

Extent of Uses of Information and Communication Technology in Agriculture by the Vegetable Growers of Tripura

Rajib Das^{1*} and Subrata Majumder²¹Krishi Vigyan Kendra - Khowai, Tripura (799 207), India²Dept. of Information Technology, M.B.B. College, Agartala, Tripura (799 001), India

Open Access

Corresponding Author

Rajib Das

e-mail: srajib99@gmail.com

Keywords

Agriculture, ICT tools, Tripura, Uses, Vegetable growers

How to cite this article?

Das and Majumder, 2021. Extent of Uses of Information and Communication Technology in Agriculture by the Vegetable Growers of Tripura. *Research Biotica*, 3(4): 176-178.

Abstract

Information and Communication Technology has transformed the role of unified communication and integration of telecommunication to built easy system for better uses of ICTs which helped create systems for responding to a wide range of societal needs. ICT means combination of all those tools and machineries which used to handle the information and communication. It includes computes, networks, hardware, software's, malwares etc. Timely accessibility of suitable information is urgent need for any country's development. Harnessing advantages of Information and Communication Technology (hereafter to be mentioned as ICTs) for changing the face of agriculture, in terms of production and productivity and farmers' wellbeing; calls for a separate set of knowledge, skill, ability and higher (if possible fullest) extent of use by the farming communities. ICT has a significant role to bridge the gap of information dissemination to the farmers. In the present study an attempt has been made to identify the extent of use of Information Communication Technology in Agriculture by the vegetable growers of Tripura. The study was conducted in south Tripura district of Tripura state taking a purposive sample of 120 nos. vegetable growers. The data was collected using pre-tested structure schedule *via* personal interview. It was found that vegetable growers preferred to utilize informal information sources more than ICTs in respect to vegetable cultivation. Therefore it is recommended to popularize the strategic use of user friendly ICT tools for better and faster outreach to the target farmers.

1. Introduction

ICT is often used as a comprehensive synonym for information technology stresses the role of unified communication and integration of telecommunications, intelligent building management systems and audio-visual systems in modern information technology. ICT includes of all technical means that are used to handle information and aid communication. It includes computer and network hardware, middleware and necessary software. According to UNDP, communication technologies involve innovations in microelectronics, hardware and software, telecommunications and optoelectronics. These allow the processing and storage of large amounts of information through communication networks.

Agriculture occupies the central pace in rural life and it is well known that rural life revolves around agriculture hence any attempt to improve agriculture will usually trigger the rural development. In India several extension approaches like farmer friend approach, group approach, mass media

approach, farming system approach, market led extension approach, participatory approach etc. have been adopted for agricultural development. Sustainability and productivity of the agricultural sector largely depends on the quality and effectiveness of extension services. For many years, farmers have been accessing agricultural information from extension workers through interpersonal communication. However, the number of extension workers has been decreasing while farming families have been increasing. Therefore, it is not possible for extension personnel to reach out each and every farmer's doorstep because in reality there is only one extension worker available for 2,879 farmers in India (Mukherjee and Maity, 2015). This leads to low achievement of the current extension services in the country with respect to reaching out to farmers with timely and relevant agricultural information.

Vegetables are the most important crops in the North-Eastern Region of India especially the hilly tracts, where the crop is grown under rainfed conditions. Vegetable crops forms an

Article History

RECEIVED on 10th August 2021RECEIVED in revised form 15th October 2021ACCEPTED in final form 17th October 2021

important part of prevailing cropping systems as well as the dietary food habits of the people of the region (Kumar *et al.*, 2008). The perishability and bulkiness are the innate characteristic of vegetables that causes problems in its marketing. Marketing of the vegetable crops in North eastern states of India is further constrained by hilly topography that comprises about 70 percent of the total area (Sah *et al.*, 2011), limits its movement which ultimately affects the resource poor farmers of the region. Marketing and storage were also identified as important weaknesses of vegetable production in India. Saikia (2001) highlighted that the facilities of storage, processing and marketing are deficient for perishable commodities as technological constraint for agricultural development in north eastern region of India. Owing to the highlighted weaknesses, the rural marketing in the region is confined primarily to unorganized sector with domination of private traders.

Information and Communication Technology play an important role to motivate the vegetable farmers to adopt innovative and sustainable practices. There are several tools which are being used in modern day for dissemination of information and change of any society largely depends on accessibility and usability of ICT tools (Salau and Saingbe, 2006). The farmers of Tripura don't have proper access to the requisite information communication technologies all time which might play a significant role in ushering progressive growth and development in the concerned farming sector. The farmers of Tripura most often facing serious difficulties in this modern era also, due to lack of availability of ICTs in the far end of the district. The right information at the right time in the right format can be a trigger between success and failure of a farmer. It is difficult for the governmental agencies to reach each farmers door steep all time. Use of social networking tool, ICT *etc.*, has great potential to equip

our farmers to get the updated knowledge on production as well as marketing to niche market. Use of information network and sources can bring an amicable change in managing farm resources and various other constraints faced by the vegetable growers. Though vegetables are the major commercial crops of Tripura, farmers are facing problems in utilizing information communication technologies for all round development. Considering these issues, a research study entitled “**Extent of uses of Information and Communication Technology in Agriculture by the vegetable growers of Tripura**” was undertaken.

2. Materials and Methods

Highest vegetable growing district of Tripura namely South Tripura district were selected purposively for the present study. From the selected district highest vegetable producing blocks was selected purposively. Further a list of vegetable growing villages was prepared under each of the selected blocks and four villages were selected randomly from the selected blocks. Thus a total sample of 180 farmers was selected by simple random technique including 30 vegetable growers having at least three years of farming experience. Face-to-face personal interview was conducted for collection of data using pre tested interview schedule. Data analysis was done using SPAR 2.0 software.

3. Results and Discussion

From Table 1 it was evident that, majority (73.33%) of the potato farmers of Tripura used mobile phones most often as mass media information source. Further, majority (59.17%) of them used television sometimes, while 100.00 percent of them never used radio and videoconferencing. In case of uses of social media apps like Facebook, Whatsapp, Instagram, Twitter, Telegram only limited farmers are aware about all these apps.

Table 1: Distribution of the vegetable growers based on their Extent of uses of ICT tools, N=120

Sl. No.	ICT tools	Frequency (f) of use			Mean score	Rank
		Most often f (%)	Sometimes f (%)	Never f (%)		
1	Radio	0 (0.00)	0 (0.00)	120 (100)		
2	Television	45 (37.50)	71 (59.17)	4 (3.33)		
3	Whatsapp/ Facebook / Telegram/ Instagram / Twitter	0 (0.00)	22 (18.33)	98 (81.67)		
4	Laptop	0 (0.00)	21 (17.50)	99 (82.50)		
5	Desktop computer	13 (10.83)	70 (58.33)	37 (30.83)	0.485	II
6	Internet	1 (0.83)	6 (5.00)	113 (94.17)		
7	Mobile	88 (73.33)	25 (20.83)	7 (5.83)		
8	Smartphone, SMS based services	0 (0.00)	15 (12.50)	105 (87.50)		
9	Videoconferencing	0 (0.00)	0 (0.00)	120 (100)		

Table 2 revealed that vegetable growers of Tripura, majority (52.50%) of the respondents had medium level of information sources utilization while 32.50 percent of them had low and 15.00 percent of them had high information sources utilization. These findings were in accordance with the findings of Suresh (2004), Nagesh (2006) and Shree *et al.* (2020).

Table 2: Level of information and communication technology utilized by the vegetable growers

Sl. No.	Name of the state	Information sources utilized				
		Level	Frequency	%	Mean Score	SD
1	Tripura	Medium (7.30-13.30)	84	70.00	10.40	3.31
		High (>13.30)	21	17.50		
		Low (<10)	39	32.50		
		Medium (10-13.70)	63	52.50		
		High (>13.70)	18	15.00		
		Medium (7.50-14.30)	347	72.29		
		High (>14.30)	64	13.33		

4. Conclusion

Majority of the vegetable growers of Tripura used mobile as their most preferred mass media information source for obtaining pertinent information related to sustainable vegetable cultivation. Analysis also revealed that vegetable growers of Tripura preferred to use various other sources for acquiring information's as compare to ICTs. It is therefore recommended to popularize the strategic use of mass media including user friendly ICT tools for better and faster

outreach to the target farmers. This will be helpful in providing the updated information to the farmers with accuracy, authenticity as well as at the right time of their need.

5. References

- Kumar, S., Singh, D., Singh, D.K., Yadav, R.N., Sharma, V.K., Ali, N., 2008. Study the relationship of independent variables with technological gap of potato growers. *Progressive Research* 3(1), 67-69.
- Mukherjee, A., Maity, A., 2015. Public-private partnership for convergence of extension services in Indian agriculture. *Current Science* 109(9), 1557-1563.
- Nagesh, P., 2006. Study on entrepreneurial behaviour of pomegranate growers in Bagalkot district of Karnataka. M.Sc. (Agri. Thesis, University of Agricultural Sciences, Dharwad, pp. 8-26.
- Sah, U., Dubey, S.K., Sharma, J.P., 2011. Potato Marketing in North East Region of India: A Diagnostic study. *Journal of Community Mobilization and Sustainable Development* 6(2), 194-201.
- Saikia, A., 2001. Performance of Agricultural Economy of the North Eastern India: Constraints and Priorities. Presented in workshop "Prioritization of strategies for Agricultural Development in Northeastern India" organized by National Centre for Agricultural Economics and Policy Research (NCAP), pp. 8-22.
- Salau, E.S., Saingbe, N.D., 2008. Access and Utilization of ICTs among Agricultural Researchers and Extension Workers in Selected Institutions in Nassarawa State of Nigeria. *PAT* 4(2), 1-6.
- Shree, D.A., Nithya, Rekha, R., Roopa, N., 2020. Socio-economic assessment of farm women in Rice cultivation. *Indian Journal of Extension Education* 55(4), 56-60.
- Suresh, S., 2004. Entrepreneurial behaviour of milk producers in Chittoor district of Andhra Pradesh – a critical study. M.V.Sc Thesis, Acharya NG Ranga Agricultural University. Hyderabad, pp. 46-80.