

## Original Research Article

# Perceived gratification, difficulties and suggestion on Integrated Technology Enabled Agri Management System (iTEAMS) among the registered farmers

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### ABSTRACT

The 1917 iTEAMS (Integrated Technology Enabled Agri Management System) is an initiative by the government of Meghalaya employing ICT to fulfil its objectives of providing organised evacuation logistics, access to markets and agro-advisories to the farmers upon registering with them. According to the recent data, a total of 84,246 farmers are registered with iTEAMS so far. The present study was conducted to understand the perceived gratification, difficulties and suggestions among the registered farmers of iTEAMS. Empirical data were collected from 120 registered farmers from Ri bhoi district of Meghalaya. Findings of the study reveal the majority of farmers were satisfied with the timing of the services offered by iTEAMS, followed by the services provided by the centre to them during the Covid-19 lockdown, in the sale of their produce. The farmers' biggest challenge, according to the findings, was a lack of understanding of how the centre worked. Farmers also expressed a lack of interest in availing for the services.

*Keywords: iTEAMS, ICT in agriculture, Meghalaya*

### 1. INTRODUCTION

The overall trend in the contribution of agriculture to the national GDP has seen a decline, with the contribution coming down from 52.3% (1950-51) to 18.5% (2008-09). However, unbeknownst to many, the contribution has increased from 17.6% (2018-19) to 20.2% (2020-21) and one of the contributors to this success is ICT. Agriculture has and remains to be the backbone of the country's economy and hence there had been a number of initiatives to aid the growth of agriculture in our country. ICT in agriculture is one segment which has seen widespread growth. Over the past decade, the number of public and private sector initiatives in ICT for agriculture has increased substantially. (Aker, et al., 2016). ICT in agriculture is an emerging field focusing on the enhancement of agriculture and rural development. (Mahant, et.al., 2012). The components of ICT in agriculture may include mobile applications, websites, telephony services, radio, kiosks, television, etc., making the domain vast. In recent years, the government and various other organisations have undertaken several initiatives such as eNam, Kisan Call Centre, mKisan, Kisan TV, Agmarknet, Digital Green, ITC's e-choupal, etc. to escalate the ICT trend in agriculture. ICT contributes to the development of rural areas through a variety of its services, with the main focus on agriculture. It not only assists farmers in becoming information-rich by providing them with knowledge on any topic at any time, but it also assists them with their farm activities. It is also essential to concentrate on building ICT tools that are based on local elements and designed with the requirements of local people in mind. 1917iTEAMS is such an initiative taken by the government of Meghalaya in collaboration with

Meghalaya Institute of Entrepreneurship, Digital India corporation, State Department of Agriculture, Horticulture, Fisheries, Animal Husbandry and Veterinary with the motto of “connecting farmers to market”.

With 80% of the state’s population depending on agriculture for their livelihood directly, agriculture is important to the economy of the state of Meghalaya as well. However, agriculture in Meghalaya is characterised by the use of traditional practices, low productivity and poor yield. Much of the produce of the state is consumed in the state itself and there is a negligible amount of export from the state. There is a need to increase spending on agriculture by the government in the state. (Dkhar,2018) There is a scope for improving the agricultural practices of the farmers in Meghalaya by widening the role of Information and Communication Technologies in agriculture. (Syiem, 2016). There are but a very few ICT initiatives that cater to the specific needs of the farmers in northeast India. iTEAMS is said to be the first of its kind of initiative taken in the north-eastern region of India. 1917iTEAMS (Integrated Technology Enabled Agri Management System) started in December 2017 is a mobile telephony service based on ICT that requires a farmer to register by calling the toll-free number 1917. After enrolling, farmers can avail of the services provided by iTEAMS which include logistic solutions, agro-advisories and market connect.

The centre functions from 7 AM to 7 PM. Farmers can contact the Agri-Response Centre (ARC) for assistance by dialing the number 1917. If a farmer needs a logistics solution, they are connected to the DO (Dispatch Officer), who will assist them in the transportation of their goods through ARVs (Agri-Response Vehicles); otherwise, if the farmers have questions, they are connected to the Level 1 ICO (Incoming Communication Officers), who can help them with disease and pest management, package of practices on apiculture, fisheries, Sericulture, scheme-related information, livestock health management, and providing buyer information and any other allied sectors information. If the ICOs are unable to resolve a problem, the issue is referred to Level 2 Subject Matter Experts, who are Agriculture Department officials.

## **2. MATERIAL AND METHODS**

Ri Bhoi district of Meghalaya was selected purposively for this study, as the district has the maximum number of iTEAMS registered farmers. Out of the four blocks, Bhoiymbong block was selected randomly. 120 farmers were selected through random sampling method and interviewed using a well-structured interview schedule. Data collected were tabulated and analysed using frequency, percentage analysis, mean and standard deviation.

## **3. RESULTS AND DISCUSSION**

### **3.1 Perceived Gratification for services provided by iTEAMS**

iTEAMS provide various services to its registered farmers. Table 1 presents the level of gratification towards these services by the farmers. It is evident that a majority of the farmers (71.7%) were satisfied with the services being well in time, followed by 69.2 per cent of the farmers acknowledging the help by iTEAMS in the sale of their produce during the covid-19 lockdown. In fact, it was during the lockdown that iTEAMS rose to prominence as it assisted farmers in providing access to markets. A considerable number of farmers (63.3%) were satisfied with the price charged for the ARVs (Agri-Response Vehicles). iTEAMS charge a minimum amount of Rs. 0.02 per Kg/Km. More than half (58.3%) of the farmers were satisfied with the capacity of the Agri-Response Vehicles. ARVs capacity is 2 metric tones. The accessibility of the personnel at any time was appreciated by 47.5 per cent of the farmers. iTEAMS has staff available from 7 a.m. to 7 p.m., and they are also equipped with IVRS around the clock. 28.3 per cent of the respondents felt that the information received from iTEAMS was helpful to them. iTEAMS provides their registered farmers with information regarding all the package of practices, market information, schemes-related information, etc. However, only 18.3 per cent of the respondents felt that information provided by iTEAMS was relevant and consistent with their agro-ecological conditions. Furthermore, just 10% of farmers were satisfied with the information provided by iTEAMS regarding various schemes. Despite the fact that the government uses a lot of advertising and news releases about a new scheme, unless they are informed, the majority of farmers are unaware of them. Only 9.2 per cent of the farmers were satisfied with the market information provided by the centre. Followed by 5.8 per cent of the farmers being satisfied with the information on livestock management.

**Table 1: Perceived Gratification for services provided by iTEAMS****(n=120)**

Statements	Frequency	Percentage	Rank Order
iTEAMS personnel are accessible whenever the farmers seek their help	57	47.5	5
Information received by iTEAMS helps farmer's problem	34	28.3	6
Information provided by iTEAMS is relevant and consistent with Agro-ecological conditions	22	18.3	7
Information and logistics services provided by iTEAMS are well in time	86	71.7	1
iTEAMS gave information on market	11	9.2	9
iTEAMS has given information on livestock management	7	5.8	10
Information given on various schemes	12	10	8
Price charged for the vehicles	76	63.3	3
The capacity of the vehicles	70	58.3	4
Helped in the sale of produce during the lockdown	83	69.2	2

**3.2 Difficulties faced by the users:**

From table 2, it is apparent that the lack of information on how iTEAMS works was clearly a big issue for the majority (73.3%) of the farmers. A major number of farmers associated iTEAMS with their ARVs (Agri-Response Vehicles); additionally, the farmers were unaware of the other two aspects of iTEAMS, namely, agro-advisories and market linkage. There is a need to raise awareness about iTEAMS' underutilised services. More than half (68.3%) of the respondents had a lack of interest to avail of the services altogether. There is a need to educate the farmers on the advantages of ICT in agriculture as it might be a new topic to them. 39.2 per cent of the respondents faced difficulty in getting in line with the centre, there are currently four ICOs (Information Communication Officers) working in the centre. 32.5 per cent of the farmers felt that the capacity of the ARVs (Agri-Response Vehicle) was less. Whereas, 28.3 per cent of the farmers had a problem with the waiting period to avail of an ARV. The centre currently has 18 ARVs. 24.2 per cent of the respondents had difficulty in explaining their situation to the staff. Furthermore, It was noted that services had been denied to 18.3 per cent of the respondents at a point in time. Whereas, 16.7 per cent of the farmers reported that ARVs were not available when they required them. 9.2 per cent of the farmers expressed dissatisfaction with workers not talking in their local dialect.

**Table 2: Difficulties faced by the users:****(n=120)**

Statement	Frequency	Percentage	Rank
Difficulty in getting line	47	39.2	3
Unavailability of ARVs in time of need	20	16.7	8
Lack of awareness on the functioning of iTEAMS	88	73.3	1
Not talking in local dialect	11	9.2	10
Difficulty in explaining the situation.	29	24.2	6
Lack of interest among the farmers to avail the services.	82	68.3	2
Personnel are not well prepared to answer the farmer's questions.	17	14.2	9

Capacity of ARVs is less.	39	32.5	4
Waiting period is long to avail the ARVs	34	28.3	5
Services were denied	22	18.3	7

### 3.2 Suggestions given by the users:

Table 3 lists the suggestions made by respondents for improving the centre's efficiency. It is apparent that the majority of respondents (90.8%) believe the number of ARVs should be raised. 77.5 per cent of farmers believe ARV's capacity should be enhanced, and that more iTEAMS awareness programmes are needed. According to 58.3 per cent of respondents, farmers want the centre to provide information on the latest technology and schemes. Finally, 13.3% of the farmers requested that the employees speak in the local dialect.

**Table 3: Suggestions given by the respondents:**

(n=120)

Statements	Frequency	Percentage	Rank
Increasing the number of ARVs available with iTEAMS.	109	90.8	1
Increasing the capacity of ARV	93	77.5	2
Speaking in the local dialect.	16	13.3	4
Provide information on the latest technologies/ schemes.	70	58.3	3
Awareness campaign to popularize iTEAMS.	93	77.5	2

## 4. CONCLUSION

From the study, it is evident that the respondents were mostly satisfied with iTEAMS for offering their services in time, followed by their help in the sale of produce during the covid-19 lockdown. It is also evident that the most difficulty the farmers faced was that they were unaware of the proper functioning of iTEAMS. As mentioned earlier, most of the farmers associated the term iTEAMS with their ARVs and were mostly unaware of the other two aspects of iTEAMS viz' agro-advisories and market connect; for the farmers to be able to take full advantage of the centre it is necessary for the centre to have awareness programmes across the state. It was also noted that the farmers were uninterested in availing of the services provided by the centre. Again, it is necessary to inform the farmers of the advantages of the use of ICT in agriculture. Furthermore, farmers suggested that the number of ARVs should be increased. The centre should solicit feedback from the farmers on a regular basis, in order to enhance their functioning.

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