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Perception of Farmers towards Mobile Based Extension Agro Advisory Services in Nagaland, India

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ABSTRACT

The agricultural extension services in the North East region of India are not only hindered by limited resources and scarcity of trained staff at state & regional level but also by the remoteness of the villages. Many villages remain inaccessible particularly during monsoon, due to poor road connectivity. The major technology dissemination approach adopted so far had been the traditional direct interaction and field level practical demonstration at the community level. The facility of toll-free modern smart phone based information and communication technology (ICT) service has been started and is gaining momentum. An attempt has been made to collect the data from 200 farmers of Tseminyu district of Nagaland State based on proportionate random sampling (PPS) technique to know the impact of mobile based extension agro advisory services in the region. Majority of the farmer respondents had perceived 'yield increase', and 'information of new agricultural technology' as the major benefits of using the mobile -based agro- advisory services.

Keywords: Extension; ICT; Agro- advisory; Mobile; Smart phone; Technology dissemination; North east India; Nagaland

The agricultural extension services in the North East region of India are not only hindered by limited resources & scarcity of trained staff at state and regional level but also by the remoteness of the villages. Many villages remain inaccessible particularly during monsoon, due to poor road connectivity. The major technology dissemination approach adopted so far had been the traditional direct interaction and field level practical demonstration at the community level. Along with the traditional dissemination platforms like National radio, local FM radio, television are also being used for extension services. The facility of toll-free modern smart phone based information and communication

technology (ICT) service has been started in the region, and has been gaining momentum. As of 2015, nearly half of all Indian farmers (120 million) were estimated to own a mobile phone that would allow them to be reachable via a phone-based extension service (Cole et al., 2012). Mobile phones are devices that can create, store, access and share information anytime, anywhere. But they are more than that, when teamed with extension and advisory services, they can help improve the livelihoods of rural people by getting much needed timely information at low cost. Impact-studies on the effectiveness of these mobile based agro-advisory services in the state of Nagaland are rare. Hence, this study was taken

up to examine the impact, perception, usefulness, awareness and knowledge level and benefits of the farmers by using mobile based extension agro-advisory services in the state of Nagaland.

METHODOLOGY

Tseminyu district of Nagaland State in India was selected purposively for the study. A list of farmers representing in different range of the district was prepared for each recognized villages. Thus, a total of 200 farmers were randomly selected for data collection. The data were collected using a well structured and pre- tested interview schedule. The relevant items were collected through different review of literature,

discussion with extension functionaries and were systematically incorporated in the interview schedule. The methods of data collection were through personal interview at their places of residence, telephonic talk, SMSs, messenger, WhatsApp etc. Care was taken to make the respondents understand about the objectives of the study. Suitable statistical analysis like frequency, percentage analysis and rank were employed to interpret the result.

FINDINGS AND DISCUSSION

The results on the mobile based agro advisory services, awareness and knowledge, usefulness, perception and benefits are presented in the following tables.

Table -1. Usefulness of Mobile based Agro-advisory Services

n= 200

Sl. No.	Particulars	Agree	%	Disagree	%
1	Mobile based extension service is relevant to farming needs.	195	97.5	5	2.5
2	Mobile based extension agro advisory sent is correct in terms of content.	192	96	8	4
3	Mobile based extension agro advisory sent is available on time.	198	99	2	1
4	Mobile based extension agro advisory messages are being sent during the emergency cases of outbreak of pests and diseases.	196	98	4	2

The results pertaining to the usefulness of mobile based extension agro advisory services are presented in Table-1. The data revealed that majority of the respondents (99.0%) agreed

that 'mobile based extension agro advisory sent is available on time', and 'delivers immediate messages during emergencies cases of outbreak of pests and diseases' (98.0%).

Table -2. Awareness and Knowledge Level Due to Mobile Based Extension Agro Advisory Services

n= 200

Sl. No.	Particulars	Completely	%	Partially	%	Not at all	%
1	Did you know the right time for sowing the crop?	186	93	14	7	0	0
2	Were you aware of the weather forecast?	196	98	4	2	0	0
3	Information about suitable agricultural and horticultural crops available in your area.	182	91	18	9	0	0
4	Knowledge about vaccination and other treatment given to animals.	198	99	2	1	0	0

The data from Table- 2 reveal that majority of the respondents were aware and had acquired the knowledge due to mobile based extension agro advisory services. 93.0% had known the right time for sowing the crops as completely and partially respectively. Majority of the respondents

has high level of awareness and knowledge level about their farming situation because majority of the respondents has access to Smartphone and regularly use social networking tools such as WhatsApp, Messenger and Facebook.

Table- 3. Perception of Respondents towards Mobile based agro advisory services.

n= 200

Sl. No.	Statement	Agree	%	Disagree	%
1	Sufficient information related to agriculture becomes available in the mobile based extension agro advisories.	195	97.5	5	2.5
2	Mobile based extension agro advisories services are simple and effective.	196	98	4	2
3	Doubts of the farmers are completely resolved by the mobile based extension agro advisories services.	187	93.5	13	6.5

The data from Table- 3 reveal that majority of the farmer respondents agreed 'sufficient information related to agriculture becomes available in mobile based extension agro advisories' (97.50%), 'mobile based extension agro advisories is simple and effective' (98.0%),

'doubts of the farmers are completely resolved by the mobile based extension agro advisories' (93.5%). The respondents had high level of perception possibly due to their high level of awareness and knowledge and familiarity about mobile based extension agro advisory services.

Table- 4. Benefits Offered By Mobile Based Agro Advisories Services

n= 200

Sl. No.	Particulars	Yes	%	No	%	Rank
1	Yield increase	192	96	8	4	I
2	Information of new agricultural technology	190	95	10	5	II
3	Market information	145	72.5	55	27.5	IV
4	Government schemes	168	84	32	16	III

The data from the Table- 4 reveal that majority of the farmer respondents had ranked 'yield increase' (96.0%) first followed by 'information of new agricultural technology' (95.0%), 'Government schemes' (84.0%), and 'market information' (72.5%) in terms of benefits. The reason for high level of benefits experienced by respondents using mobile based agro advisory services could be due to active participation and intervention of agricultural experts, scientists, from Government department and NGOs of agri and allied sectors through this service.

The study has found that the agro-advisory service through mobile phones in Nagaland district was highly effective in encouraging

farmers to adopt a number of recommended agricultural technologies.

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