

Original Research Article

To assess Assessment of the utilization pattern of mass media for agricultural production among farmers in Haryana, India

ABSTRACT

In this present era, information and communication technology (ICT) has an impact on every element of human life. They are essential players in the workplace, business, education, and, most crucially, agriculture. Furthermore, many people see ICT as a catalyst for change in working conditions, information management and exchange, learning methods, and access to information communication technologies. The present study was conducted in Haryana state. One district viz. Hisar were selected randomly as they are present in two different zones of Haryana. Further two blocks were selected randomly. Hisar II and Adampur block were selected from Hisar district. Analysis revealed that about 70.00 per cent% of the respondents always utilized mass media for gathering information and near about one-fourth of the respondents (24.20 per cent%) sometimes utilized mass media followed by a few of respondents (09.17%) were never utilized mass media for gathering weather information. More than three-fifth of the respondents (77.50%) never utilized mass media and near about two-fifth of the respondents (18.33%) sometimes utilized mass media followed by a few respondents (04.17%) always utilized mass media for the inputs. Annual income of the respondents found highly significantly associated with level of utilization of mass media. The data-analysis revealed that 66.70 per cent of the respondents, who earned annual income i.e. up to Rs.1,00,001 to 2,00,001, sometimes utilized mass media. Contrary to that 45.10 per cent of the respondents, who earned annual income above Rs. 1,00,000/-, sometimes and 41.20 per cent had never utilized mass media.

KEY WORDS- Mass media, Utilization, Socio-economic factors, Information

INTRODUCTION

India's economy is centered on agriculture, which is the country's mainstay. As a result, agricultural production, productivity, and marketing are main- representative of any nations development. Agro inputs are the most important factor in farm productivity after natural resources. Modest and marginal farmers account for the majority of Indian farmers, who have small land holdings and minimal resources. As a result, ensuring a steady supply of high-quality seeds, ~~fertilisers~~fertilizers, and pesticides is essential for farmers to increase their production and profitability. Various ICT tools are utilized in agricultural sectors and one of such ICT tools that fostered in last decades in agriculture is social media. Social media is a medium of communication that makes use of information and communication technology (ICT). Social media brings together a huge number of people to develop, share, publish,

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cooperate, and discuss a variety of topics or information. Muktar et al. (2015) revealed in their study that the infiltration of social media to the rural areas is not only surprising but it is overwhelmingly changing the trend of communication, giving the vulnerable a voice to demand services. Through social media the rural dwellers are linked to the cities and the world at large, so much that social media opens up a very convenient and effective medium to reach out to them. Hence it can be leveraged to disseminate important agricultural information and innovations as well as marketing outlet for their products. It is asserted by (Saravan and Suchiradipta, 2013), that experience has shown that mobile phone and social media can facilitate the agricultural extension to move beyond —information facilitation to —innovation and empowerment among stakeholders of agricultural innovation system. Social media is a very essential tool for extension purpose because of its speed, distance, and coverage and not only assists farmers in sharing, discussing, and resolving issues linked to farming, but also extension specialists in completing their task successfully. Nag et al (2017) communicated in their study that social media is an excellent addition to personal communication and the scope of development in the agriculture sector has been broadened because of social networks in virtual space. Extension workers next generation will need to be well-versed in abilities for engaging the farming community on social media platforms. Social media, in its various forms, is fast infiltrating society and thus there is need of the hour before extension system to understand the various issues involved in application of social media in agricultural sector. Today in India teaching and training programmes making useful and attractive by the term of ICT. Information communication technologies (ICTs) exemplified by the internet and interactive multimedia are obviously an important focus for future agriculture and need to be effectively integrated into learning; especially in a field of agriculture. The main objective of the study is to analyze the use of ICT tools and utilization pattern of ICT tools for agricultural development. Research is needed in various frontier areas of social media application in agricultural sector like purpose or objective of social media use, decision making, virtual leadership, content development, message preparation, speed of diffusion, acceptability, accountability, innovative mechanism of social media use, competency, replication of information, etc. Professionally competent extension personnel who will be proactive in using social media in agricultural sector can bring rapid positive change in society. Agriculture sector is very important for a developing country as it

provides employment to majority of the people, covering the largest areas of the land and provides access to foreign currencies through trade. Increasing market orientation of agriculture as a result of trade liberalization , the advent of global markets and competition, and rising concerns about food and the environment put a developing country's agricultural industry under great stress. Ghanghas et al(2020) also reported in their study that public extension agencies, including extension workers, KVKs and SAUs were a source of information for around 10 per cent of households (NSSO, 2014). The lack of sufficient field level staff and the apparent absence of systematic dissemination of important information regarding appropriate cropping pattern, seeds and other inputs, cultivation practices made input dealers most important and efficient source of such information to farmers. Khan et al (2020) also prompted in their research that governments must also adopt agricultural development projects and use national communications technology to provide training and up-to-date information. Keeping in view the above facts, a study was undertaken with following specific objective:

1. To assess the utilization pattern of mass media for agricultural production
2. To know the Socio-economic factors associated utilization of mass media

MATERIALS AND METHODS

The present study was conducted in Haryana state. One district viz. Hisar were selected randomly as they are present in two different zones of Haryana. Further two blocks were selected randomly. Hisar II and Adampur block were selected from Hisar district. Two Villages were selected from each of the two blocks randomly. In Hisar II, Rawalwas and Hindwan were selected while Sadalpur and Khermpur were selected from Adampur block. Thirty respondents from each selected village i.e. Rawalwas, Hindwan, sadalpur and khermpur were selected. So, on the whole 120 respondents were taken as a sample for present this particular study. A semi structured interview schedule was prepared keeping in view the both types of variables independent and dependent. The personal interview method was used for collecting data. Keeping in views the objective of the study the scholar visited all the selected villages and interacted with village functionaries and farmers before data collection. All the items prepared were designed in schedule form and schedule so prepared was pretested. The data was collected personally with the help of an interview schedule consisting of measuring devices of dependent and independent variables and the respondents' data. The main statistical techniques used were percentages, averages and chi-square. Utilization is the action of using something, i.e. making practical and effective use of it. Put simply the term refers to use of something or the process of using it effectively. The variable was measured with the help of schedule developed for the study. It consisted of 9 statements of utilization about mass media use with a three point continuum of "Always", "Sometimes", and "Never", for which scores of 3, 2 and 1 were assigned. The total score of each respondent was calculated by summing of the scores obtained for each statement and categorized as low, moderate and high. The nine statements were regarding weather information, inputs, crop protection, cultivation practices, irrigation practices, post-harvest, market price, alternate crops and live-stock.

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RESULTS AND DISCUSSION

Utilization of mass media by farmers for gathering source of information

The results in Table 1 indicated that about 70.00 per cent of the respondents always utilized mass media for gathering information and near about one-fourth of the respondents 24.20 per cent sometimes utilized mass media followed by a few of respondents (09.17%) were never utilized mass media for gathering weather

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information. More than three-fifth of the respondents (77.50%) never utilized mass media and near about two-fifth of the respondents (18.33%) sometimes utilized mass media followed by a few respondents (04.17%) always utilized mass media for the inputs. Near about half of the respondent (43.34%) utilized mass media followed by 35.83 per cent who had never utilized mass media and one-fifth of the respondents (20.83%) always utilized mass media for crop protections. Majority of the respondents (55.83%) sometimes utilized mass media for cultivation practices followed by 32.50 per cent who had never utilized and a few respondents (11.67%) always utilized mass media for cultivations practices. However, majority of the respondents (55.83%) sometimes utilized mass media for irrigation practices followed by 32.50 per cent who had never utilized mass media and only if 11.67 per cent always utilized mass media for irrigation practices. Three-fifth of the respondents (60.00%) never utilized mass media and almost 30.83 percent of the respondent sometime utilized mass media followed by a few respondents (09.17%) always utilized mass media for post harvesting. Majority of the respondents (55.00%) utilized mass media followed by 29.17 per cent of the respondents were never utilized mass media and only 15.83 percent always utilized mass media for the market price. Majority of the respondents (67.50%) never utilized mass media followed by 26.67 per cent of the respondents sometimes utilized mass media for alternate crop and only 05.83 per cent always utilized mass media for alternate crop more than half of the respondents 58.33 per cent sometimes utilized mass media followed by 26.67 per cent never utilized mass media and only 15.00 per cent respondents always utilized the mass media for livestock. Vanya Vartika Ram [1] concluded in her study that majority of users (66.67%) have medium level of usage of ICT tools followed by high level of usage (18.33 %) and only 15 per cent of users have low usage. It is concluded from the study that agricultural information is mainly taken from radio, television and mobile phones whereas internet, E-book and agricultural portals are used less widely by the farmers for agricultural information. The high penetration of mobile phone ~~make made~~ them use good ICT tool for information dissemination. Those respondents who are aware of whatsapp and facebook use them for personal chat not for utilization in agricultural information. Lack of training program and lack of funds are the major constraints faced by the respondents. Hence, government should take steps to minimize it and create more awareness about ICT Tools regarding agricultural information. Ndaghu et al (2012) mentioned in their study that information on pests

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and diseases control (41%), improved crop varieties (25%) and weeds control (16.67%) were the most sought through mass media. Shazia et al (2020) revealed in their study that that farmers have acknowledged the usefulness of new information related to agriculture definitely take less time (66.1% strongly agreed) in cultivation, less laboring (66.1% agreed) and high crop production (56.1 agreed). They also mentioned that sampled farmers follow traditional method of seed fertilization, plant protection and irrigation method due to lack of resources. Although, they also have insufficient information related to the procedure of higher agricultural production

UNDER PEER REVIEW

Table 1: Distribution of respondent according to utilization of mass media

Sr. No.	Sources	Utilization of Mass Media		
		Always	Sometimes	Never
1	Weather Information	84(70.00)	25(20.83)	11(09.17)
2	Input	05(04.17)	22(18.33)	93(77.50)
3	Crop protection	25(20.83)	52(43.34)	43(35.83)
4	Cultivation practices	14(11.67)	67(55.83)	39(32.50)
5	Irrigation practices	14(11.67)	67(55.83)	39(32.50)
6	Post-harvest	11(09.17)	37(30.83)	72(60.00)
7	Market price	19(15.83)	66(55.00)	35(29.17)
8	Alternate crops	7(05.83)	32(26.67)	81(67.50)
9	Live stock	18(15.00)	70(58.33)	32(26.67)

Note: Figures in the parenthesis denote percentage.

Overall utilization of mass media

The data of overall utilization were calculated by summing all scores of 09 sources for each respondent and categorised in three different categories. Results in Table 2 indicated that out of total, near about 45.00 per cent of the respondents had medium level of utilization followed by one-fourth 32.50 per cent of the respondents who had low utilization of mass media. More than one-fifth 22.50 per cent of respondents had high utilization of mass media.

Table 2: Overall distribution of respondent according to utilization of mass media

Sr. No.	Utilization of Mass media	Frequency	Percentage
1	Low (9-13)	39	32.50
2	Medium (14-18)	54	45.00
3	High (19-23)	27	22.50
4	Total	120	100

Perceived usefulness of information using mass media

In the table 3 showed that overwhelming of the respondents (80.00%) had found most useful information of mass media in improving the agriculture knowledge followed by 19.17 per cent found it useful and a few respondents (0.83%) found the information not useful. After that 86.67 per cent of the respondents were found information not useful and only 10.00 per cent of the respondents found information useful and a few respondents (0.33%) found information most useful about nursery management in different crop. In the nutrient management 68.34 per cent of the respondent found information useful followed by 23.33 per cent of the respondents

issue was "moderately successful" and "very effective." Farmers' education, extension contact, and media consumption were positively associated with the effectiveness of mass media among the eight criteria studied. Multiple regression analysis found that two variables, namely education and media use, explained 39.3 percent of the overall variation in perceived effectiveness of mass media and were recognized as influential factors determining the efficacy of selected mass media.

Overall usefulness of information

The data of overall usefulness were calculated by summing all scores of 08 sources for each respondent and categorised in three different categories. Results in Table 4 indicated that out of total, near about three fifth (58.33%) of respondents had high usefulness of mass media followed by 25.00 per cent of the respondents had low usefulness. Only 14.16 per cent of respondents had high usage about mass media. **Bhatia et al. (2016)** investigated the association between farmer characteristics and mass media exposure in a study. They reported that 48.67 percent, 36.67 percent, and 14.67 percent of respondents had medium, low, and high exposure to the media, respectively. Farmers found television to be the most useful, followed by newspaper, magazine, kisan call centre, workshop/training, radio, and the internet. Education, land ownership, innovativeness, cosmopolitaness, and knowledge all had a significant positive relationship with mass media exposure, according to the findings.

Table 4: Overall distribution of respondent according to perceived usefulness of information

Sr. No.	Usefulness of info.	Frequency	Percent
1	Low (09-12)	33	27.50
2	Medium (13-16)	70	58.33
3	High (17-20)	17	14.16
4	Total	120	100

Socio-economic factors associated utilization of mass media

Analysis revealed in table 16 that 45.00 per cent of the respondents had sometimes utilized mass media followed by never (32.50%) and always (22.50%).

Age of the respondents found highly significantly associated with utilization about mass media. Analysis further revealed that near about three-fifth of the respondents (57.10%) who belonged to above 50 years of age group had never utilized mass media. On the other hand, majority of the respondents (52.70%) who

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belonged to young age up to 35 years had never utilized mass media.

Gender of the respondents not found significantly associated with level of utilization about mass media analysis clearly reveal that maximum number of the respondents (45.20%) male who had sometimes utilized mass media followed by 40.00 per cent of female respondents who had sometimes utilized mass media.

Caste of the respondents found significantly associated with level of utilization about mass media. More than three-fifth of the respondents (61.53%), who belonged to schedule caste, had never utilized mass media followed by (60.00%), who belonged to backward caste had never utilized mass media. Contrary to that, maximum number of the respondents (46.10%), who belonged to general caste, sometimes utilized mass media.

Highly significant association found between level of education of the respondents and level of utilization mass media. Analysis clearly revealed that more than three-fourth of the respondents (77.94%), who were middle and up to senior secondary/diploma, never utilized mass media. On the other hand, three-fifth of the respondents (60.86%), who were educated up to illiterate and primary, never utilization of mass media.

Table 5: Socio-economic factors associated utilization of mass media

Socio-economic variables	Utilization of mass media			
	Never	Sometimes	Always	Total
Age				
Young (upto 35)	10(18.20)	29(52.70)	16(29.10)	55(45.80)
Middle (36 to 50)	21(41.20)	22(43.10)	08(15.70)	51(42.50)
Old (above 50)	08(57.10)	03(21.40)	03(21.40)	14(11.70)
Total	39(32.50)	54(45.00)	27(22.50)	120(100.00)
$\chi^2=11.88^{**}$				
Gender				
Male	37(32.20)	52(45.20)	26(22.60)	115(95.80)
Female	02(40.00)	02(40.00)	01(20.00)	05(04.20)
$\chi^2=0.13^*$				
Caste				
General Caste	30(29.40)	47(46.10)	25(24.50)	102(85.00)
Backward Class	01(20.00)	03(60.00)	01(20.00)	05(04.20)
Scheduled Caste	08(61.50)	04(30.80)	01(07.70)	13(10.80)
$\chi^2=6.23^*$				
Education				
Illiterate & Primary	14(60.86)	7(30.43)	02(08.69)	23(19.16)
Middle & up to intermediate	24(19.11)	32(77.94)	12(02.94)	68(56.66)

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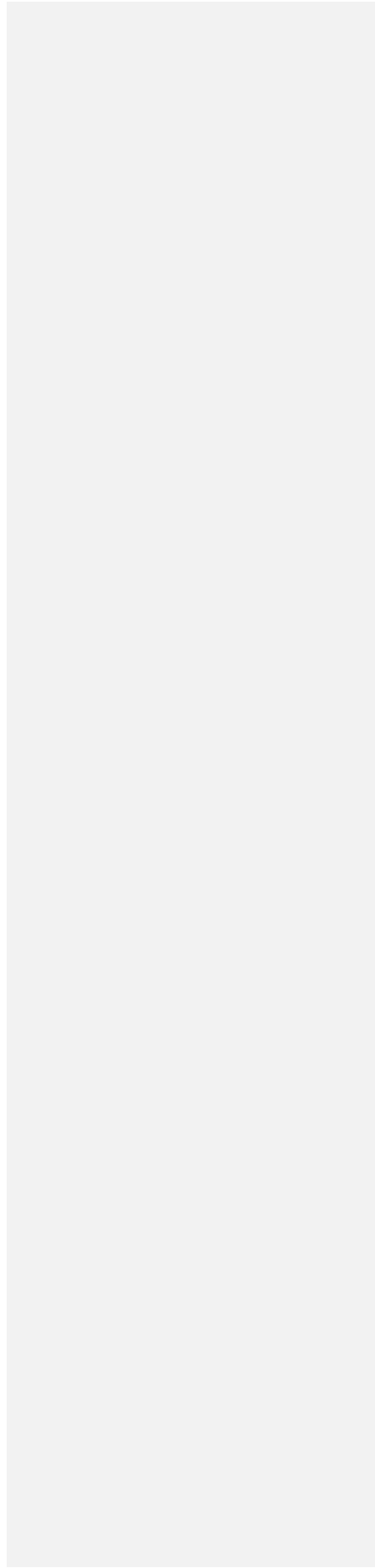
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Graduation & Post-Graduation	01(03.40)	15(51.70)	13(44.80)	29(24.20)
$\chi^2=25.72^{**}$				
Family type				
Nuclear	28(47.50)	21(35.60)	10(16.90)	59(49.20)
Joint	11(18.00)	33(54.10)	17(27.90)	61(50.80)
$\chi^2=11.86^{**}$				
Family size				
Small (up to 04 members)	26(47.30)	21(38.20)	08(14.50)	55(45.80)
Medium (05 to 08 members)	12(19.00)	32(50.80)	19(30.20)	63(52.50)
Large (more than 8 members)	01(50.00)	01(50.00)	-	02(01.70)
$\chi^2=12.07^{**}$				
Annual family income (Rs.)				
Upto 100000	21(41.20)	23(45.10)	7(13.70)	51(42.50)
100001-200000	10(34.50)	11(37.90)	8(27.6.0)	29(24.20)
200001-300000	02(09.50)	14(66.70)	5(23.80)	21(17.50)
Above 300000	06(31.57)	06(31.57)	07(36.86)	19(15.83)
$\chi^2=16.49^{**}$				
Land holding				
Marginal (up to 1 ha)	12(44.40)	12(44.40)	3(11.10)	27(22.50)
Small (1-2 ha)	13(36.10)	17(47.20)	06(16.70)	36(30.00)
Semi-medium (2-4 ha)	08(29.60)	14(51.90)	05(18.50)	27(22.50)
Medium and Large (4 and above 10 ha)	06(20.00)	11(36.66)	13(43.33)	30(25)
$\chi^2=17.01^{**}$				
Subsidiary occupation				
None	12(30.00)	19(47.50)	09(22.50)	40(33.30)
Labourer	20(47.60)	15(35.70)	07(16.70)	42(35.00)
Business	-	03(100.00)	-	03(100.00)
Independent profession	03(27.30)	05(45.50)	03(27.30)	11(09.20)
Dairy	01(20.00)	03(60.00)	01(20.00)	05(04.20)
Service	03(15.80)	09(47.40)	07(36.80)	19(15.80)
$\chi^2=12.29^{**}$				
Social participation				
Not member of any organization	36(32.40)	50(45.00)	25(22.50)	111(92.50)
Member of one or more than one organization	03(60.00)	01(20.00)	01(20.00)	5(04.16)
Office bearer and Public leader	-	03(75.00)	01(25.00)	4(03.33)
$\chi^2=06.27^*$				
Extension contacts				
Low (08-10)	20(40.80)	21(42.90)	08(16.30)	49(40.80)
Medium (11-13)	18(30.00)	26(43.30)	16(26.70)	60(50.00)
High (14-16)	01(09.10)	07(63.60)	03(27.30)	11(9.2)
$\chi^2=05.35^*$				

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UNDER PEER REVIEW



Extension activities				
Less than two activities	10(45.50)	08(36.40)	04(18.20)	22(18.30)
Two activities	13(31.00)	22(52.40)	07(16.70)	42(35.00)
More than two activities	16(28.60)	24(42.90)	16(28.60)	56(46.7)
$\chi^2=04.09^*$				
ICT sources				
Low (Less than two)	06(85.70)	1(14.30)	-	7(05.80)
Medium (Two)	17(37.80)	21(46.70)	07(15.60)	45(37.50)
High (More than two)	16(23.50)	32(47.10)	20(29.40)	68(56.70)
$\chi^2=13.71^{**}$				
Socio-economic status				
Low (09-13)	22(46.80)	19(40.40)	06(12.80)	47(39.20)
Medium (14-19)	17(27.90)	30(49.20)	14(23.00)	61(50.80)
High (20-26)	-	05(41.70)	07(58.30)	12(10.00)
$\chi^2=16.58^{**}$				

Figure in parenthesis denote percentage.

*Significant at 5% level

**Highly significant at 1% level

Type of family not found significantly associated with level of utilization about mass media. Further analysis revealed that majority number of the respondents (54.10%), who belonged to joint family, sometimes utilized mass media. Contrary to that, near about half of the respondents (47.50%) who belonged to nuclear family, never utilized of mass media.

Size of family not found significantly associated with level of utilization. It was clear from the field of the study that half of the respondents (50.80%), who hailed from medium size of family *i.e.* 5 to 8 members, sometimes utilized of mass media. Contrary to that, maximum number of the respondents (50.00%), who hailed from large size of family *i.e.* up to 5-8 members, who had never utilized mass media.

Annual income of the respondents found highly significantly associated with level of utilization of mass media. The data revealed that 66.70 per cent of the respondents, who earned annual income *i.e.* up to Rs.1,00,001 to 2,00,001, sometimes utilized mass media. Contrary to that 45.10 per cent of the respondents, who earned annual income above Rs. 1,00,000/-, sometimes and 41.20 per cent had never utilized mass media.

Highly significant association found between size of land holding and level of utilization about mass media. It was clear from the data of the respondents (51.90%) hailed from sometimes utilized *i.e.* semi-medium followed by 47.20 had small size of

land holding, sometimes utilized mass media. Contrary to that, 44.40 per cent respondents, who hailed from marginal size of land holding had never and sometimes utilized mass media.

Subsidiary occupation of the respondents not found significantly associated with level of utilization about mass media. On the other hand, (100.00%) who engaged in business. It was clear from the data that nearly three-fifth of the respondents (60.00), who engaged in dairy as subsidiary occupation, had sometimes utilized mass media.

Highly significant association was found between social participation and level of utilization about mass media. Nearly three-fourth of the respondents (75.00%), who had never utilized mass media. Contrary to that, three-fifth of the respondents (60.00%), who were engaged one and more than two social organizations had never utilized mass media. Shazia et al (2020) revealed in their study that although farmers receive information by the mass media but they trust on their fellow farmers to get respective information of agricultural market price, climate change, seed fertilization techniques, etc. However, television, radio and print media are the major source of information particularly for farmers in rural areas and farmers accept that the mass media is a credible source of information.

Extension contacts found non-significantly associated with level of utilization about mass media. Analysis clearly revealed that more than three-fifth of the respondents (63.60%), who had high extension contacts sometimes utilized mass media, 43.30 per cent of the respondent had medium contacts who had sometimes utilized mass media. Contrary to that, two-fifth of the respondents (40.80%) who had low extension contacts never utilized mass media.

Extension activities found non-significantly associated with level of utilization about mass media. Analysis revealed that revealed more than half of the respondents (52.40%), who involved in two activities had sometimes utilized mass media , 45.50 per cent of the respondents involves in less than two activities had never utilized mass media followed by 42.90 per cent of the respondents involves in more than two activities utilized mass media.

ICT Sources found highly significant associated with level of utilization about mass media. Analysis revealed that overwhelming of the respondents (85.70%), who had never utilized ICT source followed by 47.10 per cent and 46.70 per cent of the respondents who were sometimes utilized mass media.

Socio-economic status found highly significant associated with level of utilization about mass media. It was clear from the field of the study that near about three-fifth of the respondents (58.30%), who had high socio-economic status, had always utilized mass media. Contrary to that, 49.20 of the respondents, who had low socio-economic status, had never utilized mass media.

CONCLUSIONS

More than three fifth of the respondents (64.17%) found information not useful followed by 23.33 per cent of the respondents found information useful and rest of the respondents (12.50%) found information most useful about increase farm yield. Three-fourth of the respondent (74.17%) had found information not useful and followed by 18.33 percent of the respondents found information useful and only 07.50 percent of the respondent found information most useful about improving farm and home condition. Socio-economic status found highly significant associated with level of utilization about mass media. It was clear from the field of the study that near about three-fifth of the respondents (58.30%), who had high socio-economic status, had always utilized mass media. Contrary to that, 49.20 of the respondents, who had low socio-economic status, had never utilized mass media. Highly significant association found between level of education of the respondents and level of utilization mass media. Analysis clearly revealed that more than three-fourth of the respondents (77.94%), who were middle and up to senior secondary/diploma, never utilized mass media. On the other hand, three-fifth of the respondents (60.86%), who were educated up to illiterate and primary, never utilization of mass media.

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