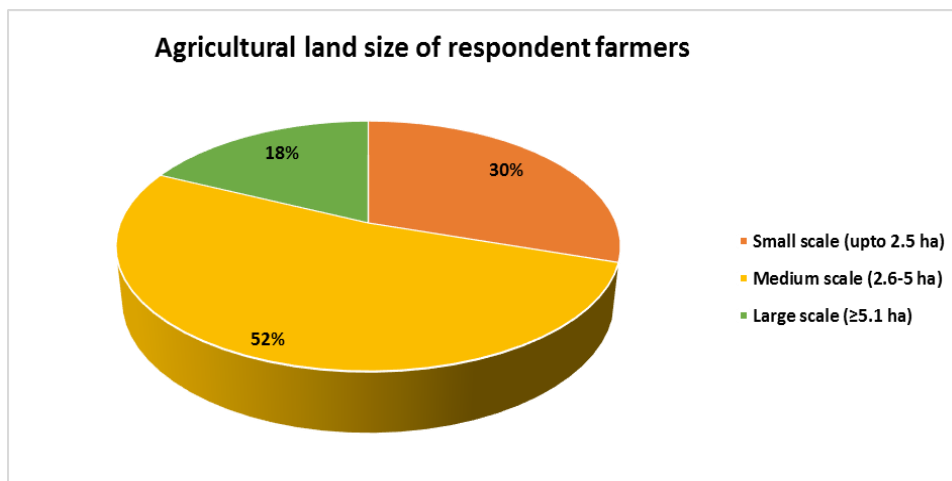


The data (Figure-8) indicated that 60 percent of the respondents had personal land, while 20 percent of the respondents were the land tenants. However, family land was possessed by 20 percent of the respondents. None of the respondents possessed the community land. This indicates that most of the agricultural land in Naushahro Feroze district is possessed by the landlords.

4.9 Agricultural land size

The size of the land holding by the respondent farmers in district Naushahro Feroze was enquired and land holding was categorized as small scale (up to 2.5 ha), medium scale (2.6-5 ha) and large scale (>5.1 ha). The data based on the perceptions of respondents in the study area are shown in Figure-9.

Figure-9 Agricultural land size of respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze N=100

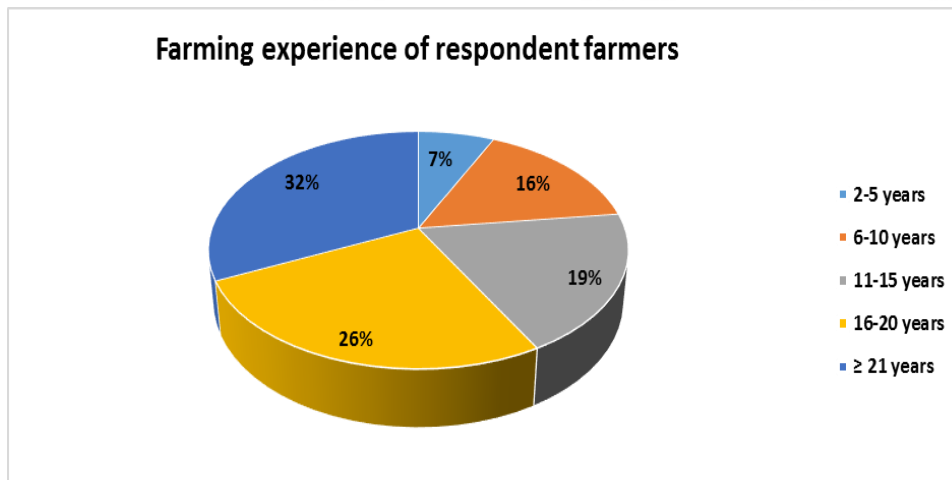


It was noted from the data (Figure-9) that majority of the farmers (52.00%) possessed medium scale agricultural land size (2.6-5 ha), and 18.00 percent of the respondents possessed large scale agricultural land size (>5.1 ha), while small scale agricultural land size (up to 2.5 ha) possessed by 30.00 percent respondents. The data showed that most of the farmer’s possessed medium to large scale agricultural land size in the study area of Naushahro Feroze.

4.10 Farming experience

The respondents were also asked to perceive on their farming experience and responses were managed according to the length of their experience in years and the data is presented in Figure-10.

Figure -10 Farming experience of respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze

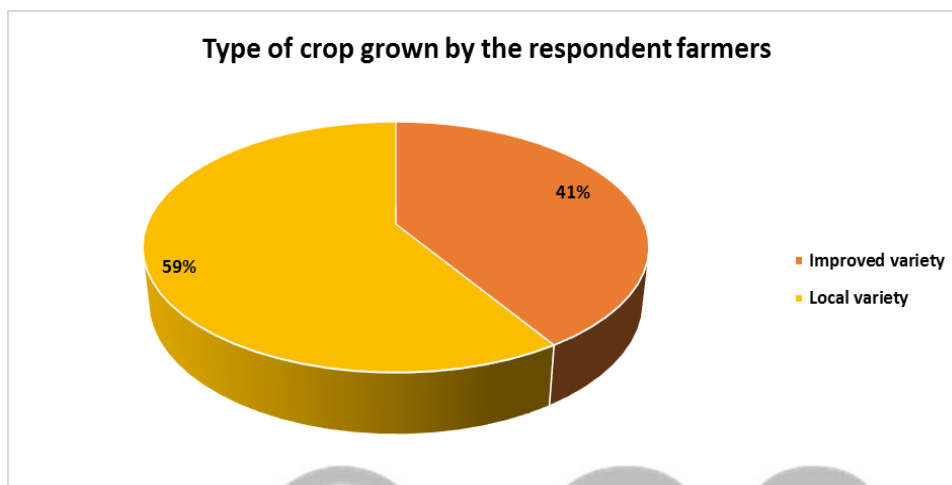


The data in the above table showed that majority of the respondent farmers (32.00%) possessed more than 21 years farming experience, 26 percent of the respondent farmers possessed 16-20 years farming experience. Similarly, 19 percent of the respondents possessed 11-15 years of farming experience, 6-10 years farming experience was reported by 16 percent respondents. Similarly, 2-5 years’ experience has been reported by 7 percent. This indicates that high majority of the respondents possessed more than 10 years farming experience.

4.11 Type of crop grown

The type of crop grown by the farming communities in Naushahro Feroze district was enquired to assess the development and awareness of people for high yielding crop varieties. The respondents were asked whether they cultivate improved crop varieties or rely still on the traditional crop varieties. The responses of the farmers are reported in Figure-11.

Figure -11 Type of crop grown by the respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze N=100

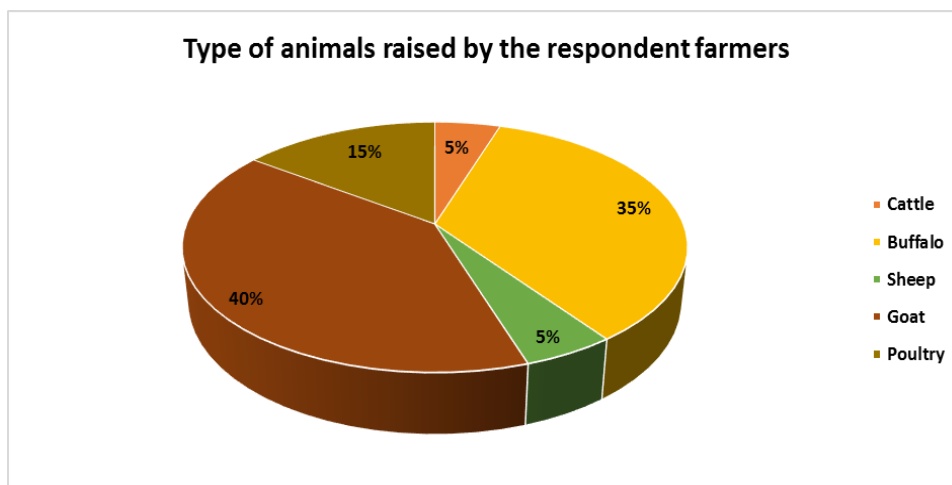


The data in Figure-11 shows that majority of the farmers (59.00%) in the Naushahro Feroze district still cultivate traditional/local varieties; while 41 percent of the farmers adopt improved crop varieties. This indicates that the awareness of farming communities towards improved/high yielding crop varieties is not upto the desired level. Extensionists must sense the situation, and the awareness among the farmers may be development regarding the need and benefits of improved crop varieties.

4.12 Type of animals raised

The farmers were also asked to disclose about the type of animals they keep for their survival and to cater the household needs regarding milk, meat, eggs etc. and their responses are provided in Figure-12.

Figure-12 Type of animals raised by the respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze

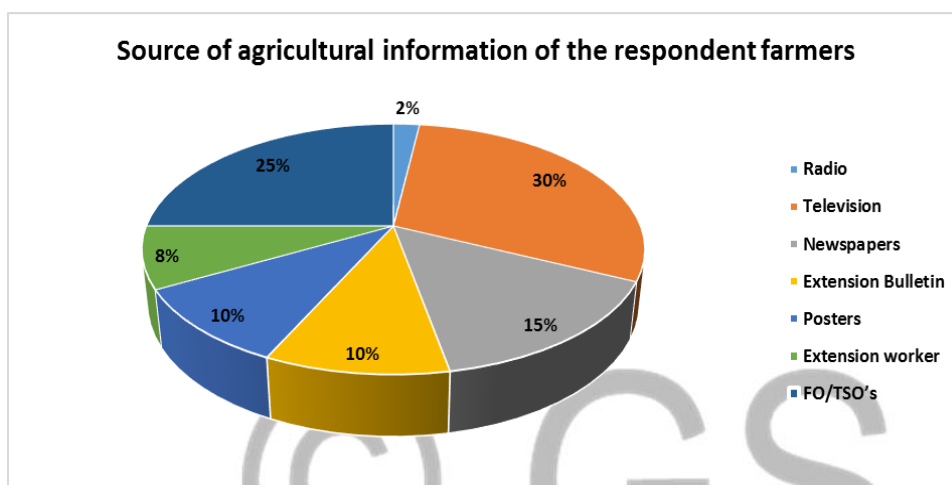


Data in Fig.m 12 shows that majority of animals reared by respondents are buffaloes (35%). Cattles and sheep comprise 5 percent each respectively. Goats' ratios in the livestock were 15 percent. The chicken rearing is observed common in the study areas which were about 40 percent. Chicken are reared for home consumption for meat and eggs and some cases it becomes the source of income as well.

4.13 Source of agricultural information

The respondents were asked to about the sources of agricultural information. In response the respondents described certain sources of information which included radio, television, newspapers, extension bulletin, posters and extension worker. The data so collected are presented in Figure-13.

Figure-13 Source of agricultural information of the respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze

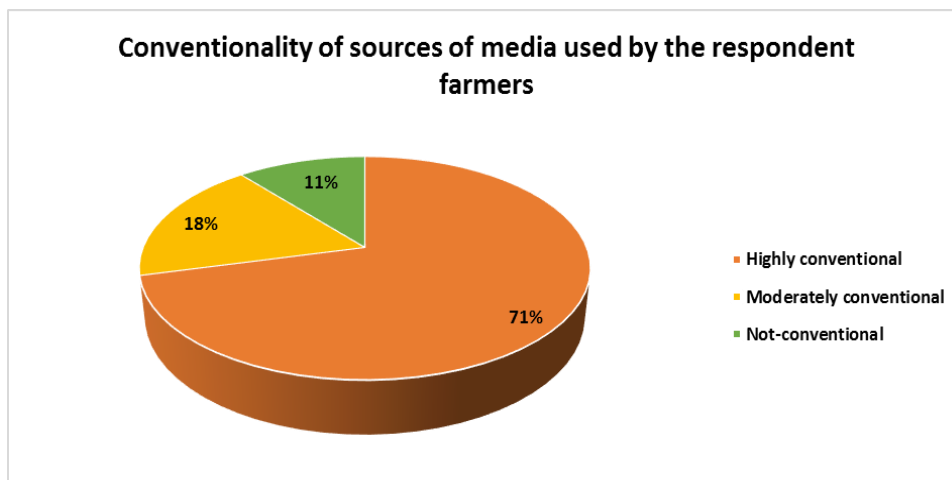


The data in the above table exhibited that majority (30.00%) of the farmers in the study area supposed television as the major source of agricultural information for them, while radio was the source of agricultural information for 25 percent respondents; while 10 percent respondents informed posters/leaflets as the major source of agricultural information, while 15 percent respondents relied on newspapers and 15 percent relied on extension bulletin; whereas, none of the respondents indicated extension worker as the source of agricultural information. The respondents were seemed pessimistic about the government Agricultural Extension Services.

4.14 Conventionality of sources of media

The conventionality of the source of media used by the respondents in Naushahro Feroze district was recorded on the basis of three conventionality ranking including highly conventional, moderately conventional and non-conventional. The responses of the farmers are given in Figure-14.

Figure-14 Conventionality of sources of media used by the respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze N=100

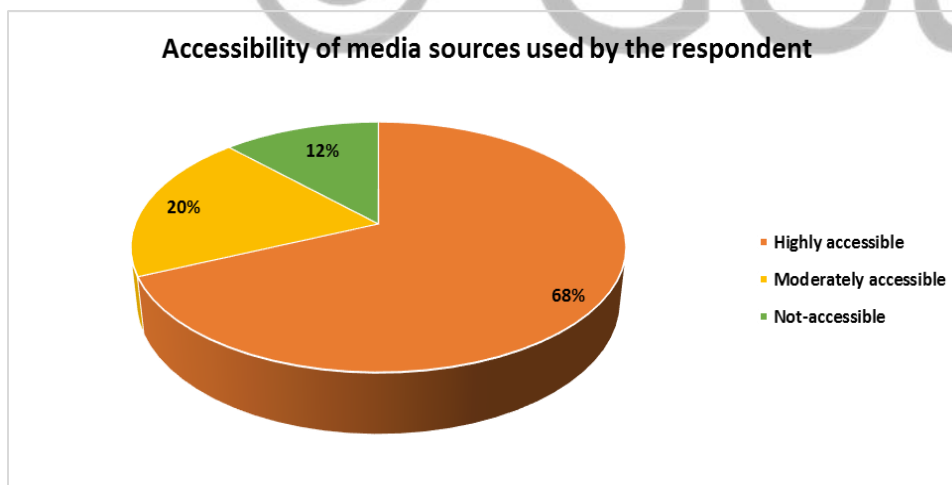


The data in above Figure show that 71.percent of the respondents perceived that the sources of media used in the area are highly conventional, while 18 percent of the respondents indicated that the source of media for agricultural information was moderately conventional. However, 11 percent of respondents perceived that the source of media for agricultural information is not conventional. This indicated that there is need to improve the situation regarding the sources of media for agricultural information in the study area.

4.15 Accessibility of media sources for agriculture information

Accessibility of media sources used by the respondent farmers in District Naushahro Feroze was determined and accessibility was assessed on the basis of ranking as highly accessible, moderately accessible and not accessible. The responses of the farmers on this aspect are presented in Figure-15.

Figure-15 Accessibility of media sources used by the respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze N=100

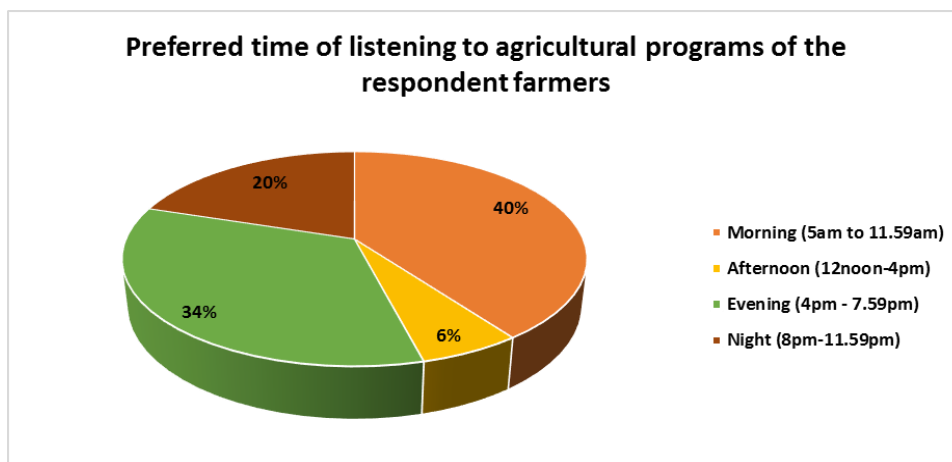


The data in fig.15 shows that majority of the respondents (67.00%) perceived that the sources of media for agricultural information was highly accessible, while 19 percent of the farmers perceived moderately accessible and the 12 percent of the respondents perceived that the sources of media for agricultural information was not accessible. This indicates that, although the source of media for agricultural information was moderately to highly accessible, but due to lack of motivation of the extension providers and other sources of information, the productivity improvement is not desirable.

4.16 Preferred time of listening to agricultural programs

The preferred time of listening to the agricultural programs was enquired from the respondents in the study area and they were offered various time schedules for listening to agricultural programs. The data based on the responses of farmers regarding preferred time of listening to agricultural programs is presented in Figure-16.

Figure -16 Preferred time of listening to agricultural programs of the respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze N=100

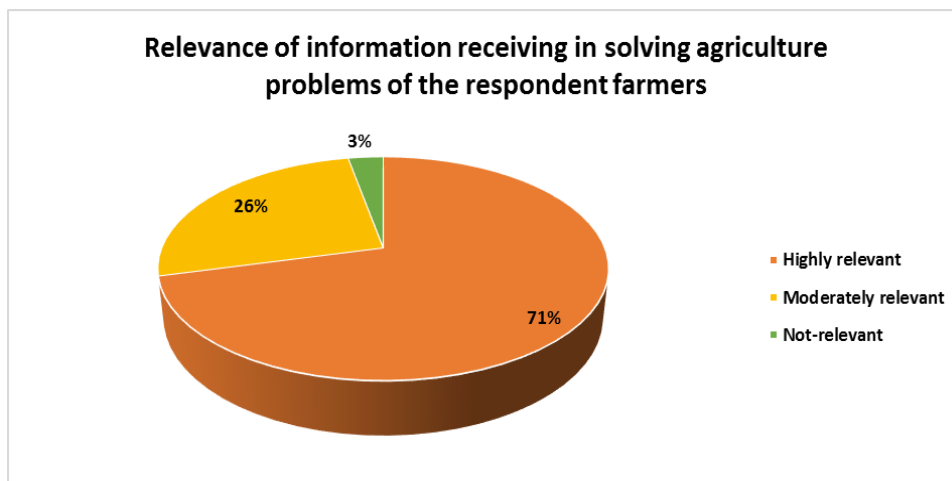


The data in Figure-16 showed that majority of the respondents (20.00%) supposed to prefer listening to agricultural programs between 8pm to 11.59pm, 34 percent respondents showed preference for listening to agricultural programs from 4pm-7.59pm; while 40.00 percent of the respondents showed their preference for listening to agricultural programs during 5am to 11.59am time period. However, 6.00 percent of the respondents supposed to prefer listening to agricultural programs during 12noon to 4pm.

4.17 Relevance of information receiving in solving agriculture problems

The farmers in the Naushahro Feroze district were also enquired for relevance of information receiving through mass media in solving agriculture problems and level of relevance was described as highly relevant, moderately relevant and not relevant and accordingly the responses are shown in Figure-17.

Figure-17 Relevance of information receiving in solving agriculture problems of the respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze

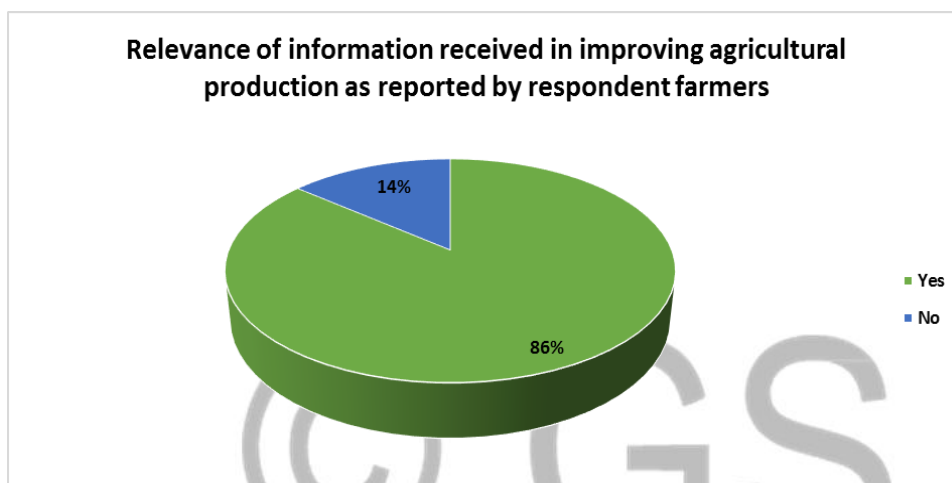


The results of the survey showed that majority of the respondents (71.00%) considered the information receiving through mass media is highly relevant in solving agriculture problems; while 26 percent of the respondents indicated that the information receiving through mass media is moderately relevant in solving agriculture problems. However, 3 percent of the respondent farmers of the study area disclosed that information receiving through mass media is not relevant in solving agriculture problems.

4.18 Relevance of information received in improving agricultural production

Whether the information received is useful in improving agricultural production or not; the respondents were enquired to perceive in positive (Yes) and negative (No), and the responses are given in Figure-18.

Figure -18 Relevance of information received in improving agricultural production as reported by respondent farmers perceived on role of mass media in dissemination of agricultural technology in District Naushahro Feroze

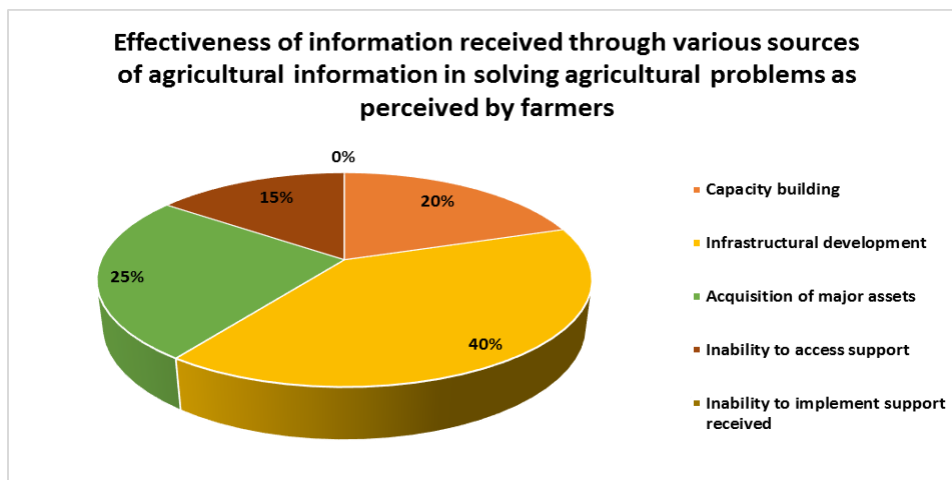


The data in Figure-18 exhibited that a high majority of respondents (86.00%) were positive and agreed over the relevance of information received mass media in improving agricultural production; while 14 percent of the respondents were against this perception and replied that there is no relevance of information received through mass media in improving agricultural production.

4.19 Effectiveness of received agricultural information in solving agricultural problems

The farmers of the study area were also asked to perceive on the effectiveness of received agricultural information through various sources of information in solving agricultural problems and the responses of the farmers are presented in FIGURE-19.

Figure-19 Effectiveness of information received through various sources of agricultural information in solving agricultural problems as perceived by farmers on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze

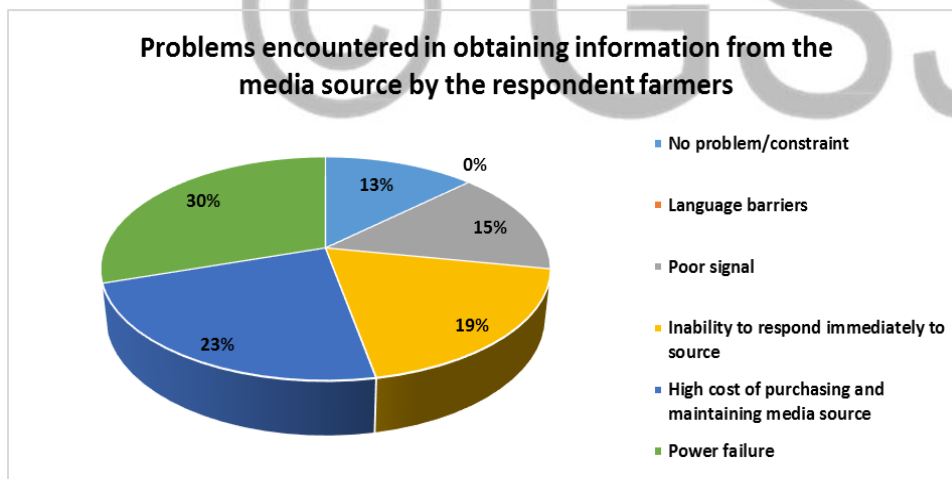


Majority of the respondents (40.00%) reported infrastructural development due to agricultural information received through mass media and 20 percent found that agricultural information received through mass media was helpful in capacity building. Similarly, 25 percent respondents agreed that such information was helpful in acquisition of major assets. On the other hand, 15 percent respondents showed inability to access such support from the mass media.

4.20 Problems encountered in obtaining information from the media sources

The farming communities in Naushahro Feroze district were asked to perceive on the problems encountered in obtaining information from the media sources and their responses are presented in figure-20.

Figure-20 Problems encountered in obtaining information from the media source by the respondent farmers perceived on the role of mass media in dissemination of agricultural technology in District Naushahro Feroze



The above table suggested that 30 percent of the respondents complained the power failure is constraint in obtaining information from media sources, 23 percent respondents could not afford the cost of purchase and maintaining the media source, 19 percent showed inability to respond immediately to media source, 15 percent complained the poor signals; while 13 percent of the respondents disclosed that they have no problem/constraint in obtaining the information from media sources.

4.21 Testing hypothesis

Correlation coefficient was worked out to assess the relationship of socio-economic characters and source of information with the agriculture enterprise or association of information sources with relevance of information in solving farmer problems. The results (Table-1) indicated that there was positive and highly significant ($r=0.668$,

P=0.0087**) correlation between sources of agricultural information and relevance of information received in solving farmer problems; while the non-significant correlation was observed between socio-economic characters with the agriculture enterprise ($r=0.197$, $P=0.3883^{NS}$) and source of information with the agriculture enterprise ($r=0.209$, $P=0.1389^{NS}$).

Table-1 Testing hypothesis

S.No.	Variable	Coefficient of correlation (r)	P-Value
1.	Socio-economic characters and agricultural enterprise	0.197 ^{NS}	0.3883
2.	Sources of agricultural information and agricultural enterprise	0.209 ^{NS}	0.1389
3.	Sources of agricultural information and relevance of information received in solving farmer problems	0.668 ^{**}	0.0087

** Significant at <0.01 probability

NS Non-Significant

5. Discussion

Mass media has a significant role in educating the farming communities regarding the crop production technologies. This survey was conducted during 2017 to examine the role of mass media in dissemination of agricultural technology among the farmers of district Naushahro Feroze and the respondents were examined for their demographic characteristics and the aspects related to the role of mass media in dissemination of agricultural technology.

The results revealed that apart from the demographic characteristics, more emphasis were given to aspects related to role and effectiveness of mass media as perceived by the farming communities. It was observed that most of farmers (32%) possessed more than 21 years farming experience; majority (63.95%) farmers cultivate traditional crop varieties; while 36 percent adopt improved crop varieties. In case of sources of agricultural information, majority of farmers (52%) considered television as the major source of agricultural information followed by radio (31%) and rest of the farmers received agricultural information through print media such as newspapers, leaflets and extension bulletins.. Some 71 farmers perceived highly conventional, moderately conventional perceived by 19 percent respondents and about 10 respondents perceived as non-conventional. Majority of farmers about 66 percent perceived that the sources of media for agricultural information were highly accessible, 21percent perceived moderately accessible and nearly 13 percent showed not accessible.

These results showed similarity with study of Abubakar *et al.* (2014) who revealed that majority of the respondents are full time farmers and having own lands with more than twenty one years of farming experience. Majority of the respondents 41percent prefer listening to agricultural programs between 8.00 pm to 12.00 pm, 34 percent from 4.00pm-8.00pm; 22percent during 5am to 12.00. Abubakar *et al.* (2014) stated that farmers preferred to listen to the agricultural programmes in the night time (8pm -12.00pm). The respondents identified purchasing and maintenance of media source (television and radio) as their major problems. These results are further supported by Venkateswarlu (2016) who indicated that mass media providing timely information about market situation and other matters of immediate and urgent nature like rains, floods, weather, possible attack of insects/pests and diseases, vaccination of animals, motivating farmers' interest in various extension activities, reinforcing the effect of individual and group extension methods and developing favorable attitude of general public about extension education efforts of extension organizations.

Khushk and Memon (2014) stated that production and distribution of printed material helps farmers in the transfer of new information and technologies. Printing helps in preserving the technologies in the shape of books/booklets, magazines, newspapers and brochures. According to a study conducted in the central Punjab, majority of the farmers consulted pamphlets, magazines, and newspapers for getting the information regarding sugarcane production technologies. These were regarded as the most suitable forms of print media for adoption of sugarcane production technologies. Mahmood and Sheikh (2015) reported that mass media are spreading agricultural technologies to the farmers at faster rate than personal contacts; while Muhammad *et al.* (2016) suggested that mass media may be limited, but these are valuable and important in stimulating the farmers' interest about new ideas. Once farmers are made aware and are stimulated through mass media, they may seek additional information from other sources. Mudannayake (2006) stated that using mass media such as printed materials, newspapers supplements, posters, video programs and TV and radio programs were the primary sources of information for farmers. Rehman and Fariha. (2011) found that the most used form of mass media for the dissemination of potato technology was radio, as reported by 77 percent of the respondents followed by meetings, agri. department, key informants, TV, newspapers, focused groups, and print media. Majority (70.93%) considered mass media as highly relevant in solving agriculture problems; 26 percent perceived moderately relevant and 4 percent as irrelevant.

In the study area power failure was the major constraint in obtaining agricultural information from telecast sources, 24 percent do not afford the cost of purchase and maintaining the media sources, 16 percent showed inability to respond immediately to media source, 13 percent complained the poor signals; while about 15 percent had no problem/constraint in obtaining the information from media sources.

Agbamu (2015) identified several constraints which affect agricultural technology transfer in developing countries; these include factors related to technologies, socio-psychological traits of farmers, cultural atmosphere, institutional constraints, and past experience with the adoption of agricultural technology. The age, education, caste, income, economic status, innovation proneness, attitude of farmers towards scientific cultivation, management orientation, and extension contact were important socio-psychological constraints affecting effective transfer of technology in agriculture. Although, the problems and constraints informed by the farmers not entirely compatible with the above researcher, but due to regional diversities and differences in political scenario, the situation to this sense may vary. Mirani (2013) have also supported the findings of the present research.

There was positive and highly significant ($r=0.668$, $P=0.0087^{**}$) correlation between sources of agricultural information and relevance of information received in solving farmer problems. These findings are in line with those of Abubakar *et al.* (2014) who tested hypotheses and showed a significant relationship between farmer's sources of agricultural information and relevance of information received in solving agricultural problems ($r=0.544$, $p=0.290$). Finally, it is recommended that more efforts should be intensified in providing more agricultural information to farmers through radio and televisions most especially during night time and local community viewing centres should be established by the government.

6. Conclusions

- ❖ Almost 1/5th portion of the total strength of the workers involved in agricultural farming was based on the women workers, which is a significant contribution of women in the study area in meeting the household expenses through agriculture farming.
- ❖ Most of the respondents were living a normal married life, 10.47% yet to be married, 4.65% widowed and 2.33% divorced respondents.
- ❖ There was a strong joint family system in the study area.
- ❖ Formal education possessed by even less than 1/3rd of the farmers, while 2/3rd of the respondents either had no education or having no systematic educational attainment.
- ❖ Agricultural farming is the dominating occupation of the people of the study area, more 80 percent of respondents directly engaged in crop production.
- ❖ High majority of the respondents possessed more than 10 years farming experience.
- ❖ Awareness of farming communities towards improved/high yielding crop varieties is not upto the desired level.

- ❖ Agri-extension programs and services are more desirable for the development and improving the crop yield is needed in the study area.
- ❖ Small ruminants including goat and sheep were the animals commonly kept by the farming communities for meeting their milk needs and other household expenses.
- ❖ Radio, television, newspapers, extension bulletin and posters were the common sources of agricultural information nobody recognized any extension activity of extension worker.
- ❖ Television were the major source of agricultural information, followed by radio, posters and newspapers.
- ❖ There is need to improve the situation regarding the sources of media for agricultural information in the study area.
- ❖ Although the source of media for agricultural information was moderately to highly accessible, but due to lack of motivation of the extension providers and other sources of information, the productivity improvement is not desirable.
- ❖ Most of the respondents supposed to prefer listening to agricultural programs between 8pm to 12.00pm, followed by 4.00pm-8.00pm and 5am to 12.00am.
- ❖ Majority of the respondents considered the information receiving through mass media is highly relevant in solving agriculture problems.
- ❖ Most of the farmers agreed over the relevance of information received mass media in improving agricultural production.
- ❖ Most of the farmers perceived infrastructural development due to agricultural information received through mass media.
- ❖ Power failure was the dominating constraint in obtaining information from media sources.
- ❖ There was positive and highly significant ($r=0.668$, $P=0.0087^{**}$) correlation between sources of agricultural information and relevance of information received in solving farmer problems and non-significant between socio-economic characters and source of information with the agriculture enterprise.

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