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Accelerating Agriculture Productivity Improvement (AAPI)

Walmart Foundation Activity

Annual Report

(July 26, 2013-July 25, 2014)

Submitted to

USAID-Bangladesh

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by



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Table of Contents

	Page
Overview	v
Introduction.....	1
Deliverables	4
Results.....	4
Vegetable Area Under Improved Technologies or Management Practices	7
Number of Women Farmers Who Have Applied New Technologies	8
Number of Individuals Who Have Received Walmart-Supported Short-Term Agricultural Sector Productivity or Food Security Training.....	10
Number of Rural Households Benefiting Directly From Walmart Interventions.....	10
Increased Yield of Vegetables	10
Incremental Vegetable Production.....	12
Increased Value of Vegetables.....	12
Urea Saving.....	13
Value of Urea Saved	13
Government of Bangladesh (GoB) Saving on Urea Subsidy.....	13
Average Incremental Value per Hectare	14
Average Incremental Income per Farm.....	15
Farmers Trained	15
Fertilizer Briquette Machines Sold	15
Activities	15
Technology Transfer	16
Women’s Access to Fertilizer Briquettes.....	20
Sharing Information and Ideas.....	21
Estimated Budget and Actual Expenditure	22

List of Tables

	Page
Table 1. Project Deliverables and Submission Data	v
Table 2. Results Achieved in the 4th Quarter (April-July 2014) of Year 1	vi
Table 3. Highlights of Project Technical Activities	vii
Table 4. Number of AAPI Walmart Activity Districts, Upazilas, Clusters and Villages by Regions.....	2
Table 5. List of Deliverables from July 26, 2013 Through July 25, 2014	4
Table 6. Results Achieved Against Targets Through July 2014.....	6
Table 7. Coverage of <i>Guti</i> Urea by Vegetable Crops During Winter 2013-14 and Summer 2014 Seasons	7
Table 8. Vegetable Area Covered by FDP Technology by AAPI WFA Direct Beneficiaries in Winter Season 2013-14.....	8
Table 9. Number of Women Farmers Using <i>Guti</i> Urea by Crops During Winter Vegetable 2013-14 and Summer Vegetable 2014.....	9
Table 10. Direct Beneficiaries Using FDP Technology in Winter Vegetable Season 2013-14	9
Table 11. Yield Calculated From Farmers' Field Crop Cuts-Winter Vegetable 2013- 14.....	11
Table 12. Status of Summer Vegetable 2014 Crop Cut from Farmers' Field by Crop....	11
Table 13. Incremental Vegetable Production – Winter Vegetable 2013-14	12
Table 14. Increased Value of Vegetables – Winter Vegetable 2013-14	12
Table 15. Urea Saving in Winter 2013-14 Farmer Field Crop Cut.....	13
Table 16. Average Incremental Value/Hectare – Winter Vegetable 2013-14	14
Table 17. Weighted Average Gross Margin/Hectare – Winter Vegetable 2013-14	15
Table 18. Activity Accomplished Against Targets Through July 2014.....	16
Table 19. Demonstrations Established for Summer Vegetables 2014 by Crop	17
Table 20. Winter 2013-14 Vegetable Demonstrations (Number).....	18
Table 21. Results of Winter 2013-14 Vegetable Demonstrations.....	18
Table 22. Financial Achievement Against Estimated Budget in U.S. \$	23

List of Figures

	Page
Figure 1. AAPI WFA Cluster Villages.....	3

List of Appendices

	Page
Appendix 1. Vegetable Area Under FDP Technology During Winter and Summer Season by Upazila.....	24
Appendix 2. Area Under FDP Technology by Crop and by Upazila (Winter 2013-14 and Summer 2014).....	28
Appendix 3. Area Under UDP Coverage by Direct Beneficiaries by Upazilas, Winter 2013-2014	34
Appendix 4. Number of Women Farmers Using FDP by Upazila (Winter 2013-14 and Summer 2014).....	35
Appendix 5. Women Farmers Trained Through July 2014 by Upazila	38
Appendix 6. Weighted Average Gross Margin by Crop (Tk/ha)	39
Appendix 7. UDP Demonstration Established for Vegetable Crops of 2013-14 by Upazila	40
Appendix 8. Motivational Field Visits Through July 2014.....	41
Appendix 9. Motivational Meetings with Trained Farmers Through July 2014.....	41
Appendix 10. Field Days Organized Through July 2014	42
Appendix 11. List of Briquette Machine Owners.....	42
Appendix 12. Technical Training of Briquette Shop Owners Through July 2014.....	43
Appendix 13. Business Management Training of Briquette Shop Owners Through July 2014.....	43
Appendix 14. Stakeholders Workshop Through July 2014.....	43
Appendix 15. Inventory of Promotional Material Produced, Distributed and Displayed Through July 2014	44
Appendix 16. Media Coverage of AAPI Walmart Activity Through July 2014.....	45

Acronyms and Abbreviations

AAPI	Accelerating Agriculture Productivity Improvement
COP	Chief of Party
DAE	Department of Agricultural Extension
FDP	Fertilizer Deep Placement (includes UDP)
FMO	Field Monitoring Officer
FS	Field Supervisor
FTF	Feed the Future
ha	hectare
ICM	Integrated Crop Management
IFDC	International Fertilizer Development Center
IPM	Integrated Pest Management
kg	kilogram
mt	metric ton
NGO	Non-Governmental Organization
No.	Number
PC	Project Coordinator
SAAO	Sub-Assistant Agriculture Officer
TOT	Training of Trainers
UAO	Upazila Agriculture Officer
UDP	Urea Deep Placement
USD	United States Dollar
USAID	United States Agency for International Development
WFA	Walmart Foundation Activity

Accelerating Agriculture Productivity Improvement (AAPI)

Walmart Foundation Activity

First Annual Report

(July 26, 2013-July 25, 2013)

Overview

This is the first annual progress report of the Accelerating Agriculture Productivity Improvement (AAPI) Walmart Foundation Activity (WFA). It covers the work completed during the period from July 26, 2013 to July 25, 2014. This also reports on the progress achieved during the fourth quarter (April-July 2014)¹ of project implementation. This overview presents a summary of results, the deliverables and key activities. Further details and a discussion of issues and the near-term outlook are provided in the main text. The targets herein were set in the first Annual Plan (covering the period August 2013 – July 2014). They, in turn, are governed by the Performance and Outcome Indicators that are specified in the agreement between the International Fertilizer Development Center (IFDC) and the Walmart Foundation.

Deliverables

All of the AAPI WFA project deliverables were submitted as required during the last quarter of the first year of AAPI WFA. A summary of the required deliverables and date submitted is shown in Table 1.

Table 1. Project Deliverables and Submission Data

Deliverable	April-July 2014				Total
	April	May	June	July	
Workplan				1	1
Monthly Progress Reports	1	1	1	1	4
Quarterly Performance Report	1			1	2
Annual Report				1	1
Expense Report				1	1

¹ The month of July has been included in the fourth quarter to report complete one year progress. However, some information beyond July 25 is not reported here. This will be reported in the next quarterly (July-September 2014) report.

Results

The last quarters saw the start of the summer vegetable transplantation of 2014 and the start of the winter vegetable harvesting. During the fourth quarter, only two result indicators were active for both winter and summer vegetables. As indicated in Table 2, AAPI WFA has achieved or exceeded the target for both indicators. The sale of briquettes is progressing as AAPI WFA staff are giving more attention to the appropriate selection of rural women entrepreneurs who will continue this business on an ongoing basis. A total of 14 machines are being delivered to the women entrepreneurs during the reporting quarter and nine more potential women entrepreneurs have been identified; delivery of the machines is in progress.

Table 2. Results Achieved in the 4th Quarter (April-July 2014) of Year 1

	Result Indicators	Unit	April -July 2014		
			Target	Actual	% of Target
1	Vegetable area under improved technologies or management practices as a result of Walmart assistance	ha	456 ^b	797 ^b	175%
2	Number of women farmers and others who have applied new technologies	No.	4,585	15,592	340%
3	Number of individuals who have received Walmart supported short-term agricultural sector productivity or food security training	No.		28	
4	Number of rural households benefiting directly from Walmart Foundation intervention	No.		14	
5	Increased yield of vegetables	mt/ha			
6	Incremental vegetable production	mt			
7	Increased value of vegetable and other crops	million U.S. \$			
8	Urea savings	mt			
9	Value of urea saved	million U.S. \$			
10	GoB saving on urea subsidy	million U.S. \$			
11	Average incremental value per ha	U.S. \$			
12	Average incremental value per ha	U.S. \$			
13	Farmers trained	No.			
14	Fertilizer briquette machines sold	No.		14	

Source: 1. The data on UDP coverage for the April-July, 2014 quarter are for the summer vegetable crop of 2014. Data on UDP coverage and number of farmers is from an *incomplete* village monitoring survey for the summer vegetable 2014. It is subject to change after the *village monitoring survey* is completed by 31 July 2014.
 2. Data on trainings, households benefiting directly is based on AAPI WFA records through July 2014.
 3. Number = No.; metric ton = mt; ha =hectare

Note: a = Winter vegetable 2013-14 results; b = summer vegetable 2014 results.

The area coverage and number of women famers includes both **direct and indirect beneficiaries**. AAPI WFA is collecting data from all the beneficiaries which will be reported once all data collection is complete. The incremental yield, incremental production and urea savings are calculated using **complete** crop cut data of cabbage, cauliflower, eggplant, tomato and potato from farmers' fields.

Highlights of Project Activities

Table 3 provides the highlights of project technical activities. During the fourth quarter, seven activities were active and others were achieved in the previous quarters. All the activities either achieved or exceeded the target. Only one activity – the crop from farmers’ field for summer vegetables – could not be completed because picking/harvesting for many crops is still continuing.

Table 3. Highlights of Project Technical Activities

Sl. #	Type of Activity	Unit	April-July 2014		
			Target	Actual	%
1	Identification of villages and collection of information on all villages	Set			
2	Conduct baseline survey	No.			
3	Training of trainers (TOT) of DAE field officials, FMOs and FSs	No.			
4	Farmers training	Batch			
5	Farmers orientation for demo establishment	Batch			
6	Field demonstration	No.	9	9	100%
7	Motivational field trips	No.	1	1	100%
8	Motivational meeting with trained farmers		5	13	260%
9	Field days	No.	11	17	155%
10	Crop cuts from				
	• Demo plots	No.			
	• Farmers’ field	No.	9	3	33%
11	Selling urea briquette machines at 80% subsidized rate	No.		14	
12	Training of briquette producer (technical training)	Batches	2	2	100%
13	National launching workshop	No.			
14	Stakeholders workshop	No.	1	2	200%

Issues

The AAPI WFA has created wide-scale awareness among women farmers on the benefits of FDP technology in vegetable crops and improving the nutrition of themselves and their families by increasing the home consumption of these products. However, there are issues which cannot be overlooked and these include:

Gender Inequity: In rural Bangladesh women’s contribution to agriculture related activities are not as explicit, which is restricted in many ways due to social norms. One problem that has attracted concern is gender inequity. In rural areas, women often play a pivotal role in agriculture, especially in post-harvest activities, in addition to their family roles. But two important factors are prohibiting their large-scale participation: (1) their right to agricultural land, which is mainly owned by adult men and (2) absence of women entrepreneurs as Bangladesh Chemical Industries Corporation (BCIC) fertilizer dealers. Bringing women into the mainstream activities has been the approach and will continue.

Invisible Role of Women in Vegetable Production and Marketing: The division of labor is different for commercial vegetable production and homestead vegetable production. In general, women are responsible for most of the production related activities in homestead vegetable cultivation. However, in commercial vegetable cultivation, men are responsible for most of the production related activities. Women are involved mainly in seed saving as well as harvest and post-harvest activities, though their contribution is substantial in planting and weeding operations also.

Additionally, women's contribution to the creation of market value remains highly invisible because of their absence at the end market chain where the value is realized. However, some positive changes are taking place with regard to women's role in agriculture and their contribution beyond "laborers" to "farm managers."

Sustainability: The sustainability of the technology, in a broader sense, means that the number of FDP women farmers and the volume of urea briquette production will not decline from previous seasons/years where there were project interventions. It may be noted that urea briquette use and production are being established in such a way in the project area that they will expand on their own to reach the natural limits defined by agronomic and economic returns to urea briquette use. Another factor relating to the sustainability issue is the active participation of DAE in expanding the technology in its own programs.

Estimated Budget and Actual Expenditure

AAPI WFA is incurring costs as planned. Although this part of the AAPI activity was signed on July 26, 2013, virtually all project activities in the field began from the last week of August 2013 after appointment of all staff. Therefore, the project actual expense started from September 2013, and the expenses reported here are only for 10 months. The budget for Year 1 was estimated at U.S. \$708,400. Of this, the actual expenses incurred totaled U.S. \$531,828 through July 2014, or 75 percent of the Year 1 budget.

Accelerating Agriculture Productivity Improvement (AAPI)

Walmart Foundation Activity

Fourth Quarterly Report

(April -July 2014)

USAID-Bangladesh

Cooperative Agreement Number AID-388-A-10-00002

Introduction

On July 26, 2013, the Walmart Foundation signed a contract with the International Fertilizer Development Center (IFDC) for implementation of the Accelerating Agriculture Productivity Improvement (AAPI) Walmart Foundation Activity for a period of two years. The goal of the AAPI-Walmart Activity is to enhance rural women's empowerment by increasing their capacity to produce and market horticultural crops and to increase their families' food security status by:

1. Increasing income from the sales of the vegetables and fruits that will be produced.
2. Improving nutrition by increasing the home consumption of these products.

Achieving this goal will result from carrying out a set of integrated strategic activities to enhance the technical knowledge of women in the production and marketing of horticultural crops, which are not only high-value products but are also highly nutritious. Rapid diffusion of FDP² technology, with concurrent attention to demand- and supply-side issues and improvement of women's access to and participation in markets will be essential components of the AAPI Walmart activity.

Although this part of the AAPI activity was signed on July 26, 2013, virtually all project activities in the field began from the last week of August 2013. This is the Annual Progress Report of the

² FDP involves point placement of a large fertilizer pellet (up to 3.4 grams by weight) near the root zone of the plant. This reduces fertilizer nitrogen losses and increases crop uptake efficiency of the fertilizer; it is an environment-friendly technology. Urea deep placement (UDP) technology is well suited to small, resource-poor farmers, including women.

AAPI Walmart Activity. It incorporates progress achieved during fourth quarter (i.e., April-July 2013) coinciding with the quarterly report of the AAPI project. It also provides cumulative progress through July 25, 2014. The month of July has been included in the fourth quarter to report complete one year progress. However, some information beyond July 25 is not reported here. This will be reported in the next quarterly (July-September 2014) report. A summary of activities, status of deliverables and results are provided in the overview. More detailed reports on all of these activities are provided in the following text. It may be noted that from Year 4, AAPI has set separate targets on the use of FDP technology in vegetable and other crops. These are reported separately in the AAPI quarterly report. There is no duplication of information as the area of both activities has been demarcated.

The geographic spread of the AAPI WFA logically divides into three regions: Barisal and Jessore regions (FTF zones), with 24 upazilas in 10 districts; and Mymensingh region (non-FTF zone), with nine upazilas in two districts. Table 4 provides a summary of the number of AAPI WFA clusters and villages by region, and Figure 1 shows the locations map. The AAPI WFA has been directly engaged in winter 2013-14 and summer 2014 vegetable activities in all the 329 villages.

Table 4. Number of AAPI Walmart Activity Districts, Upazilas, Clusters and Villages by Regions

Regions	District	Upazila	Cluster	Villages
Barisal	3	5	13	71
Jessore	7	19	34	168
FTF Zone	10	24	47	239
Mymensingh (Non-FTF Zone)	2	9	22	90
Total	12	33	69	329



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AAPI-Walmart Foundation Activity Districts

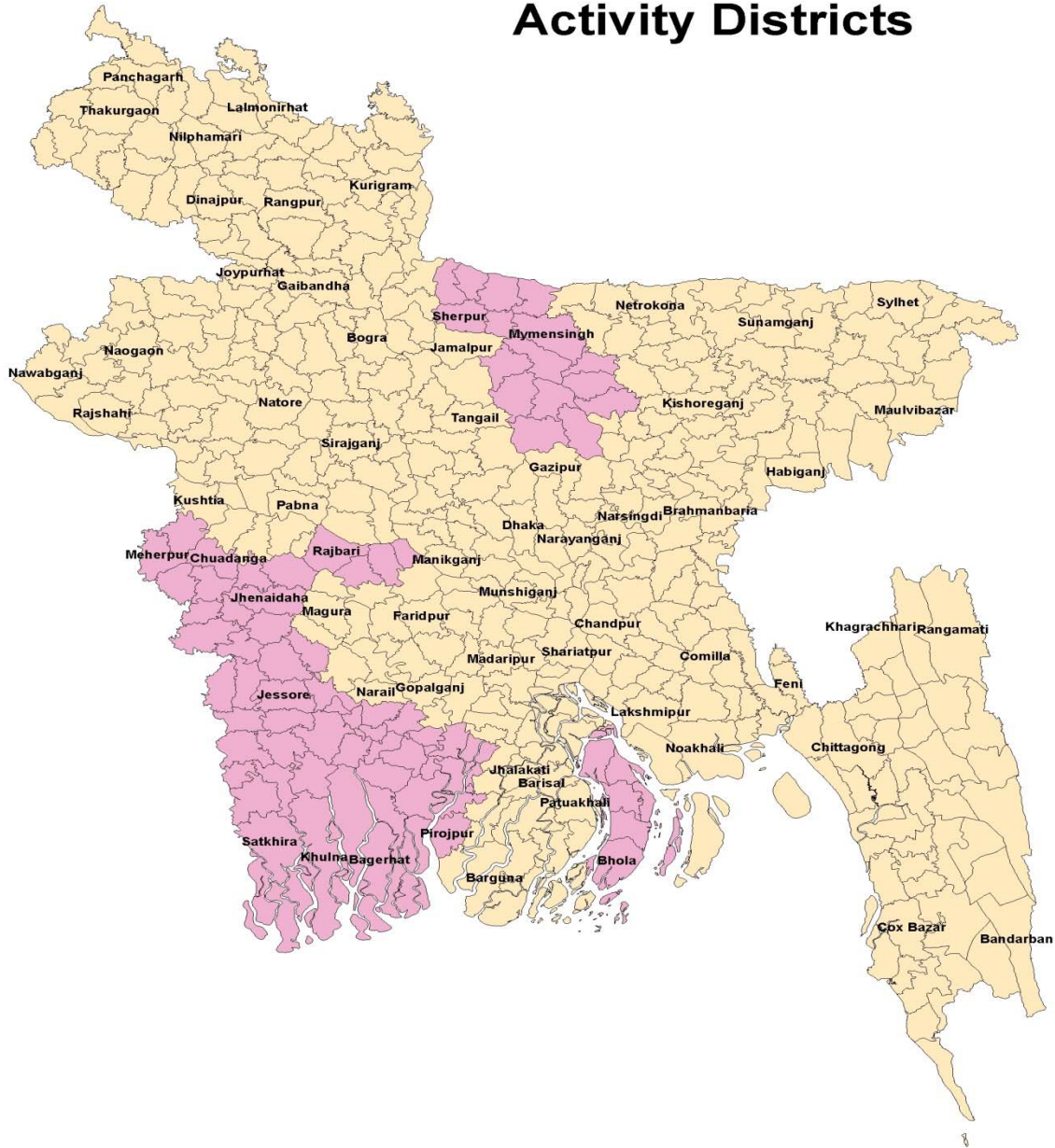


Figure 1. AAPI WFA Cluster Villages

Deliverables

In compliance with the reporting requirements, 20 deliverables were required through July 2014 of Year 1. As indicated in Table 5, all were submitted as planned. In addition, although not a contracted deliverable, the AAPI WFA prepared 45 weekly reports on project performance during this period in order to facilitate project oversight. In this period, AAPI WFA also prepared the detailed plan for the winter 2013-14 and summer 2014 seasons for vegetable production.

Table 5. List of Deliverables from July 26, 2013 Through July 25, 2014

Deliverable	2013					2014							Total
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
Workplan			1									1	2
Monthly Progress Reports		1	1	1	1	1	1	1	1	1	1	1	11
Quarterly Performance Report			1			1			1			1	4
Half Yearly Report													1
Annual Progress Report												1	1
Expense Report												1	1

Results

The fourth quarter saw the continuation of summer 2014 vegetable transplantation. The results are reported against indicators and their targets specified in the contract between IFDC and Walmart Foundation with interpretations via the Annual Work Plan. To align with reporting requirements, the results indicators are presented in Table 6.

During the period covered by this report, the winter vegetable crops 2013-14 season were fully harvested and planting was finished on the summer vegetable crops 2014. The results reported in the table are from the **complete** village monitoring report of the winter vegetable crops 2013-14 season and **partial** village monitoring report of the summer vegetable crops 2014 season, as well as the complete crop cuts of winter vegetables from farmers' fields of selected crops. Therefore, the results presented in Table 6 do not reflect the achievement for the whole year, as summer crops are yet to be cut and the next quarterly report will give a complete picture on the progress of Year 1.

In addition, AAPI WFA is collecting data from direct beneficiaries (trained farmers) through format and data collection for winter vegetable crops 2013-14. The season is complete, but data collection from summer vegetable season 2014 is ongoing.

Table 6 shows only two result indicators were active this quarter. Complete FDP data for summer 2014 vegetable is not reported this quarter and will be reported next quarter. It should be noted that much of the data is obtained from weighted averages from the original data sets.

The vegetable production data reported this quarter applies to the winter vegetable crops 2013-14 that were completely harvested during the quarter. The indicators in Table 6 are coded with superscripts to differentiate between winter vegetable crops 2013-14 and summer vegetable 2014 seasons.

Through July 25, 2014, of the 14 result indicators, seven indicators achieved or exceeded the target and three made good progress. Progress of three indicators is moderate and related only with winter vegetable crops 2013-14 and with summer vegetable crop cut. It is expected all indicators will achieve 100 percent of the target. Only one indicator, sale of briquette machines, is below target, but it is progressing well as AAPI WFA staff give more time in the selection of real rural women entrepreneurs who will continue this business so that there are no dropouts. A total of 16 machines have been delivered to the women entrepreneurs, and another nine potential women entrepreneurs have been selected.

Table 6. Results Achieved Against Targets Through July 2014

Result Indicators	Unit	Achievement (July 26, 2013-March 2014)	April -July 2014			Cumulative Achievement (July 26, 2013-July 25, 2014)		
			Target	Actual	% of Target	Target	Actual	% of Target
Vegetable area under improved technologies or management practices as a result of Walmart assistance	ha	2,596 ^a	456 ^b	797 ^b	175%	4,000	3,393	85%
Number of women farmers who have applied new technologies	No.	22,095 ^a	4,585	15,592	340%	20,000	37,687	188%
Number of individuals who have received Walmart supported short-term agricultural sector productivity or food security training	No.	20,149 ^a		28		20,159	20,177	100%
Number of rural households benefiting directly from Walmart intervention	No.	20,042 ^a		14		200,25	20,056	100%
Increased yield of vegetables	mt/ha	3.24 to 16.64 ^c				1 to 10	3.24 to 16.64 ^c	166% to 324%
Incremental vegetable production	mt	14,857 ^c				20,000	14,857 ^c	74%
Increased value of vegetable and other crops	million U.S. \$	2.22 ^c				3.14	2.22 ^c	70%
Urea savings	mt	270 ^c				358	270 ^c	75%
Value of urea saved	million U.S. \$	0.12 ^c				0.14	0.12 ^c	86%
Government of Bangladesh (GoB) saving on urea subsidy	million U.S. \$	0.07 ^c				0.06	0.07 ^c	117%
Average incremental value per ha	U.S. \$	1,312 ^c				580	1,312 ^c	226%
Average incremental income per farm	U.S. \$	102 ^c				115	102 ^c	88%
Farmers trained	No.	20,040 ^a				20,000	20,040	100%
Fertilizer briquette machines sold	No.	2		14		25	16	64%

Source: 1. The data on UDP coverage for the April-July, 2014 quarter are for the summer vegetable crop of 2014. Data on UDP coverage and number of farmers is from *incomplete* village monitoring survey for the summer vegetable 2014. It is subject to change after the *village monitoring survey* is completed by 31 July 2014.
 2. Data on trainings and households benefiting directly is based on AAPI WFA records through July 2014.
 3. Number = No.; metric ton = mt; ha =hectare

Note: a = winter vegetable 2013-14 and summer 2014 results; b = summer vegetable 2014 results; c = winter vegetable 2013-14
 The area coverage and number of women famers includes both **direct and indirect beneficiaries**. AAPI WFA is collecting data from all the beneficiaries and will be reported once all data collection is complete. The incremental yield, incremental production and urea savings are calculated using **complete** crop cut data of cabbage, cauliflower, eggplant, tomato and potato from farmers' fields.

Vegetable Area Under Improved Technologies or Management Practices

Winter Vegetable 2013-14 and Summer Vegetable 2014

The FDP coverage data in winter and summer vegetables are collected on a weekly basis by AAPI WFA FMOs with the assistance of Department of Agricultural Extension (DAE) field-level officials, the sub-assistant agriculture officers (SAAOs). The FMOs send the information to the field supervisors (FSs), who then send to the AAPI Data Management Unit using a spreadsheet designed by the senior data management specialist under the guidance of the project coordinator (PC) and chief of party (COP). This information is now validated with the **complete** village monitoring survey results of the winter vegetable 2013-14 and **partial** village monitoring survey results of the summer vegetable 2014.

The data in the first three quarters have now been revised following analysis of the village monitoring survey. Table 7 shows that 3,393 ha came under UDP technology through July 2014. This is 85 percent of the annual target. Table 7 provides data on the *Guti* urea coverage by vegetable crop during the winter season 2013-14. Appendix 1 (A to C) shows *Guti* urea coverage of vegetable area by upazila and Appendix 2 (A to C) by crop based on the village monitoring survey.

Table 7. Coverage of *Guti* Urea by Vegetable Crops During Winter 2013-14 and Summer 2014 Seasons

Crop	Winter 2013-14			Summer 2014			Total		
	Area by Crop (ha)	Area Under <i>Guti</i> Urea (ha)	Percentage of Area Under <i>Guti</i> Urea	Area by Crop (ha)	Area Under <i>Guti</i> Urea (ha)	Percentage of Area Under <i>Guti</i> Urea	Area by Crop (ha)	Area Under <i>Guti</i> Urea (ha)	Percentage of Area Under <i>Guti</i> Urea
Cabbage	1,254	264	21				1,254	264	21
Cauliflower	1,153	258	22				1,153	258	22
Eggplant	1,518	426	28	1,317	141	11	2,834	566	20
Tomato	797	254	32				797	254	32
Potato	2,764	491	18				2,764	491	18
Knolkhol	111	31	28				111	31	28
Cucumber				699	134	19	699	134	19
Taro				1,070	89	8	1,070	89	8
Bitter Gourd				543	80	15	543	80	15
Teasle Gourd				190	41	21	190	41	21
Watermelon	78	42	54				78	42	54
Other Crops	4,347	749	17	3,466	393	11	7,813	1,143	15
Total:	12,021	2,516	21	7,284	878	12	19,305	3,393	18

Source: AAPI-Walmart 213 Village Monitoring Survey, Winter 2013-14 and AAPI-Walmart 315 Village Monitoring Survey, Summer 2014.

Note: Other crops include bottle gourd, chili, country bean, sweet gourd, bottle gourd, pointed gourd, ash gourd, Indian spinach and banana.

FDP Coverage by Direct Beneficiaries: It may be noted that AAPI WFA started collection of data on the number of direct beneficiaries using FDP technology through a follow up of each of the trained farmers. The data collection of all the farmers trained during winter season 2013-2014 completed. Table 8 indicates that 1,659 ha of *Boro* area has been brought under FDP coverage by direct beneficiaries. Details of FDP coverage by direct beneficiaries by upazila are presented in Appendix 3. Data of summer 2014 season will be reported next quarter.

Table 8. Vegetable Area Covered by FDP Technology by AAPI WFA Direct Beneficiaries in Winter Season 2013-14

District	FDP Coverage by Direct Beneficiaries (ha)
Bhola	566
Chuadanga	293
Jessore	190
Jhenaidah	39
Meherpur	212
Mymensingh	145
Sherpur	214
Grand Total:	1,659

Source: AAPI- Walmart Activity Trained Farmer's Follow up --Winter Season 2013-2014

Number of Women Farmers Who Have Applied New Technologies

Winter Vegetable 2013-14 and Summer Vegetable 2014

AAPI Walmart village monitoring survey results show that a total of 37,687 women used *Guti* urea in their family lands during winter 2013-14 and summer 2014 vegetable seasons through July 2014 (Table 9). Appendix 4 (A to C) shows the number of women farmers who used *Guti* urea in vegetable crops by upazila. On average, plot size of each farmer is 28 decimal for winter vegetable crops 2013-14 and 14 decimal for summer 2014 season.

Table 9. Number of Women Farmers Using *Guti* Urea by Crops During Winter Vegetable 2013-14 and Summer Vegetable 2014

Crop	Winter 2013-14			Summer 2014			Total		
	Area Under <i>Guti</i> Urea (ha)	Number of Women Farmers Used <i>Guti</i> Urea*	Average Plot per Farmer (decimal)	Area Under <i>Guti</i> Urea (ha)	Number of Women Farmers Used <i>Guti</i> Urea*	Average Plot per Farmer (decimal)	Area Under <i>Guti</i> Urea (ha)	Number of Women Farmers Used <i>Guti</i> Urea*	Average Plot per Farmer (decimal)
Cabbage	264	4,999	13				264	4,999	13
Cauliflower	258	4,028	16				258	4,028	16
Eggplant	426	8,114	13	141	3,858	9	566	11,972	12
Tomato	254	5,713	11				254	5,713	11
Potato	491	5,568	22				491	5,568	22
Knolkhol	31	698	11				31	698	11
Cucumber				134	2,707	12	134	2,707	12
Taro				89	2,132	10	89	2,132	10
Bitter Gourd				80	2,303	9	80	2,303	9
Teasle Gourd				41	777	13	41	777	13
Watermelon	42	189	55				42	189	55
Other Crops	749	17,729	10	393	11,596	8	1,143	29,325	10
Total:	2,516	21,848*	28	878	15,839*	14	3,393	37,687	22

Source: AAPI-Walmart 213 Village Monitoring Survey, Winter 2013-14 and AAPI-Walmart 315 Village Monitoring Survey, Summer 2014.

Note: Other crops include bottle gourd, chili, country bean, sweet gourd, bottle gourd, pointed gourd, ash gourd, Indian spinach and banana.

* This is the unique number of farmers. Many of them have used *Guti* urea in more than one crop.

Direct Beneficiaries Using FDP Technology

AAPI WFA trained 14,480 women on the use of FDP technology in winter 2013-14 vegetable crops. Table 10 shows that 99 percent of the trained farmers used FDP technology in winter 2013-14 vegetable season.

Table 10. Direct Beneficiaries Using FDP Technology in Winter Vegetable Season 2013-14

District	Total Trained Farmers	Total Direct Beneficiary Using FDP	% of Trained Farmers Using FDP
Bhola	2,480	2,470	100
Chuadanga	3,186	3,137	98
Jessore	1,955	1,945	99
Jhenaidah	559	555	99
Meherpur	2,160	2,214	100
Mymensingh	1,880	1,877	100
Sherpur	2,120	2,111	100
Grand Total:	14,416	14,309	99

Source: AAPI- Walmart Activity Trained Farmer's Follow up --Winter Season 2013-2014

Number of Individuals Who Have Received Walmart-Supported Short-Term Agricultural Sector Productivity or Food Security Training

The number of individuals who have received short-term training is calculated from farmers training and training of government staff and NGOs (training of trainers [TOT]) and training of briquette machine owners. A total of 20,040 women farmers were trained under the AAPI WFA. In addition, 109 participants attended the training of trainers (TOT) program of AAPI in the first quarter, and 28 briquette machine owners attended two trainings; thus, the total number of individuals receiving AAPI WFA short-term training stands at 20,177. The number of women trained by upazila is provided in Appendix 5.

Number of Rural Households Benefiting Directly From Walmart Interventions

A household is a beneficiary if it contains at least one individual who is a beneficiary. For AAPI WFA, this is defined as an individual engaged with a project activity who has already either shown benefit from the activity or has a high likelihood of gaining benefits due to her significant level of engagement with the project. It is calculated from the number of farmers trained and the number of rural entrepreneurs who procured a fertilizer briquette machine at a reduced rate and directly benefited from an intervention of AAPI WFA.

During this quarter, 15 women entrepreneurs received fertilizer briquette machines. Therefore, a total of 20,055 rural households benefited directly from AAPI WFA interventions through July 2014.

Increased Yield of Vegetables

Winter Vegetable 2013-14

The incremental yields arising from UDP technology are derived from crop cuts in farmer fields. Each cut consists of two samples—one from a UDP field and another (as close as possible) from a broadcast urea field which used the same variety of seeds and has a similar soil type and equal number of plants. Vegetable crop cuts are recorded for each harvest/picking according to a prescribed format prepared under AAPI WFA. For the 2013-14 winter vegetable, 47 crop cuts were targeted and all the crop cuts completed. Table 11 presents the yield difference of five vegetable crops.

Table 11. Yield Calculated From Farmers' Field Crop Cuts-Winter Vegetable 2013-14

Crop	Total No. of Samples	Guti Urea Yield (mt/ha)	Broadcast Urea Yield (mt/ha)	Incremental Yield (mt/ha)	Incremental Yield (%)
Cabbage	12	77.49	68.12	9.37	14
Cauliflower	6	67.51	57.07	10.44	18
Eggplant	9	53.56	44.47	9.09	20
Tomato	10	77.08	60.44	16.64	28
Potato	10	22.35	19.10	3.24	17

*Source: AAPI Walmart Winter Vegetables 2013-14 Crop cut from Farmers' Fields.

The target of a selected number of vegetables was set at 1 to 10 mt/ha in the Annual Work Plan. However, the incremental yield ranged from 3.24 mt/ha to 16.64 mt/ha depending on five vegetable crops (cabbage, cauliflower, eggplant, tomato and potato). In terms of percentage, the incremental yield ranged between 14 and 28 percent for the same crops. The farmers have used *Guti* urea in many vegetables, which cannot be targeted for crop cuts due to resource constraints. The results can be compared with the data for demonstrations reported in Table 21 where yield increments averaged 15.57 mt/ha for cabbage, 12.66 mt/ha for cauliflower, 8.05 mt/ha for eggplant and 4.86 mt/ha for potato. As could be expected, yields were generally higher in the demonstrations. But in the case of eggplant, yields were slightly higher in farmers' field crop cuts than that of the demonstration.

Summer Vegetable 2014

For summer vegetable 2014, 30 crop cuts are targeted from farmers' field and the status of the crop cuts is presented in Table 12. The results of summer crop cuts will be presented in the next quarter after completion of all 30 cuts.

Table 12. Status of Summer Vegetable 2014 Crop Cut from Farmers' Field by Crop

Crop	Target	Harvest Completed	Harvest Ongoing
Cucumber	7	1	6
Bitter Gourd	7		7
Teasel Gourd	6		6
Taro	5		5
Ash Gourd	5	2	3
Total	30	3	27

Incremental Vegetable Production

Incremental vegetable production is calculated from the area of UDP coverage and the weighted average yield increments as measured by vegetable crop cuts in farmers' fields. Although more vegetable area has been brought under UDP coverage, the incremental production has been shown only for the five crops (cabbage, cauliflower, eggplant, tomato and potato) mentioned above. The incremental production would be much more than shown in Table 6. The detailed calculation of incremental production by crop is shown in Table 13.

Table 13. Incremental Vegetable Production – Winter Vegetable 2013-14

Crop	Yield Difference (mt/ha)	Guti Area Under Crop (ha)	Incremental Vegetable Production (mt)
Cabbage	9.37	264	2,474
Cauliflower	10.44	258	2,689
Eggplant	9.09	426	3,872
Tomato	16.64	254	4,227
Potato	3.24	491	1,596
Total		1,693	14,858

Source: AAPI Walmart Winter Vegetable 2013-14 Crop Cut from Farmers' Fields

Increased Value of Vegetables

The increased value of vegetables produced by AAPI WFA women farmers is calculated from the incremental vegetable production and the sales value of vegetables. From each pick/harvest of each crop AAPI WFA FMOs recorded the amount sold to the market and also the value received by the farmers. After the final crop cut was completed, data was compiled in the AAPI Data Management Unit and the unit price was calculated by dividing total sales value of the crop by the total quantity sold. The details of the increased value by crop are presented in Table 14. This value would have been much higher if this could have been calculated for all crops.

Table 14. Increased Value of Vegetables – Winter Vegetable 2013-14

Crop	Total Incremental Vegetable Production (mt)	Unit Price (Tk/mt)	Value of Incremental Vegetable Production (Million U.S. \$)
Cabbage	2,466	3,371	0.11
Cauliflower	2,689	3,998	0.14
Eggplant	3,859	18,263	0.92
Tomato	4,221	15,398	0.85
Potato	1,593	10,049	0.21
Total	14,829		2.22

Note: U.S. \$1 = Tk 77.

Urea Saving

Urea saving is also calculated from the crop cut data collected from farmers' fields. The results are summarized by crop in Table 15. The Annual Plan assumed a urea saving of 10 percent per unit of land for each vegetable crop. But the farmers' field crop cut data indicates that it ranged between 19 and 48 percent for the five types of vegetable crops. Actual urea saving was 89 to 221 kg/ha. Total urea saved was 269 mt.

Table 15. Urea Saving in Winter 2013-14 Farmer Field Crop Cut

Crop	UDP	Broadcast	Urea Saving (kg/ha)	Guti Area Under Crop (ha)	Total Urea Saving (mt)
	(kg/ha)	Urea (kg/ha)			
Cabbage	364	454	90	264	24
Cauliflower	368	495	127	258	33
Eggplant	242	463	221	426	94
Tomato	380	469	89	254	23
Potato	368	565	197	491	97
Total				1,693	270

Source: AAPI Walmart Winter Vegetables 2013-14 Crop cut from Farmers' Fields.

Value of Urea Saved

The value of urea saved is calculated from the urea saved, using the international market price. The Annual Plan set the target using the price of U.S. \$400/mt. The average Bangladesh Chemical Industries Corporation (BCIC) urea imported price, October 2013 to December 2013, was U.S. \$433 per mt. This is used to calculate values of urea saved against the five crops shown in Table 14. The higher urea price and higher quantity of urea saved from only five crops have achieved the targets of values of urea saved of U.S. \$ 0.12 compared to the target of \$0.10 million.

Government of Bangladesh (GoB) Saving on Urea Subsidy

The Annual Plan assumed a GoB subsidy of U.S. \$177.78/mt. But the dealer price reduced to Tk 14/kg or U.S. \$181.81/mt. Using the import parity price reported in the value of urea saved, the subsidy on a ton of urea is U.S. \$251.19. Using this data, the saving on the urea subsidy in five crops of winter vegetables 2013-14 amounts to U.S. \$0.07 million. Therefore, this remains above target.

Average Incremental Value per Hectare

The average incremental value per hectare is estimated by dividing the total incremental value of the five crops by the total UDP area of the same five crops. The values are also shown in Table 16 by crop. This is a reflection of higher incremental yield of all five vegetables discussed above.

Table 16. Average Incremental Value/Hectare – Winter Vegetable 2013-14

Crop	Guti Area Under Crop (ha)	Value of Incremental Vegetable Production (In Million U.S. \$)	Average Incremental Value/ha (U.S. \$)
Cabbage	263	0.11	410
Cauliflower	258	0.14	542
Eggplant	425	0.92	2,156
Tomato	254	0.84	3,328
Potato	490	0.21	424
Total	1,689	2.22	1,312

The AAPI WFA has also calculated the gross margin using the sample crop cut survey data of the five crops.³ The results are presented in Table 17, which shows that the weighted average gross margin is higher with UDP technology for all the five crops compared to broadcast application of urea. Therefore, the benefit is that the cost ratio is also high for all UDP crops. Details are presented in Appendix 6.

³ USAID Feed the Future (FTF) indicator definition: The gross margin is the difference between the total value of production of the agricultural product (crop) and the cost of producing that item excluding family labor, divided by the total number of units in production (hectares of crops). Gross margin per hectare is a measure of net income for that farm's activity. Only purchased inputs that represent at least five percent of total costs have been considered for calculation of gross margin. Costs included, for example, rent paid but not imputed rent on own land. If a farmer owned the pump that irrigated his or her land, the fuel cost was considered.

Table 17. Weighted Average Gross Margin/Hectare – Winter Vegetable 2013-14

Crop	Gross Margin (U.S. \$/ha)			Benefit-Cost Ratio	
	UDP Plots	Broadcasted Urea Plots	Difference	UDP Plots	Broadcasted Urea Plots
Cabbage	2,099	1,601	498	2.65	2.16
Cauliflower	2,196	1,548	648	2.65	2.10
Eggplant	11,295	9,095	2,201	9.02	7.26
Tomato	13,799	10,539	3,260	9.54	7.81
Potato	1,700	1,067	633	2.40	1.75

Average Incremental Income per Farm

The average incremental value per farm is estimated by dividing the total incremental value of the five crops by the total UDP unique number of users of all crops. As a result, per farm income is U.S. \$102 per farm, or 88 percent of the targeted amount.

Farmers Trained

Through July 2014, all the 501 training programs targeting 20,040 women have been completed. Details by upazila are provided in Appendix 5.

Fertilizer Briquette Machines Sold

Through July 2014, 16 fertilizer briquette machines has been sold to 16 women entrepreneurs. The sale of briquette machines is progressing well as AAPI WFA staff has been spending more time in the selection of rural women entrepreneurs who will continue this business so that there are no dropouts. Another nine potential women entrepreneurs have been selected. However, this is not affecting the *Guti* urea production and supply due to the large number of sales of briquette machines already made under AAPI.

Activities

Table 18 indicates that during the fourth quarter, seven activities were active. All the activities except one either achieved or exceeded the target. Only one activity – the crop cut from farmers’

field for summer vegetables could not be completed because picking/harvesting for many crops is still continuing. Table 18 further indicates that through July 2014, of the 14 project activities, 12 activities either achieved or exceeded the target. One activity, the field days is progressing well. The launching workshop is yet to be organized. The sale of briquettes is progressing as AAPI WFA staff are giving more attention to the appropriate selection of rural women entrepreneurs who will continue this business on an ongoing basis. A total of 16 machines delivered to the women entrepreneurs during the reporting quarter and nine more potential women entrepreneurs have been identified and delivery of machines is in progress.

Table 18. Activity Accomplished Against Targets Through July 2014

Result Indicators	Unit	Achievement	April-July 2014			Cumulative (July 26, 2013-July 25, 2014)		
		July 26-March 2014	Target	Actual	% of Target	Target	Actual	% of Target
Identification of villages and collection of information on all villages	Set	1 (329)				1	1 (329)	100%
Conduct baseline survey	No.	1				1	1	100%
Training of trainers (TOT) of DAE field officials, FMOs and FSS	No.	3				3	3	100%
Farmers training	Batch	501				500	501	100%
Farmers' orientation for demo establishment	Batch	3				3	3	100%
Field demonstration	No.	41	9	9	100%	50	50	100%
Motivational field trips	No.	9	1	1	100%	10	10	100%
Motivational meeting with trained farmers	No.	7	5	13	260%	20	20	100%
Field days	No.	24	11	17	118%	50	41	82%
Crop cuts from								
• Demo plots	No.	50				50	50	100%
• Farmers' field	No.	47	9	3	33%	50	50	100%
Selling urea briquette machines at 80% subsidized rate	No.	2		14		25	16	64%
Training of briquette producer (technical training)	Batches		2	2	100%	2	2	100%
National launching workshop	No.					1		
Stakeholders workshop	No.	1	1	2	200%	6	6	100%

Technology Transfer

Farmer Training on FDP Technology

The women farmer training programs are designed to improve farmer knowledge of vegetable crop management in general, with emphasis on increasing awareness and knowledge of FDP technology

and use of good-quality seeds. A training module has been developed for farmer training. Training takes place over a period of two days, and each day involves training for three hours, either in the afternoon or in the morning to match the schedule of women farmers. In one batch, 40 women were trained by a DAE SAAO as the resource person. In some instances, in the absence of a trained trainer, the AAPI WFA FMO is the resource person. The FMO is responsible for the administration, according to guidelines set by the project. This arrangement helps build the farmer training into the mainstream of DAE field programs while maintaining accountability for the activity within the project. Through July 2014, a total of 20,040 women farmers were trained under the AAPI WFA. Details of farmers training are provided by upazila in Appendix 5.

Field Demonstrations

Technology results demonstrations are some of the important activities of the AAPI WFA. The demonstration plots consist of two plots, each measuring 200 square meters – one using UDP and the other broadcasting conventional urea, keeping all other inputs such as seed and other fertilizers and the management practices same. Through July 2014, a total of 50 vegetable demonstrations established among which 39 were in winter and 11 were in summer season.

Summer Vegetable 2014 Demonstration

All the 11 demonstration plots for summer vegetables were established. The results of demonstration plots for summer crops will be presented in the next quarter as the harvest of the vegetables just started. The demonstrations established by crop are presented in Table 19.

Table 19. Demonstrations Established for Summer Vegetables 2014 by Crop

Name of the Demonstration Crop	Demonstrations Established
Cucumber	4
Taro	2
Bitter Gourd	2
Eggplant	2
Teasel Gourd	1
Total	11

Winter Vegetable Demonstration

There were 39 field demonstrations planned for the winter season. The status of winter demonstrations is presented in Table 20. In the previous quarter, the demonstrations for cabbage, cauliflower and potato were completely harvested and presented in last quarterly report. Six demonstrations were damaged due to hail storm, pest attack and plant diseases.

Table 20. Winter 2013-14 Vegetable Demonstrations (Number)

Demonstration Crop	Target	Harvest Completed	Damaged
Cabbage	8	8	
Cauliflower	12	10	2
Potato	11	10	1
Eggplant	7	5	2
Tomato	1		1
Total	39	33	6

The harvest of these vegetables occurs in several pickings, except potato. Data is collected by AAPI WFA FMOs as per set format during each pick. The farmers are advised to keep all records of harvest so that FMOs can get correct information. The results of demonstration plots that were completely harvested are presented in the Table 21. Details by upazila and crops are provided in Appendix 7.

Table 21. Results of Winter 2013-14 Vegetable Demonstrations

Crop	No. of Demos	Guti Urea Yield (kg/ha)	Broadcast Urea Yield (kg/ha)	Yield Difference (kg/ha)	Incremental Yield (%)
Cabbage	8	95,624	80,048	15,576	19
Cauliflower	10	61,939	49,275	12,664	26
Potato	10	28,938	24,080	4,858	20
Eggplant	5	55,585	47,533	8,052	17

Motivational Field Visits

Motivational field trips allow farmers in a new area to visit and exchange views with those in areas that show the benefits of FDP technology. Normally, about 40 women farmers along with the SAAO and upazila agriculture officer (UAO) of the DAE are taken from an area that is new to FDP technology to an area where FDP technology is widely adopted.



Therefore, the visits can occur only when there is something to show and learn. Only one motivational field visit was completed during the fourth quarter, with the participation of 46 women farmers along with another 15 participants (briquetting machine owners, the host farmers, the DAE staff and AAPI WFA staff) for a total of 61 participants. Through July 2014, 10 motivational visits were completed against the target of 10. Details by regions are provided in Appendix 8.

Motivational Meeting with Trained Farmers

This activity is undertaken by the staff as a follow up of the trained farmers to hold their interest in using FDP technology in their vegetable garden and field crop. The project uses farmer meetings as an effective way to remind farmers of the benefits that they received in the earlier season when they used urea briquettes. The purpose is to affirm farmer commitment to use UDP technology in the new season. As the project proceeds, the number of farmers who have already used UDP is growing to the point where they are the majority. Motivational meetings are becoming the key to sustaining the numbers of adopters. During the reporting quarter, 13 motivational meetings were conducted in Jessore and Mymensingh regions to motivate trained women to continue UDP technology, with a total of 230 participants attending that included trained farmers, men farmers, DAE officials and urea briquette producers. Through July 2014, 20 meetings were completed as targeted. Details by regions are provided in Appendix 9.

Field Days

In this quarter, 17 field days were held around the winter and summer vegetable harvests of demonstrations. *Field days are organized for farmers including extension agents* to mainly observe the method and results of UDP technology in the particular demonstration. They also share their experiences through question and answer sessions with demonstration and UDP block farmers as well as with AAPI WFA senior staff and DAE officials. Through July 2014, 41 field days were organized and completed in the project area. Nine field days targeted earlier were canceled due to political unrest, unsatisfactory crop yield and damaged crop seedlings. A total of 2,420 participants attended the field days, of which 1,985 were female farmers; 435 other participants included male farmers, DAE field officials, media personnel, briquetting machine owners, local leaders and other project staff. Appendix 10 indicates the total number of field days organized by region.

Women's Access to Fertilizer Briquettes

Selling of Briquetting Machines

In this quarter, 14 machines were sold. Two (2) in Barisal region, five (5) in Mymensingh region and seven (7) in Jessore region. Through July 2014, 16 machines were sold. Appendix 11 indicates the briquette machine owners list by region.

Training for Briquette Machine Owners

In this quarter, two (2) training courses were organized for the machine owners and the machine operators of Mymensingh, Barisal and Jessore regions. Twenty-eight (28) participants attended these courses. The training was delivered by the AAPI engineer, AAPI technician and AAPI business management officer. It was a two day course with a high practical content. **The first day** was technical training for owners and operators and discussion was on machine operations and maintenance, briquette



production, quality control and, in the case of briquette manufacturers, on mixing and briquette applicator use in vegetable/rice. **The second day** was business management and accounting practices. All participants were actively involved in the practical session. They have shown their interest and commitment. Appendix 12 and Appendix 13 provide details of the training programs.

Sharing Information and Ideas

Stakeholders Workshop

Through July 2014, all the six stakeholders' workshops in Jessore, Chuadanga, Rajbari, Khulna and Satkhira districts of Jessore region and in the Mymensingh district on women's empowerment through vegetable productivity improvement took place. The heads of the district administration, deputy commissioners (DCs) were the chief guests of the workshops, which were held in the conference room of the



DCs. The workshops were chaired by the deputy director of the DAE of the corresponding district. The workshops' participants were selected from different segments of society associated with agriculture crop production, such as women farmers, private enterprises dealing with agriculture inputs, fertilizer briquette producers, BCIC fertilizer dealers, retailers, irrigation pump owners, market management committee members, school teachers, mosque imams, union council members (women) and representatives from non-governmental organizations (NGOs).

The objectives of organizing a stakeholder workshop by AAPI WFA are to: (1) inform local stakeholders about AAPI and AAPI WFA; (2) motivate stakeholders and seek their commitment to support women for expansion of FDP technology in vegetable crops; and (3) create awareness among stakeholders for facilitating the empowerment of women in farmers' families. The project coordinator and chief of party of AAPI briefly presented an overview of AAPI and AAPI WFA. The workshop was designed for discussion by the participants on women's empowerment through vegetable productivity improvement using FDP technology. In this process participants were divided into small groups for analysis of strengths, weaknesses, opportunities and threats (SWOT). Small groups identified SWOT for women's empowerment through vegetable production using FDP technology. These were then presented in the workshop for endorsement by all participants. Details are provided in Appendix 14.

Printing and Distribution of Promotional Material

The AAPI WFA is sharing information about the project activity and FDP technology among the beneficiaries and other stakeholders through leaflets, brochures, signboards and flyers. These are being used in various activities such as stakeholder workshops, motivational tours, farmer training programs, demonstrations, field days and public handouts. Materials were also distributed to representatives of integrated pest management (IPM)/integrated crop management (ICM) clubs and community leaders. A list of promotional materials prepared, printed and displayed through July 2014 is presented in Appendix 15.

Media Coverage

The project regularly invites members of the electronic and print media to different events for wider coverage. The events are reported and broadcast on several television channels, in local/national newspapers and online. Details on media coverage of the AAPI WFA are provided in Appendix 16.

Estimated Budget and Actual Expenditure

AAPI WFA is incurring costs as planned. Although this part of the AAPI activity was signed on July 26, 2013, virtually all project activities in the field began from the last week of August 2013 after the appointment of all staff. Therefore, the project's actual expenses started from September 2013. Therefore, the expenses reported here only for 10 months. The budget for Year 1 was estimated at U.S. \$708,400. Of this, the actual expenses incurred totaled U.S. \$531,828 through July 2014, or 75 percent of the Year 1 budget. Details of expenses are provided in Table 22.

Table 22. Financial Achievement Against Estimated Budget in U.S. \$

Line Item	Annual Budget for Year 1	Actual Expenses in Year 1 through July 2014	Percent Achieved
Personnel, fringe benefits and allowances	287,600	228,611	79%
Travel and transportation	84,000	86,281	103%
Procurement (equipment/supplies/contracts/grants)	67,900	21,963	32%
Training	121,400	112,703	93%
Other direct costs	83,100	33,923	41%
Total direct costs	644,000	483,480	75%
Overhead	64,400	48,348	75%
Total Walmart Activity Amount	708,400	531,828	75%

Appendix 1. Vegetable Area Under FDP Technology During Winter and Summer Season by Upazila

A. Winter Season 2013-14

District	Upazila	Number of Clusters	Total Vegetable Area (ha)	Area Under FDP Technology (ha)	Percentage of Vegetable Area Under FDP
Bhola	Bhola Sadar	2	636	205	32.19
	Burhanuddin	2	892	307	34.37
	Char Fasson	5	1,201	485	40.36
Subtotal:		9	2,730	996	36.50
Chuadanga	Alamdanga	2	666	105	15.81
	Chuadanga Sadar	2	1,088	337	31.00
	Damurhuda	3	1,469	38	2.55
	Jibannagar	1	101	23	22.44
Subtotal:		8	3,324	503	15.13
Jessore	Bagherpara	1	13	5	38.33
	Chaugachha	1	55	21	39.01
	Jessore Sadar	3	2,059	381	18.51
	Jhikargachha	2	565	112	19.76
Subtotal:		7	2,692	519	19.28
Jhenaidah	Kotchandpur	2	34	12	35.64
	Maheshpur	2	474	25	5.18
	Shaikupa	1	85	7	8.45
Subtotal:		5	593	44	7.38
Meherpur	Gangni	2	813	64	7.87
	Meherpur Sadar	4	881	105	11.93
	Mujibnagar	1	170	36	21.02
Subtotal:		7	1,864	205	10.99
Mymensingh	Ishwarganj	2	64	24	38.09
	Mymensingh Sadar	3	188	42	22.48
	Phulbari	3	50	23	45.87
	Phulpur	1	39	10	26.44
Subtotal:		9	341	100	29.29
Sherpur	Nakla	2	156	54	34.71
	Nalitabari	3	245	64	26.24
	Sherpur Sadar	1	77	31	40.07
Subtotal:		6	478	149	31.23
Total:		51	12,021	2,516	20.93

Source: AAPI-Walmart Activity 213 Village Monitoring Survey, Winter 2013-14

B. Summer Season 2014

District	Upazila	Number of Clusters	Total Vegetable Area (ha)	Area Under FDP Technology (ha)	% of Vegetable Area Under FDP Technology
Bagerhat	Bagerhat Sadar	2	76	27	35.49
Subtotal:		2	76	27	35.49
Bhola	Bhola Sadar	2	144	36	25.15
	Burhanuddin	2	132	41	30.81
	Char Fasson	5	455	145	31.89
Subtotal:		9	731	222	30.37
Chuadanga	Alamdanga	2	236	24	10.02
	Chuadanga Sadar	2	699	51	7.28
	Damurhuda	3	551	14	2.60
	Jibannagar	1	96	5	5.19
Subtotal:		8	1,582	94	5.93
Jessore	Bagherpara	1	6	2	32.46
	Chaugachha	1	202	10	5.07
	Jessore Sadar	3	451	45	10.04
	Jhikargachha	2	179	17	9.38
Subtotal:		7	838	74	8.87
Jhenaidah	Kaliganj	1	65	12	18.05
	Kotchandpur	2	77	8	10.51
	Maheshpur	2	152	15	10.09
	Shailkupa	1	43	5	11.96
Subtotal:		6	338	40	11.96
Khulna	Dumuria	1	122	19	15.65
Subtotal:		1	122	19	15.65
Meherpur	Gangni	2	178	6	3.25
	Meherpur Sadar	4	380	23	6.03
	Mujibnagar	1	151	6	3.69
Subtotal:		7	710	34	4.84
Mymensingh	Ishwarganj	2	102	15	14.75
	Sadar	3	224	7	2.96
	Phulbari	3	367	10	2.75
	Phulpur	1	25	6	25.85
	Trishal	4	306	34	10.96
Subtotal:		13	1,024	72	7.01
Pirojpur	Nesarabad	2	362	142	39.26
Subtotal:		2	362	142	39.26
Rajbari	Baliakandi	2	149	17	11.29
	Rajbari Sadar	2	305	38	12.52
Subtotal:		4	454	55	12.12
Satkhira	Satkhira Sadar	1	93	18	19.79
Subtotal:		1	93	18	19.79
Sherpur	Jhenaigati	3	301	32	10.56
	Nakla	2	350	17	4.97
	Nalitabari	3	154	12	8.02
	Sherpur Sadar	1	149	18	11.93
Subtotal:		9	954	79	8.31
Total:		69	7,284	878	12.05

Source: AAPI-Walmart Activity 315 Village Monitoring Survey, Summer 2014

Note: FDP area coverage by female farmers.

C. Cumulative Vegetable Area Under FDP Technology (Winter 2013-14 and Summer 2014)

District	Upazila	Number of Clusters	Total Vegetable Area (ha)	Area Under FDP Technology (ha)	Percentage of Vegetable Area Under FDP Technology
Bagerhat	Bagerhat Sadar	2	76	27	35.49
Subtotal:		2	76	27	35.49
Bhola	Bhola Sadar	2	780	241	30.90
	Burhanuddin	2	1,025	348	33.91
	Char Fasson	5	1,656	630	38.05
Subtotal:		9	3,460	1,218	35.22
Chuadanga	Alamdanga	2	902	129	14.26
	Chuadanga Sadar	2	1,787	388	21.71
	Damurhuda	3	2,020	52	2.59
	Jibannagar	1	197	28	14.21
Subtotal:		8	4,906	597	12.17
Jessore	Bagherpara	1	19	7	36.53
	Chaugachha	1	257	31	12.17
	Jessore Sadar	3	2,510	426	16.98
	Jhikargachha	2	744	129	17.31
Subtotal:		7	3,530	593	16.81
Jhenaidah	Kaliganj	1	65	12	18.05
	Kotchandpur	2	111	20	18.08
	Maheshpur	2	626	40	6.44
	Shaikupa	1	128	12	9.50
Subtotal:		6	931	84	9.07
Khulna	Dumuria	1	122	19	15.65
Subtotal:		1	122	19	15.65
Meherpur	Gangni	2	991	70	7.04
	Meherpur Sadar	4	1,261	128	10.14
	Mujibnagar	1	321	42	12.95
Subtotal:		7	2,574	239	9.30
Mymensingh	Ishwarganj	2	166	39	23.50
	Mymensingh Sadar	3	412	49	11.80
	Phulbari	3	417	33	7.93
	Phulpur	1	64	16	25.72
	Trishal	4	306	34	10.96
Subtotal:		13	1,365	171	12.51
Pirojpur	Nesarabad	2	362	142	39.26
Subtotal:		2	362	142	39.26
Rajbari	Baliakandi	2	149	17	11.29
	Rajbari Sadar	2	305	38	12.52
Subtotal:		4	454	55	12.12
Satkhira	Satkhira Sadar	1	93	18	19.79
Subtotal:		1	93	18	19.79

District	Upazila	Number of Clusters	Total Vegetable Area (ha)	Area Under FDP Technology (ha)	Percentage of Vegetable Area Under FDP Technology
Sherpur	Jhenaigati	3	301	32	10.56
	Nakla	2	506	71	14.10
	Nalitabari	3	399	76	19.14
	Sherpur Sadar	1	226	49	21.58
Subtotal:		9	1,432	228	15.94
Total:		69	19,305	3,393	17.58

Source: AAPI-Walmart Activity Village Monitoring Survey, Winter 2013-14 (213 Villages) and Summer 2014 (315 Villages)

Note: FDP area coverage by female farmers.

Appendix 2. Area Under FDP Technology by Crop and by Upazila (Winter 2013-14 and Summer 2014)

A. Area Under FDP Technology by Crop and by Upazila for Winter 2013-14

District	Upazila	Number of Clusters	Crop Area Under FDP Technology (ha)								
			Cabbage	Tomato	Cauliflower	Knolkhol	Eggplant	Potato	Watermelon	Other Crops	Total
Bhola	Bhola Sadar	2	11	34	13	4	44	33	10	57	205
	Burhanuddin	2	18	49	17	18	61	56	4	84	307
	Char Fasson	5	30	87	24	7	96	22	28	189	485
Subtotal:		9	60	170	54	29	201	111	42	329	996
Chuadanga	Alamdanga	2	17	0	1	-	38	18	-	31	105
	Chuadanga Sadar	2	40	9	95	-	18	86	0	88	337
	Damurhuda	3	3	2	3	-	12	2	-	15	38
	Jibannagar	1	2	13	3	-	2	2	-	1	23
Subtotal:		8	62	25	102	-	70	108	0	135	503
Jessore	Bagherpara	1	2	2	0	0	0	0	-	0	5
	Chaugachha	1	1	1	1	-	9	6	-	4	21
	Jessore Sadar	3	40	3	27	1	66	123	-	120	381
	Jhikargachha	2	7	7	5	-	12	60	-	21	112
Subtotal:		7	50	13	33	1	87	189	-	144	519
Jhenaidah	Kotchandpur	2	-	1	1	-	3	1	-	6	12
	Maheshpur	2	0	1	-	-	5	5	-	13	25
	Shailkupa	1	4	0	-	-	1	-	-	2	7
Subtotal:		5	4	2	1	-	10	7	-	21	44
Meherpur	Gangni	2	22	1	17	-	1	2	-	21	64
	Meherpur Sadar	4	31	5	21	-	9	15	-	24	105
	Mujibnagar	1	9	7	9	-	2	4	-	4	36
Subtotal:		7	61	12	48	-	13	21	-	49	205

District	Upazila	Number of Clusters	Crop Area Under FDP Technology (ha)								Total
			Cabbage	Tomato	Cauliflower	Knolkhol	Eggplant	Potato	Watermelon	Other Crops	
Mymensingh	Ishwarganj	2	2	3	1	-	7	6	0	5	24
	Sadar	3	9	6	8	-	9	1	-	9	42
	Phulbari	3	3	1	3	-	5	2	-	8	23
	Phulpur	1	2	1	1	-	1	0	-	5	10
Subtotal:		9	16	12	12	-	22	9	0	28	100
Sherpur	Nakla	2	2	5	1	0	6	22	-	19	54
	Nalitabari	3	5	15	4	-	13	11	-	16	64
	Sherpur Sadar	1	3	1	4	-	4	12	-	7	31
Subtotal:		6	10	20	8	0	23	45	-	42	149
Total:		51	264	254	258	31	426	491	42	749	2,516

Source: AAP-Walmart Activity 213 Village Monitoring Survey, Winter 2013-14

Note: FDP area coverage by female farmers.

Other crops include banana, bottle gourd, chili, bitter gourd, taro, cucumber, bean, maize, sweet gourd, teasel gourd, country bean, pointed gourd etc.

"0" indicate less than 1.

B. Area Under FDP Technology by Crop and by Upazila, Summer 2014

District	Upazila	Number of Clusters	Crop Area Under FDP Technology (ha)						
			Eggplant	Cucumber	Taro	Bitter Gourd	Teasel Gourd	Other Crops	Total
Bagerhat	Bagerhat Sadar	2	7	3	1	5	6	5	27
Subtotal:		2	7	3	1	5	6	5	27
Bhola	Bhola Sadar	2	8	7	2	5	1	13	36
	Burhanuddin	2	6	6	4	6	2	16	41
	Char Fasson	5	13	58	14	21	11	29	145
Subtotal:		9	27	72	20	32	14	58	222
Chuadanga	Alamdanga	2	7	0	2	1	-	14	24
	Chuadanga Sadar	2	8	2	10	0	-	30	51
	Damurhuda	3	4	1	2	0	-	8	14
	Jibannagar	1	1	0	0	-	-	3	5
Subtotal:		8	20	4	14	1	-	56	94
Jessore	Bagherpara	1	0	0	0	-	0	1	2
	Chaugachha	1	2	0	1	0	-	7	10
	Jessore Sadar	3	7	1	2	2	0	32	45
	Jhikargachha	2	3	1	2	0	0	10	17
Subtotal:		7	12	3	6	2	0	51	74
Jhenaidah	Kaliganj	1	3	0	1	2	-	6	12
	Kotchandpur	2	2	-	1	1	-	5	8
	Maheshpur	2	5	0	2	1	-	7	15
	Shailkupa	1	1	1	0	0	-	3	5
Subtotal:		6	11	1	4	4	-	21	40
Khulna	Dumuria	1	2	2	2	1	-	12	19
Subtotal:		1	2	2	2	1	-	12	19
Meherpur	Gangni	2	1	-	1	-	-	4	6
	Meherpur Sadar	4	2	1	10	0	-	9	23
	Mujibnagar	1	1	1	2	0	-	2	6
Subtotal:		7	4	1	13	0	-	16	34
Mymensingh	Ishwarganj	2	3	3	1	1	0	8	15
	Mymensingh Sadar	3	1	1	0	0	-	4	7
	Phulbari	3	3	0	1	2	1	3	10
	Phulpur	1	1	2	1	0	0	3	6
	Trishal	4	3	4	11	1	1	13	34
Subtotal:		13	10	11	14	5	2	30	72
Pirojpur	Nesarabad	2	21	19	10	20	13	59	142
Subtotal:		2	21	19	10	20	13	59	142
Rajbari	Baliakandi	2	3	1	1	1	-	12	17
	Rajbari Sadar	2	5	3	0	2	-	27	38
Subtotal:		4	8	4	1	3	-	39	55
Satkhira	Satkhira Sadar	1	1	-	0	-	-	17	18
Subtotal:		1	1	-	0	-	-	17	18

District	Upazila	Number of Clusters	Crop Area Under FDP Technology (ha)						
			Eggplant	Cucumber	Taro	Bitter Gourd	Teasel Gourd	Other Crops	Total
Sherpur	Jhenaigati	3	8	3	2	3	5	12	32
	Nakla	2	4	3	2	0	-	8	17
	Nalitabari	3	3	2	1	2	1	3	12
	Sherpur Sadar	1	3	6	0	0	-	8	18
Subtotal:		9	18	14	5	6	5	31	79
Total:		69	141	134	89	80	40	393	878

Source: AAPI-Walmart Activity 315 Village Monitoring Survey, Summer 2014

Note: FDP area coverage by female farmers.

Other crops include bottle gourd, banana, pointed gourd, snake gourd, ash gourd, sweet gourd, Indian spinach, chili, okra, yard long bean, ridge gourd, sponge gourd etc.

"0" indicate less than 1.

C. Cumulative Area Under FDP Technology by Crop and by Upazila, (Winter 2013-14 and Summer 2014)

District	Upazila	Number of Clusters	Crop Area Under FDP Technology (ha)												Total
			Egg-plant	Cucumber	Taro	Bitter Gourd	Teasel Gourd	Cabbage	Tomato	Cauliflower	Knolkhol	Potato	Water-melon	Other Crops	
Bagerhat	Bagerhat Sadar	2	7	3	1	5	6							5	27
Subtotal:		2	7	3	1	5	6							5	27
Bhola	Bhola Sadar	2	52	7	2	5	1	11	34	13	4	33	10	70	241
	Burhanuddin	2	67	6	4	6	2	18	49	17	18	56	4	100	348
	Char Fasson	5	109	58	14	21	11	30	87	24	7	22	28	218	630
Subtotal:		9	228	72	20	32	14	60	170	54	29	111	42	387	1,219
Chuadanga	Alamdanga	2	45	0	2	1	-	17	0	1	-	18	-	45	129
	Chuadanga Sadar	2	26	2	10	0	-	40	9	95	-	86	0	119	388
	Damurhuda	3	15	1	2	0	-	3	2	3	-	2	-	23	52
	Jibannagar	1	4	0	0	-	-	2	13	3	-	2	-	4	28
Subtotal:		8	90	4	14	1	-	62	25	102	-	108	0	190	596
Jessore	Bagherpara	1	0	0	0	-	0	2	2	0	0	0	-	1	7
	Chaugachha	1	10	0	1	0	-	1	1	1	-	6	-	10	32
	Jessore Sadar	3	74	1	2	2	0	40	3	27	1	123	-	152	427
	Jhikargachha	2	15	1	2	0	0	7	7	5	-	60	-	31	129
Subtotal:		7	99	3	6	2	0	50	13	33	1	189	-	195	594
Jhenaidah	Kaliganj	1	3	0	1	2	-							6	12
	Kotchandpur	2	5	-	1	1	-	-	1	1	-	1	-	11	20
	Maheshpur	2	11	0	2	1	-	0	1	-	-	5	-	20	40
	Shailkupa	1	2	1	0	0	-	4	0	-	-	-	-	5	12
Subtotal:		6	21	1	4	4	-	4	2	1	-	7	-	42	84
Khulna	Dumuria	1	2	2	2	1	-							12	19
Subtotal:		1	2	2	2	1	-							12	19
Meherpur	Gangni	2	2	-	1	-	-	22	1	17	-	2	-	25	69
	Meherpur Sadar	4	12	1	10	0	-	31	5	21	-	15	-	33	128
	Mujibnagar	1	3	1	2	0	-	9	7	9	-	4	-	6	41
Subtotal:		7	17	1	13	0	-	61	12	48	-	21	-	65	239

District	Upazila	Number of Clusters	Crop Area Under FDP Technology (ha)												Total
			Egg-plant	Cucumber	Taro	Bitter Gourd	Teasel Gourd	Cabbage	Tomato	Cauliflower	Knolkhol	Potato	Water-melon	Other Crops	
Mymensingh	Ishwarganj	2	9	3	1	1	0	2	3	1	-	6	0	13	39
	Mymensingh Sadar	3	10	1	0	0	-	9	6	8	-	1	-	13	49
	Phulbari	3	8	0	1	2	1	3	1	3	-	2	-	11	33
	Phulpur	1	2	2	1	0	0	2	1	1	-	0	-	8	17
	Trishal	4	3	4	11	1	1							13	34
Subtotal:		13	32	11	14	5	2	16	12	12	-	9	0	58	171
Pirojpur	Nesarabad	2	21	19	10	20	13							59	142
Subtotal:		2	21	19	10	20	13							59	142
Rajbari	Baliakandi	2	3	1	1	1	-							12	17
	Rajbari Sadar	2	5	3	0	2	-							27	38
Subtotal:		4	8	4	1	3	-							39	55
Satkhira	Satkhira Sadar	1	1	-	0	-	-							17	18
Subtotal:		1	1	-	0	-	-							17	18
Sherpur	Jhenaigati	3	8	3	2	3	5							12	32
	Nakla	2	9	3	2	0	-	2	5	1	0	22	-	27	72
	Nalitabari	3	16	2	1	2	1	5	15	4	-	11	-	19	76
	Sherpur Sadar	1	7	6	0	0	-	3	1	4	-	12	-	15	48
Subtotal:		9	41	14	5	6	5	10	20	8	0	45	-	73	228
Total:		69	567	134	89	80	40	264	254	258	31	491	42	1,142	3,393

Source: AAPI-Walmart Activity Village Monitoring Survey, Winter 2013-14 (213 Villages) and Summer 2014 (315 Villages)

Note: FDP area coverage by female farmers.

Other crops include banana, bottle gourd, chili, bitter gourd, taro, cucumber, bean, maize, sweet gourd ash gourd, snake gourd, teasel gourd, country bean, pointed gourd, Indian spinach, okra, yard long bean, ridge gourd, sponge gourd etc.

Figures are rounded: "0" indicates less than 1.

Appendix 3. Area Under UDP Coverage by Direct Beneficiaries by Upazilas, Winter 2013-2014

District	Upazila	Number of Clusters	No. of Direct Beneficiaries	Crop Area Under UDP Coverage (ha)								Total
				Cabbage	Tomato	Cauliflower	Knolkhol	Eggplant	Potato	Watermelon	Other Crops	
Bhola	Bhola Sadar	2	480	7	13	4	0	14	19	2	29	88
	Burhanuddin	2	960	11	42	9	4	43	72	0	36	216
	Char Fasson	5	1,040	30	57	20	0	56	29	6	63	262
Subtotal:		9	2,480	48	112	33	4	113	121	8	128	566
Chuadanga	Alamdanga	2	319	2	0	3	0	10	2	-	8	25
	Sadar	2	2,187	23	3	47	0	31	18	-	87	210
	Damurhuda	3	480	1	1	1	-	12	5	0	21	41
	Jibannagar	1	200	1	0	1	-	3	2	-	9	17
Subtotal:		8	3,186	27	4	52	0	56	28	0	125	293
Jessore	Bagherpara	1	80	1	1	0	0	2	0	0	5	10
	Chaugachha	1	160	1	0	1	-	2	2	-	6	12
	Sadar	3	1,235	17	1	6	0	42	12	-	44	121
	Jhikargachha	2	480	3	1	4	0	4	15	0	19	47
Subtotal:		7	1,955	22	3	12	0	49	30	0	74	190
Jhenaidah	Kotchandpur	2	240	-	0	-	-	2	2	-	11	16
	Maheshpur	2	239	0	0	-	-	1	6	-	12	19
	Shaikupa	1	80	-	-	-	-	1	0	-	3	4
Subtotal:		5	559	0	0	-	-	4	8	-	27	39
Meherpur	Gangni	2	957	31	2	17	0	6	6	0	29	91
	Sadar	4	1,039	31	1	19	0	5	16	0	28	101
	Mujibnagar	1	240	2	0	2	0	3	2	0	10	20
Subtotal:		7	2,236	64	3	39	1	14	25	0	67	212
Mymensingh	Ishwarganj	2	520	5	10	5	0	11	7	0	14	53
	Sadar	3	800	1	8	10	0	12	5	0	12	49
	Phulbari	3	480	1	0	2	0	9	5	-	22	38
	Phulpur	1	80	0	0	0	-	1	0	-	3	6
Subtotal:		9	1,880	8	19	17	0	33	17	0	51	145
Sherpur	Nakla	2	960	1	3	1	0	8	45	0	21	78
	Nalitabari	3	920	6	17	6	-	20	20	0	51	121
	Sadar	1	240	0	2	6	0	3	2	-	3	16
Subtotal:		6	2,120	7	22	12	0	31	66	0	75	214
Total:		51	14,416	175	162	165	6	302	294	9	547	1,659

Source: AAPI- Walmart Activity Trained Farmer's Follow Up Winter Season 2013-2014

Note: Other crop included bottle gourd, bitter gourd, banana, long yard bean, cucumber, pointed gourd, sweet gourd, maize, country beans, taro etc.
"0" indicates less than 1.

Appendix 4. Number of Women Farmers Using FDP by Upazila (Winter 2013-14 and Summer 2014)

A. Number of Women Farmers Using FDP by Upazila (Winter 2013-14)

District	Upazila	Number of Clusters	Number of Female Farmers	Number of Female FDP Users	Percent of Female FDP Users	Total Guti Urea Used (kg)
Bhola	Bhola Sadar	2	14,128	2,002	14	34,077
	Burhanuddin	2	8,446	1,951	23	51,920
	Char Fasson	5	8,496	3,076	36	69,808
Subtotal:		9	1,070	7,029	23	155,805
Chuadanga	Alamdanga	2	8,694	574	7	23,800
	Chuadanga Sadar	2	5,171	2,447	47	89,678
	Damurhuda	3	7,231	700	10	11,611
	Jibannagar	1	634	167	26	2,773
Subtotal:		8	1,730	3,888	18	127,862
Jessore	Bagherpara	1	440	95	22	1,259
	Chaugachha	1	308	214	69	2,796
	Jessore Sadar	3	3,025	1,756	58	57,836
	Jhikargachha	2	3,524	892	25	16,207
Subtotal:		7	7,297	2,957	41	78,098
Jhenaidah	Kotchandpur	2	630	370	59	1,656
	Maheshpur	2	2,312	361	16	7,205
	Shaikupa	1	399	116	29	2,475
Subtotal:		5	3,341	847	25	11,336
Meherpur	Gangni	2	1,985	1,199	60	19,910
	Meherpur Sadar	4	6,088	1,140	19	31,177
	Mujibnagar	1	1,272	240	19	10,857
Subtotal:		7	9,345	2,579	28	61,944
Mymensingh	Ishwarganj	2	795	533	67	6,371
	Mymensingh Sadar	3	1,017	833	82	8,960
	Phulbari	3	1,360	660	49	6,340
	Phulpur	1	215	106	49	3,819
Subtotal:		9	3,387	2,132	63	25,490
Sherpur	Nakla	2	1,449	1,126	78	13,168
	Nalitabari	3	1,440	945	66	14,131
	Sherpur Sadar	1	705	345	49	9,390
Subtotal:		6	3,594	2,416	67	36,689
Total:		51	79,764	21,848	27	497,224

Source: AAPI-Walmart Activity 213 Village Monitoring Survey, Winter 2013-14

B. Number of Women Farmers Using FDP by Upazila, Summer 2014

District	Upazila	Number of Clusters	Number of Female Farmers	Number of Female FDP Users	Percent of Female FDP Users	Total Gutti Urea Used (kg)
Bagerhat	Bagerhat Sadar	2	827	465	56	4,838
Subtotal:		2	827	465	56	4,838
Bhola	Bhola Sadar	2	11,708	916	8	10,620
	Burhanuddin	2	8,401	1,032	12	8,453
	Char Fasson	5	6,470	1,826	28	37,499
Subtotal:		9	26,579	3,774	14	56,572
Chuadanga	Alamdanga	2	6,203	436	7	10,457
	Chuadanga Sadar	2	4,248	918	22	34,929.14
	Damurhuda	3	4,975	384	8	10,651
	Jibannagar	1	1,171	190	16	6,315
Subtotal:		8	16,597	1,928	12	62,352
Jessore	Bagherpara	1	330	120	36	966
	Chaugachha	1	1,882	405	22	5,871
	Jessore Sadar	3	3,300	1,381	42	19,254
	Jhikargachha	2	3,624	448	12	5,907
Subtotal:		7	9,136	2,354	26	31,998
Jhenaidah	Kaliganj	1	1,185	255	22	6,011
	Kotchandpur	2	670	230	34	6,734
	Maheshpur	2	1,320	455	34	7,515
	Shailkupa	1	760	195	26	3,497
Subtotal:		6	3,935	1,135	29	23,757
Khulna	Dumuria	1	2,714	361	13	4,262
Subtotal:		1	2,714	361	13	4,262
Meherpur	Gangni	2	1,285	158	12	3,911
	Meherpur Sadar	4	5,598	513	9	15,447
	Mujibnagar	1	1,720	161	9	5,443
Subtotal:		7	8,603	832	10	24,801
Mymensingh	Ishwarganj	2	1,940	100	5	3,601
	Sadar	3	3,900	185	5	1,978
	Phulbari	3	3,090	359	12	5,432
	Phulpur	1	351	158	45	1,520
	Trishal	4	3,315	537	16	9,083
Subtotal:		13	12,596	1,339	11	21,614
Pirojpur	Nesarabad	2	7,661	1,024	13	23,040
Subtotal:		2	7,661	1,024	13	23,040
Rajbari	Baliakandi	2	1,777	328	18	6,041
	Rajbari Sadar	2	3,870	780	20	14,313
Subtotal:		4	5,647	1,108	20	20,354
Satkhira	Satkhira Sadar	1	1,150	263	23	4,753
Subtotal:		1	1,150	263	23	4,753
Sherpur	Jhenaigati	3	2,250	440	20	6,015
	Nakla	2	4,555	268	6	6,114
	Nalitabari	3	3,120	364	12	5,871
	Sherpur Sadar	1	2,260	184	8	3,469
Subtotal:		9	12,185	1,256	10	21,469
Total:		69	107,630	15,839	15	299,810

Source: AAPI-Walmart Activity 315 Village Monitoring Survey, Summer 2014

C. Cumulative Number of Women Farmers Using FDP by Upazila (Winter 2013-14 and Summer 2014)

District	Upazila	Number of Clusters	Number of Female Farmers	Number of Female FDP Users	Percent of Female FDP Users	Total Gutti Urea Used (kg)
Bagerhat	Bagerhat Sadar	2	827	465	56	4,838
Subtotal:		2	827	465	56	4,838
Bhola	Bhola Sadar	2	25,836	2,918	11	44,697
	Burhanuddin	2	16,847	2,983	18	60,373
	Char Fasson	5	14,966	4,902	33	107,307
Subtotal:		9	57,649	10,803	19	212,377
Chuadanga	Alamdanga	2	14,897	1,010	7	34,257
	Chuadanga Sadar	2	9,419	3,365	36	124,607
	Damurhuda	3	12,206	1,084	9	22,262
	Jibannagar	1	1,805	357	20	9,088
Subtotal:		8	38,327	5,816	15	190,214
Jessore	Bagherpara	1	770	215	28	2,225
	Chaugachha	1	2,190	619	28	8,667
	Jessore Sadar	3	6,325	3,137	50	77,090
	Jhikargachha	2	7,148	1,340	19	22,114
Subtotal:		7	16,433	5,311	32	110,096
Jhenaidah	Kaliganj	1	1,185	255	22	6,011
	Kotchandpur	2	1,300	600	46	8,390
	Maheshpur	2	3,632	816	22	14,720
	Shailkupa	1	1,159	311	27	5,972
Subtotal:		6	7,276	1,982	27	35,093
Khulna	Dumuria	1	2,714	361	13	4,262
Subtotal:		1	2,714	361	13	4,262
Meherpur	Gangni	2	3,270	1,357	41	23,821
	Meherpur Sadar	4	11,686	1,653	14	46,624
	Mujibnagar	1	2,992	401	13	16,300
Subtotal:		7	17,948	3,411	19	86,745
Mymensingh	Ishwarganj	2	2,735	633	23	9,972
	Sadar	3	4,917	1,018	21	10,938
	Phulbari	3	4,450	1,019	23	11,772
	Phulpur	1	566	264	47	5,339
	Trishal	4	3,315	537	16	9,083
Subtotal:		13	15,983	3,471	22	47,104
Pirojpur	Nesarabad	2	7,661	1,024	13	23,040
Subtotal:		2	7,661	1,024	13	23,040
Rajbari	Baliakandi	2	1,777	328	18	6,041
	Rajbari Sadar	2	3,870	780	20	14,313
Subtotal:		4	5,647	1,108	20	20,354
Satkhira	Satkhira Sadar	1	1,150	263	23	4,753
Subtotal:		1	1,150	263	23	4,753
Sherpur	Jhenaigati	3	2,250	440	20	6,015
	Nakla	2	6,004	1,394	23	19,282
	Nalitabari	3	4,560	1,309	29	20,002
	Sherpur Sadar	1	2,965	529	18	12,859
Subtotal:		9	15,779	3,672	23	58,158
Total:		69	187,394	37,687	20	797,034

Source: AAPI-Walmart Activity Village Monitoring Survey, Winter 2013-14 (213 Villages) and Summer 2014 (315 Villages)

Note: FDP area coverage by female farmers.

Appendix 5. Women Farmers Trained Through July 2014 by Upazila

Districts	Upazila	Women Farmers Trained Through July 2014			
		No. of Clusters	No. of Villages	No. of Batches	No. of Participants
Bhola	Bhola Sadar	2	16	12	480
	Burhanuddin	2	20	24	920
	Char Fasson	5	11	35	1,400
Bagerhat	Sadar	2	2	10	400
Pirojpur	Nesarabad	2	3	20	800
Subtotal		13	52	101	4,040
Chuadanga	Alamdanga	2	11	13	520
	Chuadanga Sadar	2	6	57	2,280
	Dhamurhuda	3	8	11	440
	Jibonnagar	1	6	9	360
Jessore	Bagerpara	1	2	2	80
	Chougacha	1	4	10	400
	Jessore Sadar	3	12	35	1,400
	Jhikorgacha	2	8	16	640
Jhenaidah	Kaligonj	1	1	6	240
	Kotchandpur	2	2	6	240
	Moheshpur	2	9	8	320
	Shoilokupa	1	2	4	160
Meherpur	Gangni	2	2	24	960
	Meherpur Sadar	4	10	24	960
	Mujibnagar	1	2	6	240
Rajbari	Sadar	2	8	11	440
	Baliakandi	2	3	8	320
Khulna	Dumuria	1	3	8	320
Satkhira	Sadar	1	1	6	240
Subtotal		34	100	264	10,560
Mymensingh	Ishwarganj	2	9	13	520
	Mymensingh Sadar	3	7	20	800
	Phulbaria	3	10	12	480
	Phulpur	1	2	4	160
	Trisal	4	6	13	520
Sherpur	Nakla	3	7	30	1,200
	Nalitabari	2	12	27	1,080
	Sherpur Sadar	3	6	10	400
	Jhinaigati	1	3	7	280
Subtotal		22	62	136	5,440
Grand Total		69	214	501	20,040

Appendix 6. Weighted Average Gross Margin by Crop (Tk/ha)

Item	UDP Plots by Crop					Broadcasted Urea Plots by Farm Category				
	Cabbage	Cauliflower	Eggplant	Tomato	Potato	Cabbage	Cauliflower	Eggplant	Tomato	Potato
Total Return	259,569	271,850	978,173	1,186,878	224,599	229,230	227,875	812,161	930,655	191,939
Total Cost	97,930	102,778	108,432	124,347	93,667	105,965	108,692	111,871	119,125	109,777
Gross Margin	161,639	169,072	869,741	1,062,531	130,932	123,265	119,183	700,290	811,530	82,162
Gross Margin in U.S. \$	2,099	2,196	11,295	13,799	1,700	1,601	1,548	9,095	10,539	1,067
Gross Margin (%)	165	165	802	854	140	116	110	626	681	75
Benefit Cost Ratio (BCR)	2.65	2.65	9.02	9.54	2.40	2.16	2.10	7.26	7.81	1.75

Appendix 7. UDP Demonstration Established for Vegetable Crops of 2013-14 by Upazila

District	Upazila	Cluster	Cauliflower	Tomato	Cabbage	Eggplant	Potato	Total	Teasel Gourd	Bitter Gourd	Eggplant	Cucumber	Taro	Total	Cumulative Through July 2014
			July-December 2013						January-July 2014						
Bhola	Bhola Sadar	2	1			1		2							2
	Charfasson	2	1			1		2				1		1	3
	Burhanuddin	2				1	1	3							3
Bagerhat	Sadar	1							1		1			2	2
Pirojpur	Nesarabad	1								1				1	1
Subtotal		8	2		2	2	1	7	1	1	1	1		4	11
Chuadanga	Alamdanga	2	1			1		2							2
	Sadar	1	4				1	5							5
	Damurhuda	1					1	1							1
Jessore	Sadar	3		1	3			4							4
	Chuagachha	1	1					1							1
	Jikorgachha	1				1		1							1
Jenaidah	Moheshpur	1					1	1							1
Meherpur	Gagni	1					1	1							1
	Sadar	3	1		1		1	3							1
	Mujibnagar	1	1					1							1
Rajbari	Baliakandi	1										1		1	1
	Sadar	1										1		1	1
Satkhira	Sadar	1								1				1	1
Khulna	Dumuria	1										1		1	1
Subtotal		15	8	1	4	2	5	20			1	3		4	24
Mymensingh	Ishwarganj	2				2		2							2
	Sadar	2				1	1	2							2
	Pulbaria	1	1												
	Trisal	2								1			1	2	2
Sherpur	Jhenaigati	1											1	1	1
	Nakla	2					3	3							3
	Nalitabari	3			2		1	3							3
	Sadar	1	1					1							1
Subtotal		11	2		2	3	5	12		1			2	3	15
Grand Total		34	12	1	8	7	11	39	1	2	2	4	2	11	50

Appendix 8. Motivational Field Visits Through July 2014

Districts	Upazila	Visited Place	No. of Trips	Participants		
				Men	Women	Total
Bhola	Burhanuddin	Char Fasson	1	10	48	58
Bhola	Burhanuddin	Char Fasson	1	9	46	55
Jessore	Jessore Sadar	Magura	1	8	46	54
Meherpur	Meherpur Sadar	Rajbari	1	11	46	57
Meherpur	Gagni	Magura	1	12	46	58
Chuadanga	Chuadanga Sadar	Jessore Sadar	2	16	88	104
Sherpur	Nakla	Muktagacha	1	13	47	60
Sherpur	Nakla	Mymensingh Sadar	1	11	47	58
Mymensingh	Fulbaria	Trishal	1	15	46	61
Total			10	105	460	565

Appendix 9. Motivational Meetings with Trained Farmers Through July 2014

District	Upazila	January-March 2014				April-July 2014				Cumulative through July 2014	
		No.	Men	Women	Total	No.	Men	Women	Total	No.	No. Total of Participants
Bhola	Bhola Sadar	1	1	42	43				0	1	43
	Burhanuddin				0	1	4	46	50	1	50
	Charfasson	1		45	45	1	3	47	50	2	95
Subtotal		2	1	87	88	2	7	93	100	4	188
Jessore	Sadar				0	2	24	96	120	2	120
Chuadanga	Alamdanga	1	6	44	50	1	6	54	60	2	110
	Sadar				0	1	5	55	60	1	60
Meherpur	Mujibnagar				0	1	10	50	60	1	60
	Damurhuda	1	7	43	50				0	1	50
	Gagni				0	1	5	55	60	1	60
Jhenaidah	Moheshpur				0	1	3	52	55	1	55
	Shailkupa				0	1	9	51	60	1	60
Subtotal		2	13	87	100	8	62	413	475	10	575
Mymensingh	Sadar	1	9	41	50				0	1	50
	Ishwargonj				0	1	10	41	51	1	51
Sherpur	Nakla	1	9	41	50				0	1	50
	Jhenaigati				0	1	18	42	60	1	60
	Nalitabari				0	1	9	41	50	1	50
	Sadar	1	3	47	50				0	1	50
Subtotal		3	21	129	150	3	37	124	161	6	311
Grand Total		7	35	303	338	13	106	630	736	20	1,074

Appendix 10. Field Days Organized Through July 2014

District	Upazila	July 2013- March 2014		April - July 2014		Cumulative Through July 2014	
		No.	No. of Participants	No.	No. of Participants	No.	No. of Participants
Bhola	Bhola Sadar	2	120			2	120
	Charfasson	3	180			3	180
	Burhanuddin	2	120			2	120
Bagerhat	Sadar			1	60	1	60
Subtotal		7	420	1	60	8	480
Chuadanga	Sadar			4	240	4	240
	Chuadanga Sadar	2	115			2	115
	Damurhuda	1	55			1	55
Jessore	Sadar	2	120			2	120
	Chuagachha	1	60	1	60	2	120
Jenaidah	Moheshpur	1	50			1	50
	Kotchadpur			2	120	2	120
Meherpur	Gangni			1	60	1	60
	Meherpur Sadar	3	180			3	180
	Mujibnagar	1	60			1	60
Rajbari	Baliakandi			2	120	2	120
Subtotal		11	640	10	600	21	1,240
Mymensingh	Ishwarganj			4	240	4	240
	Sadar	1	60	1	60	2	120
	Trisal			1	60	1	60
Sherpur	Nakla	3	160			3	160
	Nalitabari	1	60			1	60
	Sadar	1	60			1	60
Subtotal		6	340	6	360	12	700
Grand Total		24	1,400	17	1,020	41	2,420

Appendix 11. List of Briquette Machine Owners

District	Upazila	Union	Cluster No.	No. of Machines
Bhola	Char Fasson	Zinnagar	11	1
	Burhanuddin	Boro Marita	6	1
Pirojpur	Nesarabad	Madra		1
Chuadanga	Chuadanga Sadar	Padmavilla	14	1
	Dhamurhuda	Dhamurhuda	17	1
	Jibannagar	Abdolbaria	19	1
Jessore	Chougachha	Patibila	21	1
Khulna	Dumuria	Atlia	33	1
Rajbari	Baliakandi	Nababpur	44	1
	Rajbari Sadar	Shahid Wahabpur	46	1
Satkhira	Satkhira Sadar	Alipur	47	1
Mymensingh	Trishal	Boilor	57	1
	Phulbaria	Putijana	53	1
Sherpur	Nakla	Charastadhar	65	1
	Nalitabari	Poragaon	68	1
	Sherpur Sadar	Lasmonpur	69	1
Total= Jessore-8; Mymensingh-5; Barisal-3				16

Appendix 12. Technical Training of Briquette Shop Owners Through July 2014

Districts	Upazilas	April-July 2014				Total Project to Date			
		Batches	Participants			Batches	Participants		
			Male	Female	Total		Male	Female	Total
Jessore	Sadar	1	8	8	16	1	8	8	16
FTF Districts Total:		1	8	8	16	1	8	8	16
Mymensingh	Sadar	1	6	6	12	1	6	6	12
Mymensingh Zone Total		1	6	6	12	1	6	6	12
Grand Total:		2	14	14	28	2	14	14	28

Appendix 13. Business Management Training of Briquette Shop Owners Through July 2014

Districts	Upazilas	April-July 2014				Total Project to Date			
		Batches	Participants			Batches	Participants		
			Male	Female	Total		Male	Female	Total
Jessore	Sadar	1	8	8	16	1	8	8	16
FTF Districts Total:		1	8	8	16	1	8	8	16
Mymensingh	Sadar	1	6	6	12	1	6	6	12
Mymensingh Zone Total		1	6	6	12	1	6	6	12
Grand Total:		2	14	14	28	2	14	14	28

Appendix 14. Stakeholders Workshop Through July 2014

District	Upazila	January-March 2014				April-July 2014				Cumulative Through July 2014	
		No.	Men	Women	Total	No.	Men	Women	Total	No.	No. Total of Participants
Jessore	Bagherpara	1	56	24	80	1	38	23	61	1	80
	Chaugachha										
	Jessore Sadar										
	Jhikargachha										
Chuadanga	Sadar	1	53	33	86	1	53	33	86	1	86
	Jibonngar										
	Damurhuda										
	Alamdanga										
Rajbari	Rajbari Sadar	1	38	23	61	1	38	23	61	1	61
	Baliakandi										
Satkhira	Sadar	1	31	18	49	1	31	18	49	1	49
Khulna	Dumuria	1*								1	
Mymensingh	Ishwarganj	1	39	33	72	1	39	33	72	1	72
	Mymensingh Sadar										
	Phulbaria										
	Phulpur										
	Trisal										
Total=		1	56	24	80	5	91	56	147	6	227

*One stakeholder workshop held on July 24, 2014. Therefore, participants number will be added later.

**Appendix 15. Inventory of Promotional Material Produced, Distributed and Displayed
Through July 2014**

Items	July 2013 -March 2014		April -July 2014		Cumulative Through July 2014	
	Number Produced	Number Distributed	Number Produced	Number Distributed	Number Produced	Number Distributed
Signboard for Cluster 42"x36"	69	69			69	69
Signboard for Demo 2.5'x2'	41	41			41	41
Sign for Gura Urea (7"x11")	41	41			41	41
Sign for <i>Guti</i> Urea (7"x11")	41	41			41	41
Signboard for Briquette shop (3'x6')			12	12	12	12
Indicator Board For Briquette Shop			12	12	12	12
Sticker			100	11	100	11
Project Profile: Bangla			4,000	120	4,000	120
Project Profile: English			1,000	17	1,000	17
Training Bag:	200	163	465	179	665	342
Booklet (Different Crops)	2,700	2,063		107	2,700	2,170
Writing Pads	2,000	387		216	2,000	603
Flyer	20,000	19,650		87	20,000	19,737

Appendix 16. Media Coverage of AAPI Walmart Activity Through July 2014

Event	Media	Name of Media	Date and Time
Field days in Jessore	Television	Channel I	December 27, 2013 5.15 pm Agriculture News
Field days in Chuadanga	Local newspaper	Dainik Matha Vangga	December 28, 2013
	National newspaper	The Daily Ittefaq	December 27, 2013
	National newspaper	The Daily Janakantha	December 28, 2013
	Online	www.Banglapost.com	December 25, 2013
	Online	www.shamolbangla.com	December 25, 2013
	Television	Mohona TV	December 27, 2013 5 pm Local News
	Television	My TV	December 27, 2013 5 pm News
	Television	Channel I	December 27, 2013 5.15 pm Agriculture News
	Print media	The Daily Ittefaq, Amader Somoy, Barisal Barta	January 21, 2014 January 26, 2014
	Online	www.crimereportnewsbd.com	January 26, 2014
	Print media	Ajker Barisal	February 3, 2014
		Ajker Poriborton, The Daily Ittefaq	February 6, 2014
		Ajker Poriborton, The Daily Ittefaq	February 19, 2014
		Ajker Barta, The Daily Jugantor	March 5, 2014
Field days in Jessore region	Television	Channel i	February 17, 2014 5.15 pm Agriculture News
	Print media	Dainik Matha Vangga	March 21, 2014 March 25, 2014
		Shomokal	March 21, 2014
		Desh Thatho	March 25, 2014
Stakeholder workshop in Jessore	Television	Desh TV and Banglavisioin	March 18, 2014 March 18, 2014
	Television	Channel i	March 20, 2014
	Print media	Financial Express	March 19, 2014
Stakeholder workshop in Chuadanga	Print media	Dainik Mathavanga	April 03, 2014
Stakeholder workshop in Rajbari	Print media	Dainik Matrikonto	April 18,2014
		Jai Jai Din	April 18, 2014
		Daily Nagorik Batra	April 20, 2014
		On line	www.abnews24.com
Field Days in Mymensingh	Print media	The Daily Azker Bangladesh	May 15,2014
		The Daily Azker Bangladesh	May 16,2014
		Daily Shodesh Sagbad	May 16,2014
Motivational Field Visit in Mymensingh	Print Media	The Daily Azker Mymensingh	June 12,2014
		The Weekly Trisal Batra	June 15-21,2014
		The Daily Diganta Bangla	June 15,2014
Field Days in Mymensingh	Print Media	Dainik Azker Khobor	June 16,2014
		Dainik Sabuz	June 26,2014
		The Daily Azker Mymensingh	June 26,2014
		Dainik Kaler Alo	June 26,2014
		Dainik Diganta Bangla	June 26,2014