# GOOD PRACTICES 53: APRIL 2022

## RAN VULHTUTE THIAN - SMART EXTENSION SERVICES THROUGH SMART PHONE IN THE PICTURESQUE HILLS OF MIZORAM

*In this Good Practice Note, Saidur Rahman and co-authors go into the importance of a mobile-based agro-advisory system in Mizoram, and how its applications helped small and marginal farmers achieve successful farming and livestock raising in challenging situations.*

### CONTEXT

Agriculture is the prime source of livelihood for the majority (85%) of rural population in North-Eastern Region (NER). Apart from agriculture, livestock, especially pigs and poultry, plays a crucial role in the lives of the people of NER and are an important component of integrated farming system. Their dependence on livestock as an alternative source of income, is significant. The farmers in NER face much hardship in their farming activities. The major factors are no access to new technologies, as well as inadequate and timely unavailability of critical inputs and services. The farmers here need information about farming practices, policy initiatives, best practices of other farmers, market intelligence, and also information related to technology. This calls for timely availability of information for farmers along with a need for specific extension strategy at the village level to improve the economy and living standards of the farming community.

In this context, the project entitled, Mobile Based Agro-Advisory System in Mizoram has been taken up by the Ministry of Electronics and Information Technology (MeitY), Government of India, and implemented in collaboration with Digital India Corporation (DIC), New Delhi, and College of Veterinary Sciences & Animal Husbandry, Central Agricultural University (I), Selesih, Aizawl, Mizoram – for a period of three years (2019-22) with an overall objective to empower the farmers by providing 'right information at right time'. The project has been given a local name – Ran Vulhtute Thian ('Ran Vulhtute' means Livestock/animal farming and 'thian' means friend, i.e., Friend of livestock/animal farming) – to make it more familiar to the local farming community.

**The pictures que hills of Mizoram**

The project was launched in September 2019. The project aims to empower the farmers in taking informed decision that can enhance their livelihood by implementing Mobile Based Agro-Advisory System in the local language.

## GOOD PRACTICES: HOW THE NEW MODEL – 'RAN VULHTUTE THIAN' WORKS

### Establishment of ICT Lab

In December 2019, a state-of-the-art ICT lab was established in the College with Level 1 Experts from Animal Husbandry and Agriculture/Horticulture disciplines providing agro-advisory services in the local language (Mizo). A toll-free helpline in the local language (1800-102-3141) was launched for the farmers.  Faculty members from the University, Subject Matter Specialists from KVK and Veterinary Officers from the State Department of Animal Husbandry and Veterinary, Govt. of Mizoram, are acting as Level 2 Experts for providing farm advisories to the farmers as and when required. In the Lab three Agro-Associates (Level I) are providing expert guidance to the farmers who call, two Field Managers are assisting with content development, collection of information, organization of awareness camps, etc. As the system and methods are new to the farming community, 16 Field Coordinators are placed in different parts of the state to motivate the farmers and provide guidance to them for registering themselves in the system so as to get advisories. The 'Interactive Information Dissemination System (IIDS)' available with Digital India Corporation (DIC), New Delhi, is used as the software platform for Ran Vulhtute Thian. This IIDS is an integrated model – basically for integration of Toll free IVRS, Smart Phone Application and Interactive Portal. IIDS is a pull and push based system where livestock and agriculture related information can be pulled by the farmers using the mobile phones.



**Experts providing advisories to farmers from the ICT Lab /   A farmer calling the ICT Lab through the Toll Free Number**

### Registration of Farmers

Each farmer has to register himself/ herself to get the desired services by providing required details; for example, for animal husbandry advisory services they need to provide their farm details. Each farmer gets a unique ID number and all the transactions are recorded in the database. Till date more than 6500 farmers are registered from 11 districts, covering 25 blocks and 166 villages. It is interesting to note that nearly half of the farmers registered are women.

Awareness campaigns were organized for sensitization of the farmers in villages about the project and on spot registrations were done to show the project features. The Field Coordinators were assigned villages, to visit the farmers there.  A 3-minute project video was prepared to disseminate the information through social media such as WhatsApp, Facebook, Instagram. Women are the custodians of livestock and take care of the livestock, so the women were targeted for registration. Field Coordinators trained them initially on how to use the app and the system.

**Registration of farmers by Field Coordinators / Registration through phone calls**

## Registration of Farm Animals

The medical history of an animal is essential for providing the best treatment if the animal suffers from any diseases. This history contains the basic information about the animal. A protocol was developed to register both farm and pet animals (pigs, dogs and Cattle) in order to maintain a record book for each animal.

Whenever a farmer calls with regard to any problem with their livestock/animals, he/she will be asked to identify the animal with its identification number and the expert can then track the health details of the specific animal through its profile in the system. During the registration of farmers, a detailed farmer's profile and farm profile is collected and put in to the system. For cattle an identification number used by the milk cooperatives are used. Proactive calls are made by the project staff to update farmers' profiles based on the records of calls made in one month.

## Awareness and Training Programme

To raise awareness in the people on project activities, we encourage them to take the benefit of the project to the maximum extent by organizing awareness camps and need-based training programmes. Moreover, animal health camps are organized in different villages for the benefit of the farmers in the registered villages.



**Project Awareness Programme in a village / Animal Health Camp in a village**

## Delivery of Farm Advice (Pull Based)

To get the advice/information service farmers call the lab from their registered mobile number. Farmers' queries are answered by the experts at advisory labs who also record and tag the different

types of queries for creation of an IVR database. If the expert at the centre is unable to answer the query, he/she passes on the query to a senior Subject Matter Specialist (SMS) at the concerned centre of the University and the specialist answers the query virtually. It has been observed that an overwhelming majority (93%) of queries was on health management aspects of animals. With regard to agriculture, the records show that 66% of farm advisories were given on pest and disease management.
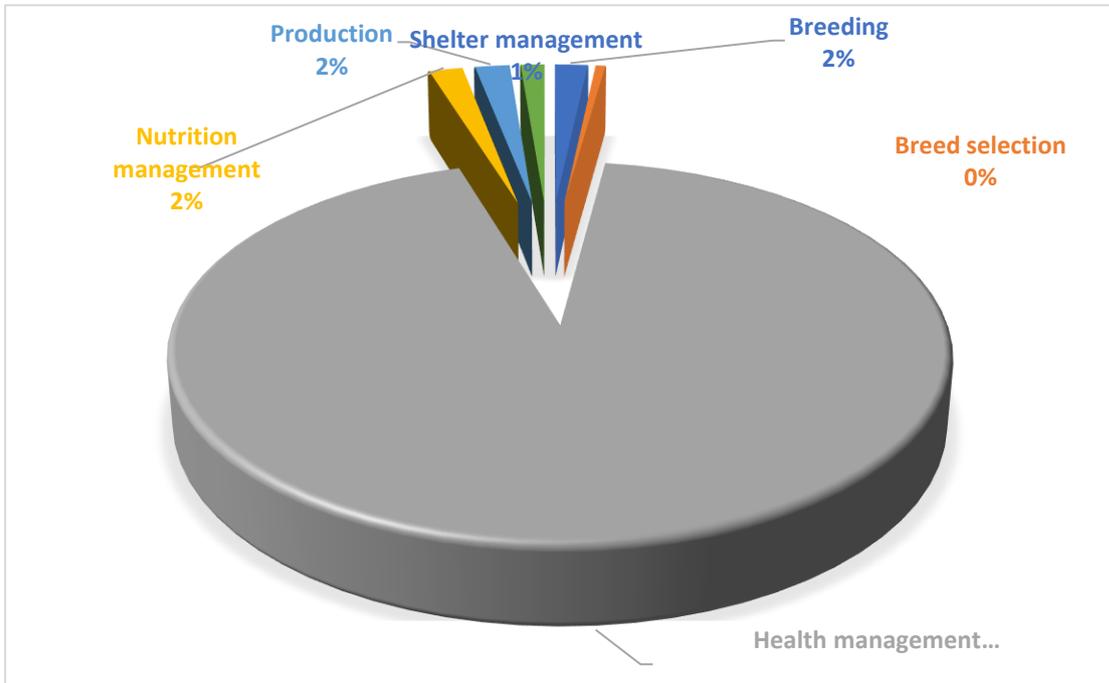


**Problem-wise Advisory given for livestock**
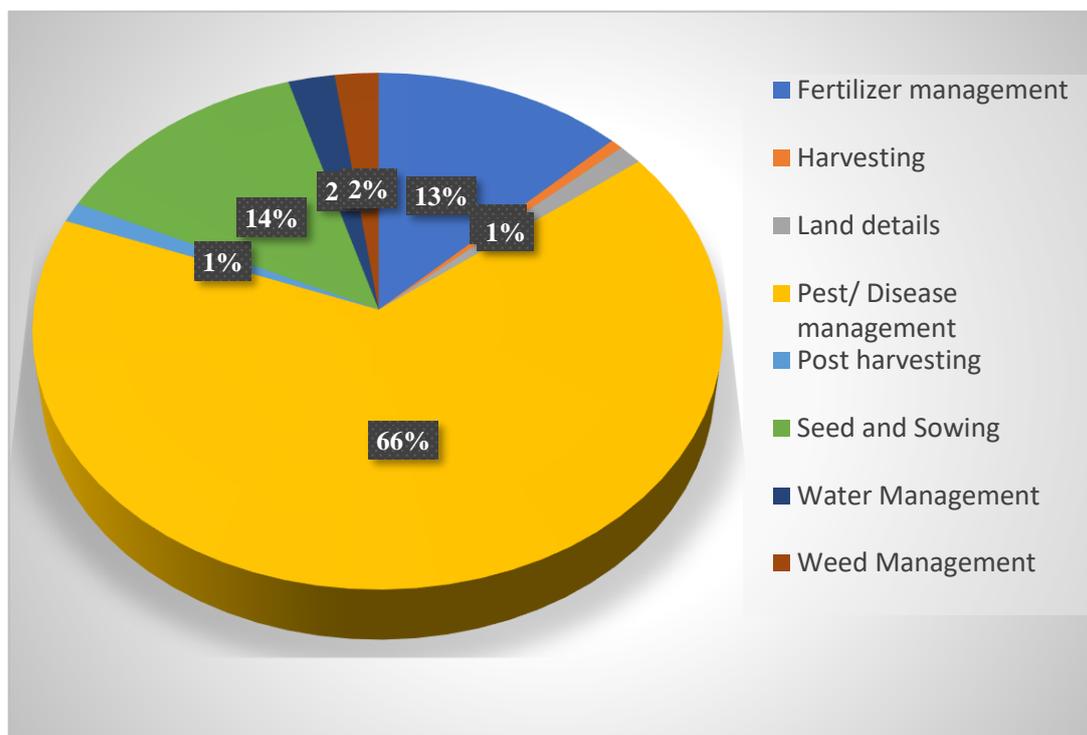


**Problem-wise Advisory given for Agricultural/Horticultural concerns**

**Delivery of Information Services (Push Based)**

The system also aggregates location specific data from various reliable information sources (Input Dealers, Financial institutions and IMD, etc.), and disseminates it to the registered users depending on the user's specified time and mode (as mentioned during their registration with the service). Through this system 68% of messages were sent to farmers as information and advisories.
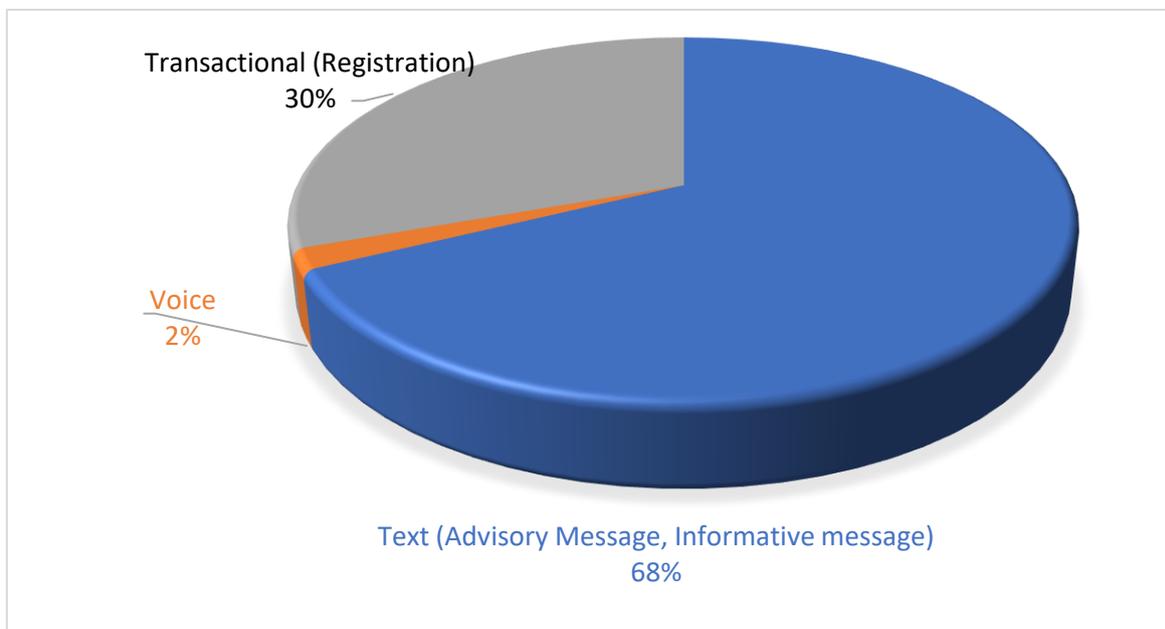


**Category-wise message pushed to registered farmers**

**Development of Content**

Location specific content on animal husbandry was developed/customized by the multidisciplinary team of experts from the college as per the requirement of the farmers. Small Videos/Voice Messages, SMS, are prepared for the farming community and pushed to the farmers for their information and use. The videos are sent to those farmers who have opted to receive such videos. During the registration itself farmers are given an option on whether they want to receive the videos or not.

**Team Field Visit**

The team of experts from the College frequently visit fields in different villages of the project areas. The purpose of such visits is to spread awareness of the project, get acquainted with the farmers, assess their problems and needs, and encourage farmers to make queries, demonstrations of Toll-Free Number, etc. Apart from this, the team also visits farms to treat livestock and pet animals and to give advice on management of livestock, and help farmers in procuring bio-organic formulation, etc.



**Field visit by the experts**

## CHALLENGES FACED DURING IMPLEMENTATION

- In some of the remote villages with poor road connectivity during the rainy season the team had to travel by foot for Registration/Awareness/Training, and by the time the team arrives most of the farmers would have already gone to their fields for work or some other place;
- Unstable Internet connectivity due to the topography of the area in villages is a problem;
- The COVID-19 pandemic severely affected the implementation of project activities. The project team were unable to visit the farmers' farms for registration due to the prolonged lockdown and fear of outsiders among the villagers. So awareness raising, camp, trainings and Animal Health Camps could not be organised during this period.

## OUTCOMES OF THE PROJECT

a. **Empowerment of agricultural extension functionaries**
- Establishment of ICT-based Agro-Advisory Lab;
- Trained experts to handle IT-based advisory system;
- Trained Field Extension Workers/Progressive Farmers on different aspects of livestock;
- Need-based Content Development in the local language (Mizo).

b. **Empowered farmers with increased awareness and confidence level residing in remote areas**
- Personalized agro-advisory services at their fingertips through Toll-Free & Mobile App;
- Toll-free IVRS in Local Language: To interact directly with the respective Subject Matter Specialists;
- At least 10,000 farmers benefited indirectly.

c. **Robust mobile-based veterinary extension model**
- To suit the local requirements of livestock farmers of Mizoram;
- 'Any Time Any Where' Mobile App for Subject Matter Specialists to access the client's query with their profile so as to cater to farmers' calls;
- SMS: Need-based Text & Voice SMS based on the subscription;
- Farm database of 5000+ farmers with farm/animal;
- App for the field extension workers to register the farmers as well as to raise multimedia queries etc., on behalf of farmers.

d. **Call monitoring dashboard & IT help desk**
- Development of a centralized monitoring system to oversee progress and transactions made on the system to overcome various issues faced by the implementing units;
- Centralized application to monitor the entire implementation so as to follow-up with the users (experts/farmers). This helps in improving the services and building confidence of the users in the system;
- A tracking module developed for monitoring/managing the technical issues/problems raised by various implementing agencies.

## SUPPORT PPROVIDED TO FARMERS DURING COVID-19 PANDEMIC

Small and marginal farmers are particularly vulnerable to economic shocks, including those sparked by COVID-19 lockdowns. The lockdown exacerbated the vulnerabilities of small and marginal farmers

by disrupting agricultural inputs and outputs as well as harvesting. The support provided under the Ran Vulhtute Thian came as a big relief to the needy farmers affected by the lockdown and other restrictions. The support services during the lockdown period are mentioned below:

a) During the period, advisories were regularly given to the registered farmers in the form of text and voice messages on livestock and agri/horticultural crops as per their requirements;

b) Continuous proactive calls to the farmers were made on a regular basis for awareness and sensitization about the project and COVID-19 pandemic;

c) Text and voice messages on National and State agro-advisories were sent to the registered farmers during the lockdown period;

d) The link to 'Recommend Aarogya Setu App to Fight Against COVID-19' for installing by the farmers in their mobile phone was pushed as text and voice messages to all registered farmers under the project;

e) Text and voice messages were sent about the 'Kisan Rath' Mobile App to facilitate transportation of food grains and perishables during the lockdown;

f) The link to 'Recommend CAU Advisories' for the farmers in their mobile phone has been pushed as text and voice messages to all registered farmers under the project in six districts of Mizoram.



**Project Staff assisting farmers during the COVID-19 pandemic**



**Online training for farmers during the COVID-19 pandemic / Vaccination camp during the COVID-19 pandemic**

**Feedback from the farmers**

## LESSONS LEARNED AND WAY FORWARD

- Poor livestock farmers generally stay far away from the Veterinary Hospitals, so when their livestock are sick, it is very difficult for them to access the veterinarian for treatment. But through the *Ran Vulhtute Thian* project, the farmers were getting complete advice and suggestions and they can just buy the medicines from the nearby dispensary shops.

- It is a completely new approach for the farmers of Mizoram. They were skeptical initially about the benefit of the project. It was difficult to convince and motivate farmers to get registered and make queries. It required tremendous effort on the part of the team to motivate them.

- The experts should be very attentive while listening to the queries from the farmers and should collect as much information as possible, including photographs. Advice provided must be authentic and meet location specific needs.

- During the process of implementation, various technical as well as socio-psychological issues crop up that stand in the way of raising queries and providing advisory service, which must be well-handled so as to make the project user friendly.

- The local leaders, mainly Village Council Office bearers, and local NGO like YMA, are to be informed and they should be taken into confidence before entering a village if the project is to be effective.

- Once some of the farmers in the village have got beneficial information, it creates a ripple effect on other farmers who will then go on to register and make calls.

- Regular team field visits are an important means to build rapport and win villagers' trust and also assess their needs.

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