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RELATIONSHIP BETWEEN CHARACTERISTICS OF GROUNDNUT GROWERS AND THEIR PERCEPTION TOWARDS ICT

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ABSTRACT

India is an agro based developing country with about 68.84 per cent population living in rural area. Agricultural extension is a service or system which assists farmers through educational procedures in improving farming methods and techniques, increasing production efficiency and income. With this consideration, the problem entitled 'Perception of Groundnut Growers towards Modern Communication Media in Saurashtra Region' was undertaken. The study was conducted in Saurashtra region of Gujarat. Four districts were selected purposively out of eleven districts and a total of 160 respondents were selected randomly. The characteristics of the respondents' viz. education, annual income, extension participation, training received, mass-media exposure, infrastructure facilities had positive and significant relationship with the perception of the respondents about ICT technology. The characteristics of the respondents like social participation, innovativeness and risk orientation were positively and highly significantly related with the perception of the respondents about ICT technology. The age of the respondents was negative and significantly related with the perception of the respondents about ICT technology. There was non-significant relationship with the perception of the respondents about ICT technology with their size of land holding.

Keywords: *groundnut growers, ICT perception, correlation*

INTRODUCTION

Groundnut is one of the vastly produced oilseed crop in the world as it is cultivated in more than 100 countries of six continents in the world and that is why it is referred to as a universal crop. Major groundnut producing nations are China, India, United States, Nigeria and Indonesia. In India, Groundnut is mainly grown in five states, Gujarat, Andhra Pradesh, Tamil-Nadu, Karnataka and Maharashtra and together they account for more than 90 percent of the crop's total area. Among these States, Gujarat stands first in terms of both area and production. In Gujarat, total area of Kharif groundnut during 2017 was 1.62 million hectares and production was 3.05 Million Tonnes (Anonymous *et al.* 2017b). Groundnut plays an important role in the agricultural and industrial economy of Gujarat state. Saurashtra region, which is known as "Groundnut Bowl of India" has greater importance for groundnut as it accounts for about 92 per cent of the total groundnut area of the state. Groundnut crop is grown mainly as rain fed crop in the state.Though, the groundnut is a principal crop of the Saurashtra as well as Junagadh district, there is a wide gap between average yield of common farmers and actual potential yield. The low yield leads to a considerable gap between supply and demand of edible oil in our country. As a result of this gap, the price of the edible oil rise beyond the reach of economically weaker section. Thus, one of the most important problem the country faces today and one that calls for immediate attention is that of stepping up production of all the oil seeds crops in general and groundnut in particular. Since improvement in varieties of groundnut has not been of the same order as in cereals and groundnut. One has to depend upon all the improved practices pertaining to groundnut cultivation to boost up the production per unit area.

OBJECTIVE

To analyse the relation between profile of groundnut growers and their perception towards modern communcation media

METHODOLOGY

Ex-post facto research design was followed for carrying out the study. For drawing the sample for the study multistage simple random sampling technique was used. The study was conducted in Saurashtra region. The Saurashtra region consist of eleven districts; out of them four districts namely Junagadh, Gir somnath, Rajkot, Amreli were selected purposively on the basis of higher groundnut area & productivity. A total of 160 respondents were selected for the

study. A sample of total 160 groundnut growers from sixteen villages was considered for the study. The dependent variables undertaken in this study were perception of the respondents towards ICT. To measure the perception of groundnut growers, a scale developed by Kale.*et al* was used with slight modification. An interview schedule was developed in accordance with the objectives of the study and it was pre-tested and translated into Gujarati. The data of this study were collected with the help of structural interview schedule. The collected data were classified, tabulated, analyzed and interpreted in order to make the findings meaningful. The statistical measures such as percentage, mean, standard deviation and correlation co-efficient were used in the study.

RESULTS AND DISCUSSION

Documentation of ICT exposure of groundnut growers

Table 1 : Distribution of respondents based on their duration of ICT utilization (n=160)

Sr. No.	ICTs	1-5 hrs. perweek		5-10 hrs perweek		10-15 hrs. perweek		Above 15 hrs. perweek	
		F	P	F	P	F	P	F	P
1	**Radio**	75	46.87	25	15.62	20	12.50	15	09.37
2	**Television**	85	53.12	75	46.87	20	12.50	10	06.25
3	**Telephone**	52	32.50	34	21.25	18	11.25	15	09.37
4	**Mobile advisory service**	98	61.25	47	29.37	18	11.25	20	12.05
5	**Computer (Internet Connected)**	52	32.50	38	23.75	21	13.12	18	11.25
6	**e-mail**	35	21.87	35	21.87	30	18.75	10	06.25
7	**Web based search engine**	38	23.75	34	21.25	25	15.62	17	10.62
8	**Web based agricultural information portals**	42	26.25	32	20.00	34	21.25	08	05.00
9	**Video conferencing**	45	28.12	25	15.62	12	07.50	08	05.00
10	**Kiosk**	65	40.62	35	21.87	19	11.87	09	05.62
11	**e-newspaper**	36	22.50	32	20.00	28	17.50	32	20.00
12	**e-agricultural magazines**	24	15.00	20	12.50	12	07.50	05	03.12

F= Frequency P = Percent

It can be inferred that the duration of e-newspaper usage was the highest (20.00 per cent) in the above 15 hrs./ week category followed by mobile advisory service (12.00 per cent) and computer (internet connected) (11.25 per cent).

It was also observed that 21.25 per cent of the groundnut growers use web based agriculture portals 10-15 hrs./week and the television utilization stood first in 05-10 hrs./ week category.

It was a evident that duration of utilization of mobile advisory service toped in 1-5 hrs./week category followed by television use (53.12 per cent) of the groundnut growers under this category.

Perception of the groundnut growers about ICT technology

Majority (58.75 per cent) of the respondents had medium level of perception about ICT technology. Whereas, 21.87 per cent and 19.38 per cent groundnut growers had low and high level perception about ICT technology, respectively.

Table 2 : Distribution of respondents based on their perception about ICT (n=160)

Sr. No.	Categories	Frequency	Percent
1	Low level of perception (up to 77.17)	35	21.87
2	Medium level of perception (77.18 to 92.29)	94	58.75
3	High level of perception (Above 92.29)	31	19.38
Mean = 84.73		S.D. = 7.56	

Relationship between profile of groundnut growers and ict perception

In order to ascertain the relationship between the ICT perception (dependent variable) of the groundnut growers and each of their selected characteristics (independent variables), the correlation co-efficient ('r') were calculated. The empirical hypotheses were stated for testing the relationship and its significance on zero order correlation are given in Table 18.

Table 3: Correlation between perception of groundnut growers and independent variables

(n = 160)

Sr. No.	Independent variables	'r' value
X_1	**Age**	-0.1668*
X_2	**Educational status**	0.1890*
X_3	**Work experience**	0.1758 *
X_4	**Size of land holding**	0.1083^{NS}
X_5	**Annual income**	0.1749*
X_6	**Social participation**	0.4017**
X_7	**Training received on ICT**	0.1676*
X_8	**Extension participation**	0.1750*
X_9	**Mass media exposure**	0.1685*
X_{10}	**Infrastructure facilities**	0.1568*
X_{11}	**Innovativeness**	0.4123**
X_{12}	**Risk orientation**	0.5302**
X_{13}	**Achievement motivation**	0.1840*
X_{14}	**Attitude towards ICT**	0.1790*

*= Significant at 0.05 level ** =Significant at 0.01 level

NS = Not significant

Age and ICT perception

It can be concluded, that there was negative and significant relationship between perception and age of the respondents. It means that perception of respondents increased significantly with decrease in age.

This trend was due to the fact that young farmers were more interested and had good understanding towards ICT technology, hence possessed high perception compared to old farmers.

This findings have been in line with that of Kumar *et al.* (2006), Badhe (2012), Gorfad (2012) and Patel *et al*. (2018).

Education and ICT perception

It can be concluded, that there was positive and significant relationship between perception and education of the respondents. It means that perception of respondents increased significantly with an increase in education.

This might be due to the fact the educated farmers generally have high extension participation, high innovativeness and also have progressive behaviour and rational thinking. Thus, they understand the use of ICT technology.

This findings have been in line with that of Bagheri *et al*. (2008) and Prasad *et al*. (2008).

Work experience and ICT perception

It can be concluded, that there was positive and significant relationship between perception and work experience of the respondents. It means that perception of respondents increased significantly with an increase in farm experience.

This might be due to the fact the experienced farmers have always tried to find out the solution of groundnut cultivation problems and at that time they got various informations regarding problems. Thus, they understand the use of ICT technology.

This finding was in line with that of Mashhadi *et al*. (2008), Soltani (2004) and Gorfad (2012).

Size of land holding and ICT perception

It can be concluded that there was non-significant relationship between perception and their size of land holding. It means perception of respondents was not related with size of land holding of the respondents.

It can be concluded that respondents irrespective of size of land holding were going for perception towards ICT. Thus, they did not have any concern with their farming size of land holding to know about use of ICT.

Similar finding had been reported by Chauhan (2009).

Annual income and ICT perception

It can be concluded that these was positive and significant relationship between the perception and annual income of the respondents. It means annual income of respondents increase significantly with an increase in perception towards ICT.

This might be due to fact that the Farmers with high annual income were generally resourceful, enable them to take more risk, more chances of exposure of communication media and it was the main source of capital to purchase farm inputs and other household consumable goods which lead them to better perception.

Similar findings were reported by Rezvanfar *et al*. (2005) and Gorfad (2012).

Social participation and ICT perception

It can be inferred that there was positive and highly

significant relationship between perception and their social participation. It means perception of respondents increased significantly with an increase in social participation.

This might be due to fact that, those who have participated in the programmes organized by various organizations might have been in close contact with various sources of information. These organizations might have facilitated them for getting latest information about ICT technology used in groundnut and finally improves the farmer's perception towards ICT.

This finding was in conformity with Kumar (2006) and Prasad *et al.* (2008).

Training received and ICT perception

It can be inferred that there was positive and significant relationship between the perception and their training received. It means perception of respondents increase significantly with an increase in training received.

This might be due to the fact that training strengthens the skill and knowledge of trainees which improves the level of perception of groundnut growers about ICT technology.

This finding was in conformity with the findings of Yakubu *et al.* (2013) and Gorfad (2012).

Extension participation and ICT perception

It can be concluded that these was positive and significant relationship between the perception and their extension participation. It means perception of respondents increased significantly with an increase in extension participation.

This might be due to fact that the respondents who have participated in various extension activities might have acquired higher perception and better understanding about ICT which improved their perception.

Similar findings were reported by Kumar (2006), Bagheri *et al*. (2008) and Gorfad (2012).

Mass media exposure and ICT perception

It is inferred that mass media exposure and ICT perception was positively correlated and the probable reason might be that the people with high mass media exposure will be in need of updated information and they will be depending on various ICTs for these updates.

This finding was similar with that of Joshi (2009) and Jha *et al*. (2014).

Infrastructure facilities and ICT perception

It can be concluded that there was a positive correlation between infrastructure facilities and ICT perception. The probable reason might be that the groundnut growers with good infrastructure facilities are available with modern ICTs and they had better environment and opportunities for efficient utilization of ICTs.

This finding was similar to the findings of Yekkini and Akinbile (2014).

Innovativeness and ICT perception

It can be inferred that there was positive and highly significant relationship between the perception and innovativeness of the respondents.

This means that as the innovativeness of the respondents increased their level of perception about ICT was increased due to their eagerness for getting information through frequent contacts with extension functionaries in their jurisdiction and outside.

This finding was in line with findings of Jha *et al*. (2014) and Roshan (2015).

Risk orientation and ICT perception

It can be concluded that there was positive and highly significant relationship between perception and their risk orientation of the respondents. It means perception of respondents increased significantly with an increase in risk orientation.

This might be due to the fact that farmers with higher level of risk orientation means a person having better quality to take risk to get better economic end. This trait helps farmers to perceive the ICT technology in a better way and finally they were motivated towards adoption of new ideas.

This finding was in line with the findings of Chauhan (2009).

Achievement motivation and ICT Perception

It can be concluded that achievement role have a significant association with ICT perception. The probable reason might be people with high achievement motivation had to use ICTs due to the great impact and influence of ICTs in their day to day life.

This result was similar to the findings of Raksha (2014), Raval *et al.* (2021) and Salunkhe *et al.* (2021).

Attitude and ICT perception

It is inferred that there was a positive correlation between attitude and ICT perception of groundnut growers. This might be due to that the person with positive attitude

towards ICTs make him mentally more concerned about it and he or she will be more interested in the use of ICTs in their professional and personal life.

This finding was in line with the findings of Chitra (2015), Patel and Vinaya (2021) and Gajera *et al.* (2022).

CONCLUSION

The characteristics of the respondent's *viz*. education, annual income, extension participation, training received, mass media exposure, infrastructure facilities had positive and significant relationship with the perception of the respondents about ICT technology. The characteristics of the respondents like social participation, innovativeness and risk orientation were positively and highly significantly related with the perception of the respondents about ICT technology. The age of the respondents was negative significantly related with the perception of the respondents about ICT .There was non-significant relationship with the perception of the respondents about ICT technology with their size of land holding.

IMPLICATIONS

(1) Extension personnel and researchers can utilize the perception scale developed in this investigation to measure the level of perception of groundnut about ICT technology particularly while scheduling training programmes in the pocket of groundnut.

(2) A systematic institutional mechanism has to be developed wherein all the stake holders *viz*., farmers, extension personnel, and research personnel to have constant interaction and sharing of information about groundnut cultivation practices.

(3) The perception scale developed in this study may be useful to document the understanding of farmers on ICT technology

CONFLICT OF INTEREST

There is no conflict between author.

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