

# Report on Training-Workshop on Digital Agriculture Tool-Plantix



September 2021

Patuakhali, Khulna, Faridpur

Organized by: FTF Bangladesh Digital Agriculture Activity

In collaboration with: FTF Bangladesh Nutrition Activity

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## Background

The FTF Bangladesh Digital Agriculture Activity, a Digital Frontiers' Buy-in financed by USAID, intends to promote the efficient and effective use of digital tools and technologies to build the capacity of value chain actors (farmers, input retailers/wholesalers, local service providers, and wholesale buyers encompassing crop, livestock, and aquaculture sub-sectors) under a market systems approach.

The goal of the Activity is to identify and select potentially effective and market-fit digital agricultural tools and deploy them in collaboration with FTF Implementing Partners (IPs), tool owners, and other relevant private-sector actors when applicable.

For these reasons, the Digital Agriculture Activity has selected a digital tool called Plantix<sup>1</sup> and partnered with the FTF Bangladesh Nutrition Activity (BNA) to conduct a pilot with its Agro-Input Retailers (AIRs) and Rural Sales Agents (RSAs) in three locations – Patuakhali, Khulna and Faridpur. Prior to the training, a pilot protocol was developed in agreement with BNA. This pilot protocol proposed three batches of training sessions for a pre-selected 60 market actors. Business Promotion Officers (BPOs) and Crop Advisors (CAs) from BNA-engaged private sectors' also participated in this capacity-building endeavor.

## Plantix App

Plantix is a mobile crop advisory application for farmers, extension workers and gardeners. This application identifies issues associated with crop production and provides digital solutions. It analyzes pictures of affected crops using artificial intelligence, provides advisory services for the entire farming cycle (seed to seed), and shares farmer's experiences within communities. Farmers can access local weather, acquire trusted agricultural advice throughout the season, and receive disease alerts regarding nearby diseases spreading in their area. PEAT GmbH, a Berlin-based AI startup company, is the developer of Plantix.



## Training Objectives

- Increase knowledge and understanding of the agricultural digital tool – Plantix and usage-related literacy among rural agriculture value chain actors.
- Develop components of the agricultural digital tool – Plantix, such as presentation, practical orientation, video show and Q&A.
- Share business and pilot model in relation to the business promotion of value chain actors.
- Plan and motivate agriculture value chain actors and their clients to use digital agriculture tools.

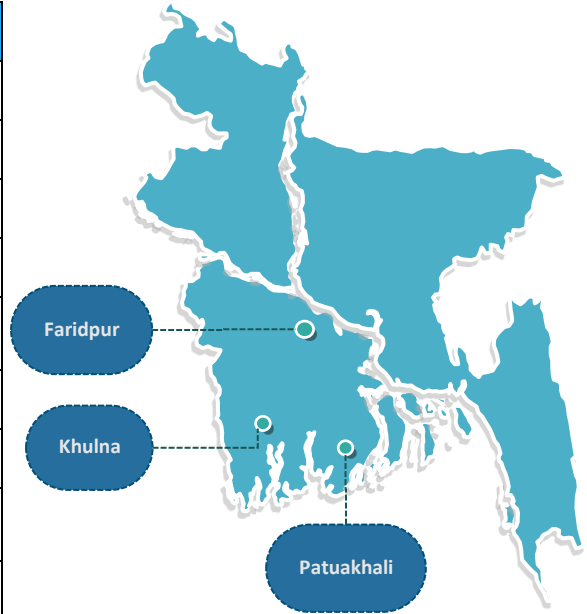
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<sup>1</sup> Plantix is a smartphone-based crop advisory application innovated by a German start-up – Progressive Environmental and Agricultural Technology-PEAT, GmbH

## Implementation Area

The Digital Agriculture Activity, in cooperation with BNA, implemented the Plantix pilot in the Zone of Influence (ZOI) - Patuakhali, Khulna, and Faridpur. In these three districts, there are nine Upazilas covered under this pilot. District-wise, the piloting locations are shown below:

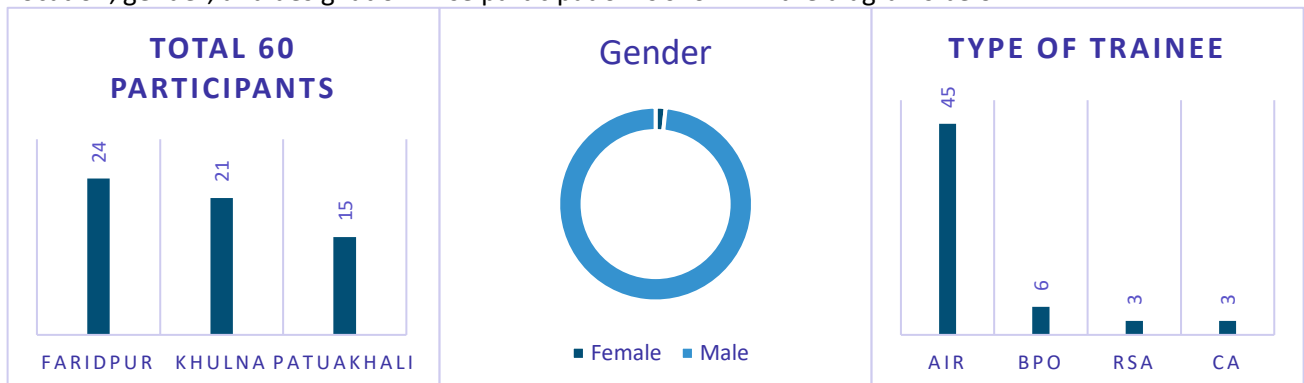
District	Upazila	Union
Patuakhali	Patuakhali Sadar	Itabaria, Morichbunia
	Mirzaganj	Amragachiya, Madhabkhali
	Kalapara	Kalapara, Mohipur
Khulna	Phultala	Phultala, Jamira
	Dumuria	Dumuria, Atlia, Dhamalia, Raghunathpur
	Rupsha	Ghatbhog
Faridpur	Faridpur Sadar	Ishan Gopalpur, Gerda
	Sadarpur	Sadarpur, Krishnapur, Hat Krishnopur
	Char Bhadrashan	Charbhadrasan, Gazirtek, Bhadrasan



## The Participants

Prior to conducting the training, BNA selected a total of 60 participants based on their ownership of smartphones, interests, and willingness to start digital service provisions that include providing capacity support to their customers. There were four different types of participants – 45 Agro-Input Retailers (AIRs), 6 Business Promotion Officers (BPOs), 6 Rural Service Agents (RSAs), and 3 Crop Advisors (CAs). These participants received hands-on training with individuals who have worked with the communities or farmers. A list of the participants is included in Annex-C.

Location, gender, and designation-wise participation is shown in the diagrams below:



## The Training

The Digital Agriculture Activity, in collaboration with BNA, organized three training batches titled 'Training-Workshop on Digital Agriculture Tool Plantix' for selective AIRs, RSAs, BPOs, and CAs in Patuakhali, Khulna and Faridpur. The training activities started at 9 am and continued until 3 pm, including registration and refreshments. A total of 54 participants were in attendance, and they received the opportunity to enhance their knowledge, skills, and confidence in using digital tools, as well as a practical orientation on Plantix. To ensure COVID-19 safety measures, individuals took proper precautions at the venue such as wearing masks, using hand sanitization, and social distancing.

Due to COVID-19 protocols, 6 participants were not allowed to join at the training due to their physical wellness. The field operations team provided one-on-one training for those 6 participants one week after the formal training events.

- **Training calendar**

Training calendar as shown below:

**September 2021**

MON	TUE	WED	THU	FRI
<b>13</b> Hotel Graver Inn, Patuakhali	<b>14</b>	<b>15</b> Hotel Castle Salam Khulna	<b>16</b> BRAC LC Faridpur	<b>17</b>

- **Training Methods**

The Capacity Building Manager of the Activity applied an interactive training approach to ensure two-way communication and discussions about digital tools and agriculture. The trainees also participated in a Plantix demonstration activity to gain a better understanding of how to deliver the training to their clients. The delivery methods used at the sessions included:



Experience sharing



Content presentation



Brain storming



Demonstration



Video show



Individual Practice



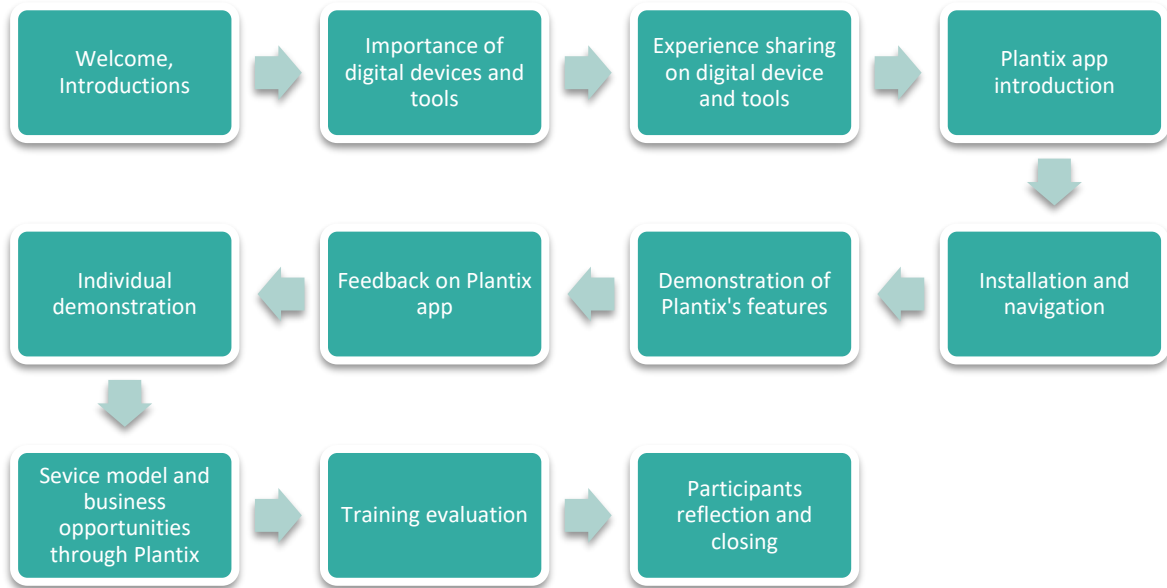
Question and Answer



Way forward

- Content Delivery**

The training contents were designed for agriculture value chain actors to provide support to other formal actors in the chain regarding Plantix as a digital agriculture tool for improving crop production-related service provisions. The learning flow of the training was as follows:



- Training Evaluation:**

At the end of each training, a post assessment was conducted. A paper-based post-test questionnaire was supplied to all participants to assess their knowledge and skills gained, as well as note any suggestions for improvement of the sessions. This evaluation showed that the training helped the participants develop an understanding of the uses of the agriculture digital tool Plantix. Participants also gained confidence in their own digital literacy.



- Participant Reflection:**

At the end of each training, participants shared their views and experiences about the content and digital tool – Plantix, as captured below:

- Experiences of Jewel Mia Babon, Agro-Input Retailer (AIR), Laxmi Dasher hat, Faridpur Sadar

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*“Earlier I face difficulties when a farmer came to my shop and asked me about the different disease, pest and crop cultivation problems. Sometimes, it was difficult for me to identify those problems. After getting this training and familiar with this app (Plantix), now I’ll be able to identify the real crop related problem, getting different measures and provide specific solution to my customer”.*

- Experiences of Mahbul Alam, Business Promotion Officer (BPO), Babylon, Dumuria Hat, Dumuria, Khulna

*“I am using smartphone for a long time, but I have no idea to use any digital tools for myself for support my farmers. After having Plantix tool training from Bangladesh Digital Agriculture Activity, my mind set has changed when I found this is working properly. The Plantix app is working as per my need. Now I’ll be able to provide various advice to my farmers during field visit. My farmers will also be happy to find know-how about this digital tool from my additional support. I think, such a digital tool will make positive changes in my community. I decided, I will orient some of my farmers who have smart phone, as a result they will easily find their need on-time.”*

- Experiences of Imran Hossen, Agriculture Input Retailer (AIR), Khaserhat, Patuakhali

*“I never was in such a kind of training earlier. This is the first time I get well oriented on using of digital tool in agriculture and how to use Plantix app properly with a business model. This training was so fruitful as we did lot of practical exercises. Now I can share right information and crop production technologies by using Plantix. This will help me to build relationships with my customers and sharing knowledge and literacy to them.”*

## Challenges

During and before the training was conducted, the team faced some challenges, as listed below:

- It was challenging to enforce COVID-19 protocols while participants were involved in interactive sessions.
- The participants’ devices were diversified and older, especially for android versions. Therefore, the facilitator had to adapt their practices to deliver the training smoothly.
- A few participants were not familiar with using digital tools, so it was difficult for them to navigate the application.

## Lesson Learned

Both the facilitator and participants provided input and recommendations on how to improve the training in the context of community farmers. They recommended the following:

- More case studies and experience-based discussions need to take place to encourage participants to engage more and gain a better understanding – refreshers may be an option.
- The demonstration sessions were much appreciated by the participants, as it made them feel confident in putting their knowledge and skills into practice regarding digital tool usage.
- The “Plantix – your crop doctor” mobile phone-based app was considered an appreciable resource for participants.
- During the practical session on the ease of the tool, 2-3 co-facilitators were needed to engage with all participants, and especially with those who were less efficient in digital tool usage.

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- Participants need to be mentored and coached by the field operations team to share further experiences and challenges while passing the learning on to their clients at the community-level.
  - Safety measures due to COVID-19 protocols encouraged the training team to adopt many context-based ideas to facilitate face-to-face training.

## **Conclusion**

The capacity-building training on the agricultural digital tool for agricultural value chain actors ran smoothly and in an interactive and participatory manner, with active support and cooperation from BNA. The Digital Agriculture Activity hopes that these value chain actors will apply the knowledge and skills from the training to their businesses. To maintain the motivation of these actors, there should be continued support to enhance knowledge, skills and behaviors in the use of the Plantix app. Continued mentorship and refresher training should continue to further support trainees and actors. The ownership and continuation of the trainees can bring a positive change to Bangladesh's agriculture digital service provision in rural settings.

## **Annexure:**

- A. Photo Gallery**
- B. Training Schedule**
- C. Training Post Evaluation Form**
- D. Training Participants**
- E. Glossary**

**A. Photo Gallery**

**1<sup>st</sup> Batch of Training at Hotel Graver Inn, Patuakhali on September 13, 2021**



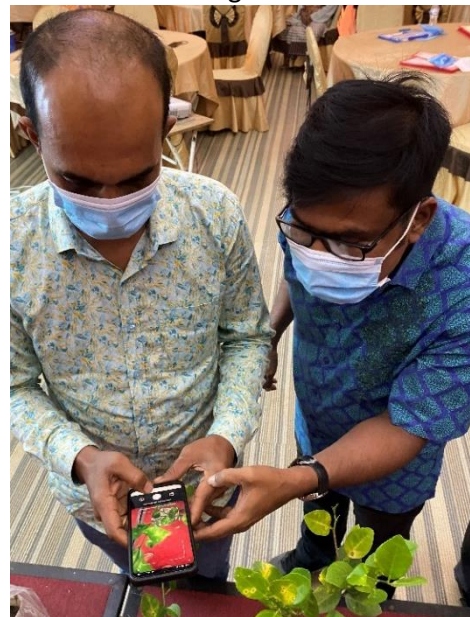
Welcome Speech from USAID



Training Session



Training materials for the participants



Hands-on training



Live demonstration



Enthusiastic participants show their Plantix App



2<sup>nd</sup> Batch of Training at Hotel Castle Salam, Khulna on September 15, 2021



Welcome Session



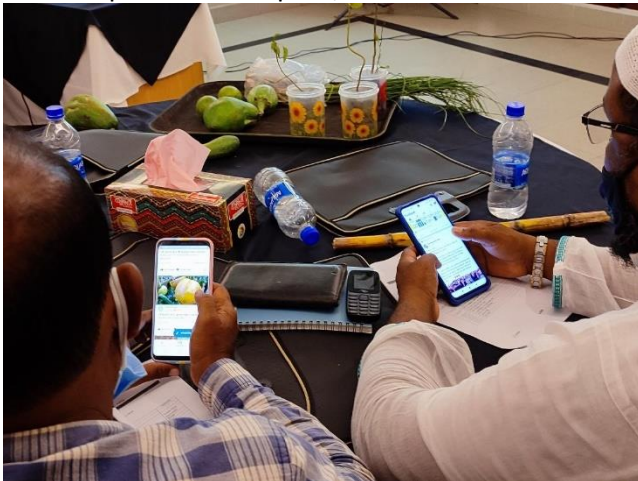
Introduction



Participants from Rupsha, Phultala and Dumuria



Live Demonstration



Individual Practice Session



End of the training Photo Session

3<sup>rd</sup> Batch of Training at BLC, Faridpur on September 16, 2021



Welcome Session



Training Session



Attentive Participants



Video Show on Plantix Uses



Training Evaluation



Training End Session

## B. Training schedule

### Training on Digital Agriculture tool

#### Plantix

Place: Hotel Castle Salam, Khulna

Date: September 15, 2021

Organized by: Feed the Future Bangladesh Digital Agriculture Activity, DAI

In collaboration with: Bangladesh Nutrition Activity (BNA)

#### Schedule

Time	Topic of the Session	Facilitator
9:00-10:00	Registration, tea	
10:00-10:15	Introduction	
10:00-10:30	Welcome speech and inauguration of the training	DAI, BNA, USAID
10:30-10:40	A brief on FTF Bangladesh Digital Agriculture Activity	DAI
10:40-10:50	A brief on FTF Bangladesh Nutrition Activity	BNA
10:50-10:55	Exchange of experiences on smartphone usage	DAI
10:55-11:10	An introduction of Plantix	DAI
11:10-11:45	Process of Plantix download: PowerPoint presentations, live demonstration, video shows, hands-on learning and Q&A	DAI
11:45-12:20	How to use Plantix plant Health Check feature: PowerPoint presentations, live demonstration, video shows, hands-on learning using affected plant part and Q&A	DAI
12:20-12:55	How to use Plantix Community feature: PowerPoint presentations, live demonstration, video shows and hands-on learning by navigation	DAI
12:55-1:35	How to use Plantix Cultivation Related Advice feature: PowerPoint presentations, live demonstration, video shows, hands-on learning by navigation and Q&A	DAI
1:35-1:40	Plantix-based service provision and business models- a PowerPoint presentation and discussion	DAI
1:40-1:45	Collective planning: concept, agreement and adoption	DAI, BNA
1:45-1:50	Concluding remarks from the participants	Participants
1:50-1:55	Concluding remarks by BNA	BNA
1:55-2:00	Closing remarks	DAI
2:00-3:00	Lunch	

### C. Training post evaluation form

## Training on Digital Agriculture tool

### Plantix

#### Post-Training Evaluation Form

(As long as you agree with the following statements, please put V at that box)

General subjects of training	Totally agreed	Fairly agreed	I don' agree
1. I got what I wanted to know in training			
2. It would have been better to get the training earlier			
3. The training is applicable to me			
4. I understood the content of training			

Training management and training materials	Totally agreed	Fairly agreed	I don' agree
1. The trainer's presentation was good			
2. The materials used in the training were good and easy to understand			
3. The training started and ended timely			
4. There was ample time for questioning and discussion in the training			
5. I had enough preparation to participate in the training			

Concepts and skills related to the content of the training	Totally agreed	Fairly agreed	I don' agree
1. The Plantix app provides instant advice on crop selection, planting and field preparation by taking pictures of crops.			
2. Cultivation advice is available in Plantix by setting the date of sowing or planting			
3. A service provider can be called directly through the Plantix app to solve crop related problem			
4. Weather information is available at Plantix			
5. Now I can identify crop diseases by taking pictures in Plantix			
6. In the Plantix community I can now ask questions about farming advice			
7. I can choose the crop of my choice			

Apply knowledge skills gained from training	Totally agreed	Fairly agreed	I don' agree
1. I am confident that I will be able to teach others how to use Plantix			
2. Plantix will help me to give more advanced and accurate advice to farmers and my customers			
3. Farmers will be able to explain crop problems to me more easily through Plantix			
4. After the training, write about how you will use the Plantix app in your personal and career.			

## D. Training Participants

Participant name	District	Upazila	Union	Market Actor Type
Laiju Begum	Faridpur	Char Bhadrasan	Bhadrasan	RSA
Md. Samsul Hoque	Faridpur	Char Bhadrasan	Gazirtek	RSA
Md. Saidul Islam	Faridpur	Char Bhadrasan	Not applicable	CA
Md. Jewel Mia Babon	Faridpur	Faridpur Sadar	Ishan Gopalpur	AIR
Tuhinuzzaman Tuhin	Faridpur	Faridpur Sadar	Gerda	AIR
Md Rajib Sheikh	Faridpur	Faridpur Sadar	Cor Madhobdia	AIR
Rakib Shek	Faridpur	Sadar Faridpur	Ishan Gopalpur	RSA
Md.Masudur Rahman	Faridpur	Sadar Faridpur	Not applicable	CA
Moniruzzaman (Monir)	Faridpur	Sadarpur	Sadarpur	AIR
Md. Mamun Sarder	Faridpur	Sadarpur	Sadarpur	AIR
Md. Shapon Bahuiyan	Faridpur	Sadarpur	Krishnapur	AIR
Md.Sujon Mahmud	Faridpur	Sadarpur	Krishnapur	AIR
Md.Polash Sheik	Faridpur	Sadarpur	Krishnapur	AIR
Md.Zayed Bin Sultan (Shawan)	Faridpur	Sadarpur	Krishnapur	AIR
Md.Samim Sikder	Faridpur	Sadarpur	Krishnapur	AIR
Sujan Molla	Faridpur	Sadarpur	Krishnapur	AIR
Obaidur Islam	Faridpur	Sadarpur	Hat Krishnopur	RSA
Toyab Ali	Faridpur	Sadarpur	Hat Krishnopur	RSA
Sushanto Kumar	Faridpur	Sadarpur	Not applicable	CA
Md. Custom Mia	Faridpur	Sadarpur	Not applicable	AIR
Mohammad Ali Zinnah	Faridpur	Charbhadrasan	Charbhadrasan	AIR
Md Zinnat Ali basar	Faridpur	Charbhadrasan	Charbhadrasan	AIR
Md Samsul Haque	Faridpur	Charbhadrasan	Gazirtek	AIR
Nitto gopal Biswas	Faridpur	Charbhadrasan	Gazirtek	AIR
Md. Monirujjaman Khan	Khulna	Dumuria	Dumuria	AIR
Md. Farid Sardar	Khulna	Dumuria	Dumuria	AIR
Md. Ahsan Habib	Khulna	Dumuria	Atlia	AIR
Md. Samsur Rahaman	Khulna	Dumuria	Atlia	AIR
Md. Nasirul Alom	Khulna	Dumuria	Dhamalia	AIR
Md. Mahabul Alom	Khulna	Dumuria	Not applicable	BPO
Sahadat Hosuen	Khulna	Dumuria	Not applicable	BPO
M.A. Latif	Khulna	Dumuria	Atalia	AIR
Md. Nazmul Hossain	Khulna	Dumuria	Atalia.	AIR
Zillur Rahman Akunji	Khulna	Dumuria	Raghunathpur	AIR
AKM Nurul Huda	Khulna	Dumuria	Raghunathpur	AIR
Md. Robiul Islam	Khulna	Phultala	Phultala	AIR
GM Md Jahangir Alom	Khulna	Phultala	Jamira	AIR
Kangkon Biswas	Khulna	Phultala	Not applicable	BPO
Md. Mahfujul Haque	Khulna	Phultala	Not applicable	BPO
Biswanath Mondal	Khulna	Phultala	Jamira	AIR
Md. Touhidul Islam	Khulna	Phultala	Phultala	AIR
Md Hyderruruzzaman Suman	Khulna	Phultala	Jamira	AIR

Participant name	District	Upazila	Union	Market Actor Type
Sujon Kumar Paul	Khulna	Rupsha	Ghatbhog	AIR
Tonmoy Sreemani	Khulna	Rupsha	Not applicable	BPO
Kazi Ezaharul Islam	Khulna	Rupsha	Not applicable	BPO
Md. Shahidul Islam Khan	Patuakhali	Kalapara	Kalapara pourashava	AIR
Md. Bashir Uddin	Patuakhali	Kalapara	Kalapara pourashava	AIR
Md Hanif Mullah	Patuakhali	Kalapara	Mohipur	AIR
Md Shohel Howladar	Patuakhali	Kalapara	Mohipur	AIR
Md Monirul Islam Miraj	Patuakhali	Kalapara	Mohipur	AIR
Md Sayed Ahmed	Patuakhali	Kalapara	Mohipur	AIR
MD. Juboraz khan	Patuakhali	Kalapara	Sobujbag	AIR
Abdus Salam	Patuakhali	Mirzaganj	Amragachiya	AIR
Md. Kabir Akon	Patuakhali	Mirzaganj	Madhabkhali	AIR
Md. Nazrul Islam	Patuakhali	Mirzaganj	Madhabkhali	AIR
Aminul Islam Shohag	Patuakhali	Patuakhali Sadar	Itabaria	AIR
Md. Jahangir Alom Mridha	Patuakhali	Patuakhali Sadar	Morichbunia	AIR
Abdur Razzak Mridha	Patuakhali	Patuakhali Sadar	Morichbunia	AIR
Abu Taleb Mridha	Patuakhali	Patuakhali Sadar	Morichbunia	AIR
Imran Hossen	Patuakhali	Patuakhali Sadar	Morichbunia	AIR

## E. Glossary

**Agro-Input Retailers (AIRs)** are persons who provide/sell crop production related inputs like seed, fertilizer, pesticide with advisory support to the farm/farmers.

**Rural Sales Agents (RSAs)** are village-level agricultural input sellers and advisory service providers at the farmers doorstep, generally called local service providers (LSPs), and are linked with agro-input companies or retailer/wholesalers.

**Business Promotion Officers (BPOs)** are fully responsible for promoting Babylon seed and conducting business at the market and rural level. They provide support to input retailers, rural sales agents, and farmers.

**Crop Advisors (CAs)** are fully responsible for promoting and marketing quality vegetable seeds, environmentally friendly technologies, and inputs (e.g., Vermicompost, Trichoderma, etc.).