



Accelerating Vegetable Productivity Improvement (AVPI)

Monthly Report (May 2017)

Funded by the Walmart Foundation



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Acronyms and Abbreviations

AVPI	Accelerating Vegetable Productivity Improvement
BMO	Briquetting Machine Owners
DAE	Department of Agricultural Extension
FDP	Fertilizer Deep Placement
FMO	Field Monitoring Officer
GAP	Good Agricultural Practice
ha	hectare
IFDC	International Fertilizer Development Center
IPM	Integrated Pest Management
kg	kilogram
mt	metric ton
NGO	Non-Governmental Organization
NPK	Nitrogen, Phosphate, and Potassium
SAAO	Sub-Assistant Agriculture Officer
SWOT	Strengths, Weaknesses, Opportunities, and Threats
Tk	Bangladeshi Taka
UDP	Urea Deep Placement

Accelerating Vegetable Productivity Improvement (AVPI) Monthly Report (May 2017)

Highlights

Introduction

The Accelerating Vegetable Productivity Improvement (AVPI) project is the second partnership between the Walmart Foundation and the International Fertilizer Development Center (IFDC) to improve the livelihoods of low-income women vegetable and fruit farmers in Bangladesh. The project has three objectives:

- Objective 1: Consolidate and enhance the benefits of the 2013-15 IFDC-Walmart Foundation intervention by expanding the use of fertilizer deep placement (FDP) and related good agricultural practices (GAPs).
- Objective 2: Introduce and pilot a second improved vegetable production technology – the use of polynet houses with trickle irrigation – to participating women farmers.
- Objective 3: Improve the market knowledge of, and market information access for, women farmers.

The project targets the horticulture sub-sector (vegetables and fruits), which is particularly relevant to women farmers. The project is expected to reach an estimated 52,000 beneficiaries. This report contains a monthly update covering project activities in May 2017.

Results

- **Good Management Practices Including FDP Technology in Winter 2016-17:** The project activities began in November 2016 with collecting information on GAPs (use of good quality seed, balanced doses of fertilizers, integrated pest management [IPM] practices, maintaining proper spacing in crop plantation, improving water use efficiency, etc.) and FDP coverage from 28,360 women beneficiaries who were trained under IFDC-Walmart Foundation activities during 2013-15. Transplantation of winter season horticultural crops for 2016-17 was completed in January 2017. However, interviews of all 28,360 beneficiaries by AVPI field-level staff was

completed in May. Partial analysis of 20,667 beneficiaries showed that 16,488 beneficiaries, or 80 percent, cultivated horticultural crops in the winter 2016-17 season. Of these, 90 percent used improved varieties, practiced spacing of seeds/seedlings as per IFDC recommendations, and applied a balanced dose of fertilizers and integrated pest management (IPM) practices. However, of the 90 percent women who applied GAP, 5,320 women farmers (32 percent) also applied FDP technology on their horticultural crop fields in winter 2016-17. These women farmers have applied FDP on 608 hectares (ha) of land. This indicates each of the beneficiaries applied FDP technology to more than 28 decimals of land, on average. In the last winter season of 2014-15 of the IFDC-Walmart Foundation's first partnership, this was less than 24 decimals per beneficiary. This implies that a number of IFDC-Walmart Foundation-trained beneficiaries are continuing to practice GAPs and FDP technology, obtaining good yields from their crops, and, therefore, improving the nutrition and livelihoods of their family members through increased income. IFDC is organizing motivational program with this group to bring more women under GAPs.

- **Good Management Practices Including FDP Technology in Summer 2017:** The farmers began transplanting summer 2017 vegetables and fruits in February 2017. In AVPI cluster villages, farmers started using GAPs and FDP technology from mid-February and completed at the end of May 2017. According to weekly monitoring reports, the AVPI beneficiaries have brought about 2,058.63 ha of summer 2017 horticultural crops under FDP technology through May 2017 against the target of 1,885 ha. Therefore, 109 percent of targeted area for summer 2017 were brought under GAPs and FDP technology. Details by crop are provided in Figure 1.¹ This will be validated through a village survey of key informants. The village survey will start from July, and results will be published in the monthly report of September 2017.

¹ Other vegetables include watermelon, yard-long bean, okra, and elephant foot.

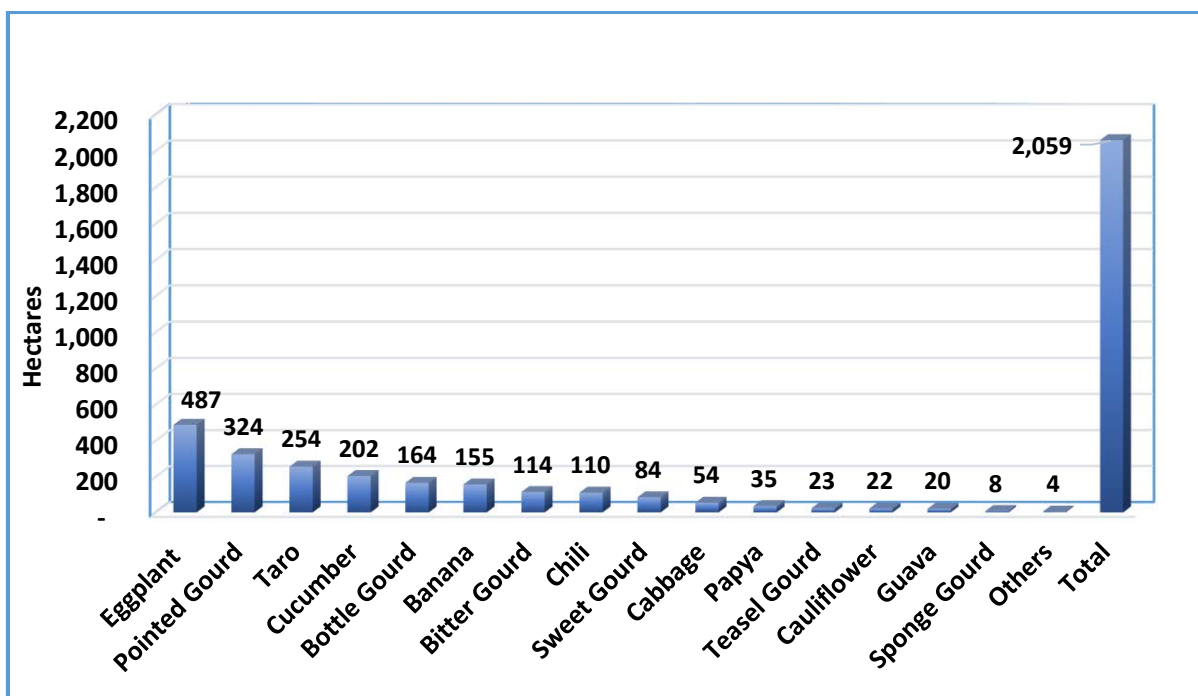


Figure 1. GAP and FDP Coverage Area (ha) by Crop

- FDP Product Production:** During May 2017, 64.80 metric tons (mt) of urea deep placement (UDP) product (briquettes popularly known as *Guti* urea) were produced. To date, 1,453.35 mt of *Guti* urea have been produced. In addition, 11.00 mt of nitrogen, phosphate, and potassium (NPK) *Guti* were produced. To date, 324.80 mt of NPK *Guti* were produced for the summer 2017 vegetable and fruit season. In total, 1,778.15 mt of *Guti* fertilizer products were manufactured for summer vegetables in the project locations.

Neighbors Respect Gulshan Ara as a Promising Business Woman

“I was happy with my responsibilities as a housewife looking after my family and children, cooking food for my family members, and taking care of my goat. I had never dreamed that one day I will become an entrepreneur and a respectful earning member of my family,” says Gulshan Ara Begum, of Andolbaria village, Jibannagar upazila in Chuadanga district.

Gulshan Ara’s fortune came in to a reality when the sub-assistant agriculture officer (SAAO) of the Department of Agricultural Extension (DAE) and IFDC-Walmart field monitoring officer (FMO) met her in 2014. They were looking for promising rural women who are interested to start a new business with a fertilizer briquetting machine. After interviewing several women, they decided to

promote Gulshan Ara, as she was found to be more interested in starting a business to improve her family income. The DAE and IFDC field staff explained to Gulshan Ara about the project objectives assisting rural women to increase productivity of high value vegetable crops with improved technologies such as UDP to empower women in increasing their income and improve nutrition status of the family members. They also informed her that the project was offering training to women farmers on GAPs² in vegetable crops, including application of UDP technology. This technology has several benefits: increases yield, saves cost of urea, uniform fruits, less weeds, less pest attack, and environmentally sound technology. The IFDC-Walmart Activity facilitated the purchase of a fertilizer briquetting machines for Gulshan Ara at a subsidized rate of 80 percent.



Gulshan Ara is working in her Guti shop.

Gulshan Ara Begum, 37, is married to Mominul Islam who was living in Malaysia before marriage. Now he is an agro-input retailer and sells crop seeds, fertilizers, and pesticides in his shop in Andolbaria village market. Gulshan Ara and Mominul Islam have one daughter and two twin sons. Her daughter is studying in grade ten and her sons are studying in grade 8. Her husband initially was not convinced that his wife has the ability to conduct a business of her own. But she told her husband that she attended a Walmart and IFDC training program, and she feels confident to run the business. Her husband reluctantly paid the 20 percent cost of the fertilizer briquetting business, and Gulshan was very happy to get the machine. She started her business with full devotion and proved her ability as she started immediately making profit. After the first season she she paid back 20 percent of the fertilizer briquetting machine cost. Gulshan Ara said, “Although my husband initially did not really trust my ability, now he is very delighted in seeing my efforts and outcomes.”

² Use of good quality seeds, use of a balanced dose of fertilizers including secondary and micronutrients, maintaining spacing requirements from line to line and plant to plant, raising beds, efficient use of water for cultivation, IPM, weeding, and regular monitoring of the field in terms of insect management, etc.

In addition to attending the IFDC-Walmart farmer training program, she also attended a fertilizer briquetting machine owners (BMOs) training program in 2014 after purchasing the machine.

During the training, she learned that the project was promoting the use of *Guti* urea along with GAPs to improve the livelihoods of farmers by reducing the cost of crop production and increasing yields. The project provided training to farmers on how to use *Guti* fertilizer and GAPs in vegetable and fruit cultivation.

After training in 2014, she started producing *Guti* fertilizer. She produced 21 mt, 30 mt, and 40 mt in 2014, 2015, and 2016, respectively. As of May 2017, she has produced 35 mt, and she is expected to increase it by another 20 mt by the end of 2017. Gulshan Ara usually purchases prilled urea at Tk 750/50-kilogram (kg) bag (Tk 15/kg) and sells *Guti* urea at Tk 18/kg. After deducting the production cost and maintenance of the machine, she earned a net profit of Tk 2/kg. Gulshan Ara and her family run this *Guti* business and performed all necessary activities by themselves. She hired labor only when she produced a large quantity of *Guti* urea per day (more than 4 mt). She purchased a goat from the profit earned in 2014. After the initial goat, she kept getting more until she had 14 in 2016. She sold 12 of them at an average cost of Tk 3,000 per goat. Now she has been gradually diversifying her activities by purchasing cows.

Gulshan Ara is now more engaged in her business. She looks after the *Guti* machine, maintains register books, and maintains production. Day by day, demand of *Guti* urea *has been* increasing in her area. She is well known among her neighbor for doing motivational work for the expansion of FDP technology. She is now able to manage all the needs of her family members including education of her children. She is now also running her livestock business with great satisfaction.

“Seeing my impressive success, my husband allowed me to join workshops/trainings alone in the district level venue,” explained Gulshan Ara. “My husband was feeling very proud when he saw me sharing the *Guti* business experience in front of 50-person audience in a trained farmer motivational meeting organized by IFDC-Walmart in February 2017.

Now, Gulshan Ara has become a self-dependent woman. She is very much active in social community services like taking people to the hospitals, helping the poor, and many more. She is so

much confident that she thinks if she and her husband take part in the union parishad (UP) election, she will win over her husband.

Gulshan Ara's success has been recognized throughout the community, especially from women who often come to her and purchase *Guti* for vegetable and fruit cultivation and seek her advice in *Guti* application.

Technical Activities

- **FDP Demonstration Field Day:** In the reporting month of May 2017, AVPI organized its first FDP demonstration field day program of summer 2017 on cucumber at Meherpur Sadar. The purpose of the field day program was to show the comparison of results of GAPs using UDP technology with that of the farmers practice using broadcasted urea. The results of yield rate were compared from these two demonstration plots. A total of 50 farmers (40 female and 10 male) visited the demo plots to see the crop condition by themselves. After physical observation of UDP and broadcasted urea plots, the cucumber was harvested and weighed separately in front of the participants from both plots having five decimals of land each. The yield in the UDP plot was 77.6 kg compared to 44.5 kg in broadcasted urea plot, indicating incremental yield from the UDP plot was more than 74 percent compared to the broadcast urea plot. The woman farmer, who established the demo plots with the assistance of AVPI staff, shared her experience with other farmers who still did not practice GAP with UDP. She mentioned that she had used less urea in her cucumber plot compared to the broadcasted urea plot but obtained much higher yield. She further mentioned that the size of the cucumbers were similar between the plots. Her husband helped her a lot in setting up the demo plots. Also her daughter, who is in school, often helped her in picking the cucumber from the UDP plot. The whole family was happy with the results of higher yield in UDP plot and plan to use GAP



Bilkis Begum, AVPI demo farmer happily looking at her husband after getting a very good yield of cucumber from her UDP demo plot.

and UDP in all three acres of their land. The farmers were happy to hear the story of the demo farmer, and they had seen the results and indicated their interest to use GAPs with UDP in their different horticultural crops for next season. The deputy director of IFDC Asia, the upazila agriculture officer, the sub-assistant agriculture officers, the sub-assistant plant protection officer of DAE, the Union Parishad member, the AVPI project manager, and the field coordinators and field-monitoring officer for AVPI were also present throughout the program.

- **Vegetable Marketing Seminar:** In May 2017, two vegetable marketing seminars in Meherpur and Chuadanga districts were organized to improve the women farmer's market knowledge and their access to market information. In these seminars, issues such as market requirements, product demand and pricing, post-harvest handling, and quality assurance were



Deputy Director, DAE inaugurating the Vegetable Marketing Seminar at Meherpur Sadar, Meherpur.

discussed in detail. AVPI women vegetable and fruit farmers, who are playing a leadership role in their communities, along with market actors (faria/bepari/aratdar/paiker/retailers), DAE officials, the district marketing officer, and non-governmental organization (NGO) officials, attended the seminars. The female farmers and market actors were divided into four groups for a group exercise on strengths, weaknesses, opportunities, and threats (SWOT), followed by a presentation from each group.

- **Follow-Up of 2013-15 IFDC-Walmart Foundation-Trained Women Vegetable and Fruit Farmers:** As of May 2017, all 28,360 beneficiaries were interviewed by AVPI field staffs to assess the degree to which previously trained farmers have continued the use of GAP and FDP technologies in horticultural crop production in winter 2016-17. The data are now under process.
- **Village Monitoring Survey:** Beginning in February 2017, AVPI field-level staff started a village monitoring survey for winter 2016-17. A total of 187 village monitoring surveys were completed by May 2017. All 233 AVPI villages will gradually be surveyed and information will be collected on GAP and FDP area and the number of users per village.

- **Vegetable and Fruit Market Information Study by Independent Consultant:** A draft report of this survey is under review.

Table 1 provides information on the activities accomplished against targets for summer 2017 until May 2017.

Table 1. Activities Conducted Through May 2017

Activities	Unit	AVPI Progress Through May 2017			Remarks
		Target	Actual	%	
Objective 1: Fertilizer Deep Placement (FDP)/Good Agricultural Practices (GAPs)					
Training manuals	Number	2	2	100%	
Demonstration plot protocols for summer crops	Number	3	3	100%	
Farmer training on GAPs and FDP	Number	50	50	100%	
Demonstration farmer orientation training	Number	1	1	100%	
Establishment of demonstration plots	Number	15	15	100%	
FDP demonstration field days	Number	10	1	10%	
Farmers field crop cut	Number	28			
Motivational meetings with beneficiaries trained under the 2013-15 Walmart Foundation-IFDC partnership	Number	50	50	100%	
Motivational workshops and operational training for agro-input retailers/briquetting machine owners	Number	2	2	100%	
Design and develop technical booklets, leaflets, flyers, posters, signboards, flags, promotional bags, and caps	Number	1	1		Continued
Objective 2: Piloting Polynet Houses With Trickle Irrigation					
Conduct informal market studies on seedling markets for fruits and vegetables	Number	1	1	100%	
Objective 3: Improving Farmer Market Knowledge/Access to Market Information					
Conduct a vegetable market information study	Number	1	1	100%	
Conduct a survey to understand the current sources of market information for women vegetable and fruit farmers	Number	1	1	100%	
Conduct vegetable marketing seminars	Number	6	4	67%	

The media campaign for AVPI activities during May 2017 is shown in Table 2 covering daily national newspapers, local print media, and online news.

Table 2. Newspaper and Television Reports, News, and Publicity, May 2017

Sl. No.	News Heading	Media	Date/ Time	Remark
A. Print Media				
(i) National News Paper				
1.	Seminar on Vegetable and Fruit Marketing at Chuadanga	Prothom Alo	May 18, 2017	Hard copy of news documented.
(ii) Local News Paper				
1.	Seminar on Vegetable and Fruit Marketing at Meherpur	Protidiner Natun Khabar	May 9, 2017	Hard copy of news documented.
2.	Seminar on Vegetable and Fruit Marketing at Meherpur	The Daily Matirdaak	May 9, 2017	Hard copy of news documented.
3.	Seminar on Vegetable and Fruit Marketing at Meherpur	The Daily Deshtatthya	May 11, 2017	Hard copy of news documented.
4.	Seminar on Vegetable and Fruit Marketing at Chuadanga	The Daily Mathabhanga	May 18, 2017	Hard copy of news documented.
5.	Field Day Program on Cucumber Cultivation at Meherpur	The Daily Matirdaak	May 25, 2017	Hard copy of news documented.
6.	Field Day Program on Cucumber Cultivation at Meherpur	The Daily Deshtatthya	May 29, 2017	Hard copy of news documented.
B. Online News				
1.	Seminar on Vegetable and Fruits Marketing at Meherpur	meherpurnews.com	May 8, 2017	http://www.meherpurnews.com/মেহেরপুরে-সবজি-ও-ফল-বাজার/
2.	Field Day on Cucumber at Meherpur	meherpurnews.com	May 24, 2017	http://www.meherpurnews.com/মেহেরপুরে-শসা-চাষের-উপর-ম/
C. Television				
1.	Field Day on Cucumber at Meherpur	DBC 24/7 News	May 24, 2017	Video clip is available in IFDC Bangladesh library

Reporting

The AVPI Monthly report of April 2017 was submitted to the Walmart Foundation.