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## Awareness of farmers regarding agri-based information for rural community through on-line communication

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### Abstract

The present study entitled, "Awareness of farmers regarding agri-based information for rural community through on-line communication." was undertaken in the year 2019-2020. In this study two types of organizations, government and private are running the online communication services in the state. One centre, each from both types of organizations was selected randomly. District Kanpur Nagar was purposively selected. Two blocks was selected randomly from the selected district. So from selected blocks twelve villages selected on random basis from each village, 25 farmers randomly selected. Thus total 300 farmers from all the selected villagers were chosen for study which was using different on-line information services. Most of the on-line information users belonged to 31 to 40 age group majorities of them were male members, mostly on-line users were educated up to primary and high school and most of them were belonged to OBC having annual income between Rs. 50001 to Rs. 150000. Mostly farmers belonged to small and marginal size of land holding.

Mostly farmers are aware about availability of relevant data related to agriculture like effective use of fertilizers, insecticides, pesticides. Overall awareness of the farmers taking online information services provided by both interventions government and private is same.

**Keywords:** awareness, agri-based information, on-line, communication, rural community

### 1. Introduction

Most of the developing countries have obtained fruitful results from the use of new technologies. Internet, mobile phones are the most important tools of communication providing knowledge and information to farmers about agriculture. By using these technologies in different countries, positive results in agriculture development have been achieved. In remote areas radio is still the favorite tool of communication and helps in broadcasting many agriculture related programs while television contributes more to disseminating information about agriculture in developing countries. Furthermore, mobile phones have reduced the gap among farmers and buyers. Farmers can now directly communicate with customers and receive a better price for their products in the market.

#### 1.1 Objectives

1. To study the socio-economic status of farmers using on-line communication services.
2. To study the awareness regarding on-line communication among users/ farmers.

### 2. Research Methodology

To complete the above objective, by employing the appropriate research methodology, the study was conducted in district Kanpur Nagar during the year 2019-2020. In this study two types of organizations, government and private are running the online communication services in the state. One centre, each from both types of organizations was selected randomly. District Kanpur Nagar was purposively selected. Two blocks was selected randomly from the selected district. So from selected blocks twelve villages selected on random basis from each village, 25 farmers randomly selected. Thus total 300 farmers from all the selected villagers were chosen for study which was using different on-line information services. Dependent and independent variables, namely awareness, opinion and constraints of farmers about online communication and age, caste, education, religion, occupation, type of family, size of family, annual income etc. the data so collected were subjected to analyses for which statistical tools, such as percentage, weighted mean, rank, standard deviation, chi-square, correlation coefficient were used.

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### 3. Results and Discussion

**Table 1** Distribution of farmers according to age group

Age group	Government		Private		Total	
	N	Mean ± SD	N	Mean ± SD	N	Mean ± SD
Up to 30 years	14 (9.3)	29 ± 2	27 (18.0)	28 ± 2	41 (13.6)	28 ± 2
31 to 40 years	56 (37.3)	36 ± 3	61 (40.7)	35 ± 3	117 (39.0)	36 ± 3
41 to 50 years	60 (40.0)	45 ± 3	50 (33.3)	44 ± 2	110 (36.7)	45 ± 3
51 and above	20 (13.3)	56 ± 3	12 (8.0)	57 ± 3	32 (10.7)	56 ± 3
Total	150 (100.0)	42 ± 8	150 (100.0)	39 ± 8	300 (100.0)	40 ± 8
$\chi^2$	7.845*					P<0.05

The perusal of table 1 reveals the distribution of farmers according to age group, maximum 40.0 per cent of farmers belonged to age group of 41 to 50 years with mean age 45 years and SD 3 years, 37.3% of farmers belonged to age group of 31 to 40 years with mean age 36 years and SD 3 years, 13.3% of farmers belonged to age group 51 years and above with mean age 42 years and minimum 9.3% of farmers were belong 30 years of age with mean age 29 years and SD 2 years taking agri-based information from government organizations. Maximum 40.7% of farmers belonged to age group of 31 to 40 years with mean age 35 years and SD 3 years, 33.3% of farmers belonged to age group of 41 to 50

years with mean age 44 years, 18.0% of farmers were having age up to 30 years with mean age 28 years and minimum only 8.0% of farmers belonged to 51 years and above age group with mean age 57 years in the research study area getting information from private organizations. The observed value of chi square was significant at 5% level of significance. Hence, age group plays an important role and is significantly associated with both interventions.

Thus, it can be concluded that most of the online communication services users were found to be in middle age group in both intervention government as well as private.

**Table 2:** Distribution of farmers according to Educational qualification

N=300

Education	Government		Private		Total	
	N	%	N	%	N	%
Illiterate	8	5.3	7	4.7	15	5.0
Up to primary	31	20.7	22	14.7	53	17.7
Up to High school	82	54.7	47	31.3	129	43.0
Up to Intermediate	19	12.7	40	26.7	59	19.7
Graduate and above	10	6.7	34	22.6	44	14.6
Total	150	100.0	150	100.0	300	100.0
$\chi^2$	31.657**					P<0.01

The data presented in table 2 reveals the distribution of farmers according to educational qualification, 54.7% of farmer’s using government communication services were educated up to high school, 20.7% up to primary, 12.7% up to intermediate, 6.7% up to graduation and above and only 5.3% up to were found to be illiterate in the study area. 31.3% of farmers getting on-line information from private organizations education up to high school, 26.7% up to intermediate, 22.6% up to graduation, 14.7% up to primary level and 4.7% were

found to be illiterate. The observed value of chi square 31.657\*\* was significant at 1% level of significance. Education of respondents was associated significantly with both communication organizations.

Thus, it can be concluded on the basis of above data that majority of the online communication service users were educated be up to primary and high school education level only.

**Table 3:** Distribution of farmers according to the awareness regarding on-line communication

N = 300

S. No.	Statements	Symbols	Government					Private					Total					$\chi^2$ b/w Govt. & Pvt.	P level
			Aware	Partially aware	Un-aware	Mean Score	Rank	Aware	Partially aware	Un-aware	Mean Score	Rank	Aware	Partially Aware	Un-aware	Mean Score	Rank		
1	Availability of relevant data about agriculture	A	54.0	42.7	3.3	2.51	I	70.7	27.3	2.0	2.69	I	62.3	35.0	2.7	2.60	I	17.761**	<0.01
2	Fastest mode of information	B	30.7	64.0	5.3	2.25	III	42.7	50.7	6.7	2.36	III	36.7	57.3	6.0	2.31	III	10.987**	<0.01
3	Retrievable information	C	30.7	58.0	11.3	2.19	V	32.7	42.0	25.3	2.07	VIII	31.7	50.0	18.3	2.13	IX	23.906**	<0.01
4	Accurate weather forecast	D	24.0	57.3	18.7	2.05	X	32.7	58.0	9.3	2.23	V	28.3	57.7	14.0	2.14	VIII	13.321**	<0.01
5	Information about crop insurance & Govt. programmes	E	34.0	44.7	21.3	2.13	VII	27.3	36.0	36.7	1.91	IX	30.7	40.3	29.0	2.02	XI	17.128**	<0.01
6	Availability of Information about different method of irrigation	F	38.0	56.0	6.0	2.32	II	45.3	44.0	10.7	2.35	IV	41.7	50.0	8.3	2.33	II	10.891**	<0.01
7	Provides information related to different varieties of crops and	G	36.7	46.7	16.7	2.20	IV	36.0	43.3	20.7	2.15	VII	36.3	45.0	18.7	2.18	VI	1.674	>0.05

	seeds																		
8	Provides information about the services of agri. institutions to the farmers	H	30.0	52.0	18.0	2.12	VIII	48.7	42.7	8.7	2.40	II	39.3	47.3	13.3	2.26	V	25.849**	<0.01
9	Market prices of various agricultural product are available online	I	32.0	52.0	16.0	2.16	VI	44.0	47.3	8.7	2.35	IV	38.0	49.7	12.3	2.26	V	12.882**	<0.01
10	Availability of Fisheries and horticulture related information	J	16.7	52.0	31.3	1.85	XII	18.0	54.0	28.0	1.90	X	17.3	53.0	29.7	1.88	XII	0.829	>0.05
11	Availability of Information regarding crop production/protection, post harvest technologies and allied activities	K	30.7	50.0	19.3	2.11	IX	39.3	40.7	20.0	2.19	VI	35.0	45.3	19.7	2.15	VII	6.135*	<0.05
12	Availability of Information about effective use of fertilizers, insecticides and pesticides	L	46.7	38.7	14.7	2.32	II	43.3	36.0	20.7	2.23	V	45.0	37.3	17.7	2.27	IV	3.713	>0.05
13	They can seek expert advice on soil testing, maintaining soil quality and crop rotation	M	16.7	48.7	34.7	1.82	XIII	18.7	42.7	38.7	1.80	XI	17.7	45.7	36.7	1.81	XIII	2.177	>0.05
14	Availability of Information about advanced and sustainable farming methods	N	21.3	54.7	24.0	1.97	XI	33.3	56.0	10.7	2.23	V	27.3	55.3	17.3	2.10	X	23.335**	<0.01

The data pertaining in table 3 reveals the awareness of farmers regarding on-line communication services taking from government organizations, 54.0% of farmers were fully aware regarding availability of relevant data about agriculture with mean score 2.51 and rank I followed by 46.7% and 38.0% who were found to be fully aware about information of different method of irrigation and effective use of fertilizers, insecticides and pesticides with mean score 2.32 and rank II. 30.7% farmers were fully aware and 64.0% were partially aware about fastest mode of information with mean score 2.25 and rank III whereas 36.7% of farmers were aware about information related to different varieties of crops and seeds with mean score 2.20 and rank IV. 30.7% of farmers were aware about retrievable information with mean score 2.19 and rank V while 32.0% farmers were aware about the fact that market prices of various agricultural products are available on-line with mean score 2.16 and rank VI. 34.0% farmers were aware about crop insurance and other government programmes in the study area with mean score 2.13 and rank VII whereas 30.0% farmers were aware about the services of agricultural institutions to the farmers with mean score 2.12 and rank VIII. 30.7% of farmers were aware and 50.0% were partially aware about crop production/protection, availability of post harvest technologies and allied activities with mean score 2.11 and rank IX whereas 24.0% farmers in the research study area were aware about accurate weather forecast with mean score 2.05 and rank X. 21.3% of farmers were aware about advanced and sustainable farming methods with mean score 1.97 and rank XI while 16.7% of farmers were aware about fisheries and horticulture related information with mean score 1.85 and rank XII while only 16.7% farmers were aware about the fact that they can seek expert advice on soil testing, maintaining soil quality and crop rotation with mean score 1.82 and rank XIII.

The awareness of farmers regarding online communication services from private agencies, 70.7% of farmers were found to be aware about availability of relevant data for agriculture with mean score 2.69 and rank I followed by 48.7% of farmers who aware and 42.7% of farmers were partially aware about the services of agricultural institutions to the farmers with mean score 2.40 and rank II. 42.7% of farmers were

aware and 50.7% of them were partially aware that online communication is the fastest modes of information with mean score 2.36 and rank III whereas 45.0% of farmers were aware that there is availability of information about different method of irrigation and market prices of various agricultural products with mean score 2.35 and rank IV respectively. 32.7% of were farmers aware about accurate weather forecast, information of effective use of fertilizers, insecticides and pesticides and advance and sustainable farming methods with mean score 2.23 and rank V while 39.3% of farmers were aware regarding crop production/protection, post harvest technologies and allied activities through online communication with mean score 2.19 and rank VI. 36.0% of aware and 43.3% of them were partially aware about availability of information related to different variety of crops and seeds with mean score 2.15 and rank VII whereas 32.7% of farmers were aware regarding the fact that information is retrievable with mean score 2.07 and rank VIII. 27.3% of farmers were aware and 36.0% of farmers were partially aware about crop insurance and other government programme with mean score 1.91 and rank IX while 18.0% of farmers were aware about fisheries and horticulture related information with mean score 1.90 and rank X in research study area. 18.7% of farmers were aware and 42.7% of them were partially aware about how to seek expert advice on soil testing, maintaining soil quality and crop rotation with mean score 1.80 and rank XI in research study area.

In Overall the awareness of farmers regarding on- line communication, 62.3% r farmers were aware about the fact that relevant data about agriculture is available with mean score 2.60 and rank I followed by 41.7% who were aware about the fact that different method of irrigation is available with mean score 2.33 and rank II. 36.7% of farmers were aware and 57.3% of them were partially aware about fastest mode of information with mean score 2.31 and rank III whereas 45.0% of farmers were aware and 37.3% were partially aware about effective use of fertilizers, insecticides and pesticides with mean score 2.27 and rank IV. 39.3% of r farmers were aware regarding services of agricultural institution to the farmers and market prices of various agricultural products is available on-line with mean score 2.26

and rank V respectively while 36.3% of farmers were aware about information related to different varieties of crops and seeds with mean score 2.18 and rank VI in study area. 35.0% of farmers were fully aware about crop production/ protection, post harvest technologies and allied activities with mean score 2.15 and rank VII whereas 28.3% of farmers were aware and 57.7% of them were partially aware about accurate weather forecast with mean score 2.14 and rank VIII. 31.7% of farmers were aware that information is retrievable with mean score 2.13 and rank IX while 27.3% of farmers were aware and 55.3% of them were partially aware about availability of information related to advanced and sustainable farming methods with mean score 2.10 and rank X. 30.7% of farmers were aware about crop insurance and other government programmes with mean score 2.02 and rank XI while 17.3% of them were aware that fisheries and horticulture related information is available with mean score 1.88 and rank XII whereas 17.7% of farmers were aware that they can seek expert advice on soil testing, maintaining soil quality and crop rotation with mean score 1.81 and rank XIII in the study area.

The association test between government and private interventions regarding awareness on-line communication by farmers, both interventions of respondents were fully dependent about availability of agriculture data, government as well as private interventions respondents were found to be significantly associated and dependent with fastest mode of on-line information, information is retrievable, aware about accurate weather forecast, information about crop insurance and other government programmes, information available of different method of irrigation, services of agricultural institutions to the farmers, agriculture products are available on-line as per market price, information about advanced and sustainable farming methods and information of crop production/ protection, post harvest technologies and allied activities at 5.0% level of significance.

Thus, it can be concluded from the analysis of above table that maximum farmer's using on-line services from either intervention were aware about availability of relevant data about agriculture. Similar finding were also reported by Chandrasekan, *et al.* (2010)<sup>[1]</sup>

#### 4. Conclusion

The findings related to research made clear that online communication and information helps farmers in taking all the agricultural related decisions promptly. Most of the on-line information users belonged to 31 to 40 age group, mostly on-line users were educated up to primary and high school. Mostly farmers are aware about availability of relevant data related to agriculture like effective use of fertilizers, insecticides, pesticides. Overall awareness of the farmers taking online information services provided by both interventions government and private is same.

#### 5. Recommendation and Suggestions

1. Mostly farmers are illiterate, the knowledge and skill of the farmers should be improved by training.
2. Farmers should give proper information and promotion about the use of android apps like ifco kisan app, agri app, plantix etc, so that they can easily get the technical information related to agriculture through online communication.
3. Online communication institutions should also be linked with agriculture universities and information centres of

the district, so that technology and information can be disseminated faster.

4. Information and communication revolution should be used more and more in agriculture, which can give a new direction to agriculture and the production of food and others agricultural and livestock products will increase and the financial position of the farmers will be further strengthened.
5. Farmers should be provided information through online communication to improve agricultural productivity and sell about their agricultural products in the global market at high prices.

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