



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

Bangladesh Digital Agriculture Activity: Plantix Pilot Success Stories

The Feed the Future Bangladesh Digital Agriculture Activity (hereafter referred to as “the Activity”), promotes the efficient and effective use of digital tools and technologies to build the capacity of value chain actors (e.g. local services provider, market vendors, artificial inseminators, and feed dealers/distributors) under a market systems approach. These value chain actors are then able to use these digital tools to build the capacity of their clients/customers (smallholder farmers, pregnant/lactating women and vulnerable households) sustainably and effectively during and beyond the period of activity implementation. Capacity building refers to comprehensive training sessions, provision of training and follow-on resources, and demonstrations of appropriate technologies, as well as improved production practices and provision of quality services.

The Activity works with technology firms to identify appropriate and gender-sensitive agricultural digital tools within and outside of Bangladesh that can be adapted and/or piloted to demonstrate new technologies and improve management practices. Plantix, a mobile crop advisory application, is one of these tools that was selected for piloting. The Activity completed their pilot of Plantix with three implementing partners: the Bangladesh Horticulture, Fruits, and Non-Food Crops Activity implemented by Chemonics, the Bangladesh Nutrition Activity (BNA) implemented by Abt Associates, and one of the private sector partners of the Rice and Diversified Crops Activity (RDC), implemented by ACDI/VOCA. The pilot was conducted with value chain actors and farmers in seven districts of the FTF Zones of Influence (ZOI): Chuadanga, Jhenaidah, Jashore, Patuakhali, Khulna, Rajbari and Faridpur. Several stories of Plantix beneficiaries have been collected from the intervention areas in the southern part of Bangladesh.

Disclaimers:

This report is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of DAI and do not necessarily reflect the views of USAID or the United States Government.



USAID
FROM THE AMERICAN PEOPLE





Plantix - Reducing Production Costs of Yield and Boosting Confidence

Ayesha Begum, a successful businesswoman from the Itabaria union of the Patuakhali district, cultivates several diverse types of crops and runs a shop in Pukurjana. She started using Plantix a few months ago after learning of the app from Agriculture Input Retailer (AIR) Shohag. Determined to improve her paddy cultivation this year, she began to utilize Plantix for her crops' overall health needs.



Last year, Begum struggled to get a satisfactory yield due to brown planthopper insects (BPHs) affecting her paddy field. By following all the advice given by Plantix, she received immediate results.

Plantix provided her with pesticide advice and advised her to use a specific vitamin supplement in her field to enhance her crops. With this guidance, she was able to cultivate double yield as compared to the previous year.

“Last year my paddy field was completely destroyed by brown plant hopper, I invested but did not get the yield. But this year, when I saw brown plant hopper in my paddy field, I used pest control method according to the Plantix app and got immediate result and double yield. It only happens because of Plantix.”

Begum now suggests Plantix to all customers who visit her shop. Before using Plantix, Ayesha Begum was completely dependent on community AIRs for solutions, and unfortunately, not all those solutions were effective. Now, she is happy with Plantix because the app suggests the right solutions to diseases and pests at the right time.

Partner: Bangladesh Nutrition Activity (BNA)





Plantix - Boosting Resma Khatun's Confidence in Agriculture Farming

Reshma Khatun is a 27-year-old rural woman living in the Gandiya village within the Faridpur district. She is actively engaged in farming to ensure food security for her family. Her family fully depends on their 63 decimals of land and her husband's income. As her husband works as a day laborer, Khatun looks after all farming activities.



"I am very grateful BDAA and SDC Agro to provide me timely suggestion of Plantix which reduce my crop loss and increase my yield. Plantix increases my confidence for my agriculture farming"

Khatun cultivates onions, bottle gourds, sweet gourds, jute, and rice. She has previously faced challenges in identifying crop disorders and uncertainty of weather in the Faridpur district. Before her training on the Plantix app, her family fully depended on local Agriculture Input Retailers (AIRs) for information, advisory services, and inputs on farming. If any problem occurred in their crop fields, Khatun would inform her husband, who would then purchase inputs and receive information from a local retailer business center located far from their village. Sometimes, this process could be delayed due to her husband's occupation with his construction work, resulting in significant crop loss. This year, due to uncertain rainfall in the initial stages of crop production, her family faced crop loss due to not having early weather advisory services at hand.

Khatun's situation has changed significantly after receiving training on Plantix, as she has used the digital app to care for her gourd and onion fields. When her gourd field was affected by fruit flies and fruit rot, she used Plantix's community groups to receive quick suggestions from their expert farming community. Her use of these advisory services resulted in a 40-50% increase in gourd production. Similarly, when her onion field was affected by purple blotch and blight disease, she received timely suggestions from Plantix's pest and disease identification feature, which helped her reduce crop loss by 20-30%.

Khatun has now encouraged her friends, Sumon Sheikh and Eliash Sheikh, to use the Plantix app. Sumon Shekh said "I got orientation from Resma about Plantix. I am now using Plantix to know about weather condition. This application giving me 3-4 days early weather information which helping to schedule my irrigation & pesticide spray time on my crop field".

Partner: FTF Bangladesh Horticulture, Fruits, and Non-Food Crops Activity implemented by Chemonics International





Mahima Begum's Declining Poverty Through Vegetable Cultivation

Mahima Begum, a 38-year-old woman, she lives in the Ratnapara village under the Rajbari district. She has two daughters and is married to a farmer, providing regular support to his farming practices, especially those regarding vegetables. Her husband cultivates various seasonal vegetables and crops on their 135 decimals of land, both commercially and to enhance family nutritional needs.



"I am so much happy using this tool, and it is very helpful to identify the disease and get recommendation for a solution quickly."

Initially, her husband led agriculture activities, but due to illness, he is now unable to contribute. Therefore, Begum leads the agriculture activities for her family. Prior to using Plantix, if she faced any problems related to disease or pests, she was bound to rely on her past experiences, peers, and Agriculture Input Retailers (AIRs) for pest management recommendations.

Now, Begum can rely on Plantix to detect diseases, as it can offer solutions along with the correct dosage of pesticides. While she is decently technologically oriented, she sometimes gets supplemental technological support from her child, Mehedi Hasan, in using the Plantix app.

Mehedi Hasan, a 7th grade student, helps his mother use the more advanced features of Plantix, which include land size calculations and adding or removing crops on the app. Last year, Begum cultivated beans on 16 decimals of land, using 1300 BDT worth of pesticides per the direction of AIRs. This year, with the help of Plantix, she cultivated the same crop on the same amount of land and only spent 400 BDT. Begum is very enthusiastic about digital agriculture tools such as Plantix.

Partner: FTF Bangladesh Horticulture, Fruits, and Non-Food Crops Activity implemented by Chemonics International





Plantix Tool - Increasing the Use of Organic Pesticides

Moniruzzaman Monir, a man from Saresat Roshi Bazar, has fully depended on Plantix this year for his paddy cultivation and in interactions with customers in his shop. The app suggested that he increase the magnesium levels of his paddy field, which yielded satisfactory results. It also suggested that he incorporate more crops such as lentils and jute, as farmers in his area have had a lot of success in cultivating paddy, lentils, and jute. Before the use of Plantix, farmers in his area mostly depended on 'Krishi officer', the local government officer who provides agricultural support to the community. Now they can use the Plantix app and find it more convenient for everyday support.



Monir mentioned that land size differs from area to area, so it is difficult for farmers to calculate their land size in decimals, an important measurement in calculating the dosages for pesticides and fertilizers. He also mentioned learning of the importance of organic pesticides, knowledge that he gained from Plantix. While Monir has used many mobile applications, has found Plantix to be the easiest to use, as it provides the group names of products, making easier to purchase any company's products rather than a specific brand.

"Plantix is providing both the organic and chemical based pesticide solution. Organic pesticide is very good for farming. After using Plantix farmers are now using yellow stick paper and pheromone trap to protect plants. The sales of this organic pesticide are increasing day by day. After using this application, I started selling these organic pesticides. It also reduces cost as organic pesticide cost is lower than the chemical pesticides."

Additionally, the app has increased sales volume at this shop. The farming community is very happy to get solutions from Monir, and sometimes farmers will even gather at his shop to discuss their problems and solutions, transferring important agricultural knowledge amongst themselves.

Partner: Bangladesh Nutrition Activity (BNA)





Plantix - Helping Young Farmers Make the Right Decisions

Md. Hasan is in his first year of his higher secondary level of college and has owned a store for the last 3-4 years where he sells pesticides and fertilizers. Prior to owning the store, he ran the business with his father for 12 years. Recently, he learned about Plantix from a dealer, Syed Ahmad, who recommended the app because he knew many agricultural officers and company representatives were unreliable in recommending the correct pesticides for particular crop diseases. He shared Plantix as a useful tool to identify and control diseases in a timely manner.



"The tool was beneficial for me because it helped to reduce the cost of my customers who are farmers because the tool rightly identified the disease and farmers could use accurate pesticide(s) to cure the disease."

Previously, farmers would try many kinds of pesticides to cure a disease, often spending around 3000 BDT. Now, with Plantix, they only need to use one recommended pesticide, which reduces their maintenance costs by half. When Hasan's crops became diseased this year, he listened to Plantix community experts, who suggested a different pesticide than the one he initially used. Since he had some agricultural experience and knowledge, the app's suggestion seemed acceptable to him. He now uses many of the applications' features, which include weather updates, use of fertilizers, and crop disease detection.

Hasan has suggested the use of Plantix to at least 40 of his clients. Not everyone has a smartphone to use Plantix, but he will often suggest the app to a family member, such as a son, even if a farmer does not have a smartphone, as the family member may be able to orient them on the tool at a later date. Hasan noted, "Although there is not much change in my sales due to the use of Plantix, but my relationship with my customers has improved, and farmers trust me more on recommendations of the correct pesticides." He admitted that using the Plantix app is not difficult, as he can install the app on a farmer's mobile or they can do it themselves. He thinks that spreading information about Plantix is possible if one learns about it from a dealer, as a dealer can easily share the app and information with their clients and consequently, inform their communities.

Partner: Bangladesh Nutrition Activity (BNA)





FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

Plantix - Helping Young Farmers Make the Right Decisions

Md. Masud, the son of a farmer, is based in Patuakhali. He is currently studying and helping his father in his agricultural activities. Masud was introduced to Plantix by Md. Hanif Mullah, who owns a pesticide store in Moulovi Bazaar. Mullah helped him install Plantix and gave him training on the various features and uses of the app.



“Before I had to go several times to the market which is 30 minutes away from my place to get different pesticides or fertilizers but now, I can know in an instance which pesticide or fertilizer is required for my crop and get it from the market at once which saved me time.”

Masud used the tool to identify disease in his rice crop and discussed with Hanif the pesticide recommended by Plantix, later purchasing it from Hanif for his crops. He has since learned how to use various features of the tool, including how to take pictures and how to upload photos in the Plantix community to get expert advice.

He also supports others in his community, using the tool to identify diseases in their crops. Typically, a packet of pesticides would cost him 50 BDT and he would get multiple recommendations from Agro Input Retailers (AIRs) to try and find a solution. Now, he can get the right pesticide on the first try and save money. One of his neighbors, Md. Sogir, gets advice from Masud on pest issues based on Masud's use of the Plantix app.

Partner: Bangladesh Nutrition Activity (BNA)



USAID
FROM THE AMERICAN PEOPLE





Plantix - Changing Homestead Vegetable Production for Rural Women

Billkis Begum confidently uses the Plantix app for her homestead gardening. She lives in the semi-urban area of the Atra village under the Khulna District with five family members, which include her businessman husband, child, and mother-in-law. Her house has 4-5 decimals of land for gardening, and each year she cultivates diverse types of vegetables to meet her family's nutrition needs.



"I am so much happy to have this digital tool and it would be more helpful to identify the crop disease rapidly with quick solutions."

She used to gather agricultural knowledge from her own experiences, family members, and neighboring farmers, but felt it was not a sufficient source of information. She had never used digital tools before and knew nothing about Plantix. As a woman in a semi-rural area, she also regularly has less access to current information about agriculture than men.

She received training on the Plantix tool in September 2021 as an add-on beneficiary of Konkon Biswas, a Business Promotion Officer (BPO) of Babylon Agro Ltd, a sub-awardee of the Feed the Future Bangladesh Nutrition Activity (BNA). Begum has a smart phone and previously only used it for daily correspondence and social media. After learning about Plantix from Biswas, she has used the app daily to identify problems, diagnose diseases, and find proper pesticide dosages for her garden.

She is thrilled to get quick solutions for her crops. Moreover, she previously could not have yielded such strong results from her garden due to a lack of proper knowledge and skills in agriculture. With the Plantix app, she can easily identify actual rates of fertilizer and superior quality pesticides and identify diseases to keep her garden thriving. Biswas mentioned, "Now she is very confident to cultivate her homestead gardening because Plantix digital tool makes her very smart."

Partner: Bangladesh Nutrition Activity (BNA)





Plantix - Helping to Boost Business Growth

Mr. Shawan, an Agriculture Input Retailer (AIR), is more confident in his agriculture knowledge after using the Plantix app for disease detection. Before using Plantix, when Shawan went to farmer's fields to solve issues such as disease detection and pest control management, he would suggest pest control methods based on his own individual experiences. However, he never felt fully confident in his services, as, while it was possible to detect the right diseases, it was difficult to give the exact types and dosages of pesticide for those diseases. As such, most AIRs suggest using more than one pesticide for a disease. Now, after using Plantix, Shawan can give an exact solution for a crop disease, reducing the cost of pesticides for farmers.



"My input sales are also increasing after using Plantix, because now I can give right information for each crop diseases with correct dosage of pesticide."

"Some pesticide groups were unknown to me. I got to learn some new group names from Plantix and I applied it in the field and got a better result from the new groups," Shawan advised to the farmers who received services from him.

He advised one young new farmer, Awlad Khondoker, who was previously not at all involved in farming, to install the Plantix app. Now, Khondoker is happy that he can get instant solutions to his crop cultivation problems. In total, Shawan has advised more than 15 farmers to install the Plantix app.

He feels that it creates higher acceptance levels between himself and the farming community, as he can maintain more trustworthy relationships with his customers. All his customers now repeatedly come to him if they face any problems. Overall, the Plantix app has helped Shawan grow his business as well as increase his knowledge base in agriculture.

Partner: Bangladesh Nutrition Activity (BNA)





Plantix - Boosting the Confidence of Young Farmers

Awlad Khondoker, a student from the Barishal district, was never interested in agriculture. However, a sudden change in his life, the death of his father, bound him to take on the agricultural responsibilities of his family. For the last three years, he has cultivated paddy, jute, maize, and lentils.

“Once my paddy was effected and I tried Plantix app and got to know that it was affected by ‘Mazra poka’ and it gave the solutions, I immediately use the pesticide and got the very good results. Before using Plantix I would use different types of pesticide and I do not know which pesticide is working. But now I know the exact problem with right solution. I got better yield this year”

As he didn't have any prior agricultural knowledge, when he faced any problems, he had to rely on Agriculture Input Retailers (AIRs). He used several pesticides and fertilizers in his field for better yield but did not have a strong understanding of which pesticides were good for which crops.

One day, an AIR, Shaown, requested that he install the Plantix app on his phone. As a young person and student, he has a strong grasp of technology, and easily understood how to use the tool. So far, he has used the Plantix app several times to better understand the conditions of his paddy field. Now, he is getting the right type and dosages of pesticides and can make better decisions about his crops.

Partner: Bangladesh Nutrition Activity (BNA)





FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

Plantix - Unsuccessful with Small Businessowner

Aminul Islam Sohag, an Agriculture Input Retailer (AIR) in Pukurjana Bazar under the Patuakhali district, has been operating his agriculture business since 2015. His business products include seeds, pesticides, and fertilizers from small companies such as Green Bangla, Agrovet, and Sweet Agrovet Ltd., and he maintains a customer base of 200-250 individuals. After Sohag received training on the Plantix app, he oriented several customers on the app as well. However, he said that Plantix created confusion among his customers, as the group names suggested for pesticides and fertilizers were only those of reputed brands. As Sohag sells products from smaller companies, those types of branded products were not available in his rural bazar. Additionally, many farmers he works with are illiterate and therefore are not aware of group product names, creating additional confusion. Sohag noted, "So, the crop protection inputs group name from Plantix creating confusion to my business customer while I am suggesting some similar group inputs from local company to my customer." After these observations, Sohag stopped orientation of Plantix to his customers completely.



Partner: Bangladesh Nutrition Activity (BNA)

Contributors: ASM Monirujjaman, Atanu Bhattacharjee, Tanvir Manower, Niaz Murshed, Saiful Islam, Babul Aktar, Kristen Weller, Naba Tareque, Sutapa Biswas, Aaur Rahman Tasnuba Sinha



USAID
FROM THE AMERICAN PEOPLE

