

**Development of Value chains in High Value Crops**  
National Agricultural Technology Program – Phase II Project  
(NATP - 2)

**Annual Progress Report**  
**2018 - 2019**



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**IFAD**  
INTERNATIONAL  
FUND FOR  
AGRICULTURAL  
DEVELOPMENT



**Hortex Foundation**

As Strategic Partner of the

**Department of Agricultural Extension (DAE)**

Sech Bhaban (3<sup>rd</sup> Floor), 22 Manik Mia Avenue, Dhaka 1207

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Published by:

**Hortex Foundation**

Sech Bhaban (3<sup>rd</sup> Floor – west wing)  
22 Manik Mia Avenue  
Sher-e-Bangla Nagar  
Dhaka 1207

**June 2020**

Assisted by

National Agricultural Technology Program – Phase II Project (NATP-2)

Text and Composition by:

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*Cover Photo*

*Training of CIG farmers on improved PHM practices has been a hallmark activity during 2018-19*

200 copies

Printed by

**Prince Sign**

20-21, Garden Road (3<sup>rd</sup> Floor), Kawran Bazar, Dhaka-1215



## Executive Summary

Hortex Foundation is working as a 'Strategic Partner' of the DAE for the NATP-2 project, providing technical services in value chain development for selected high value crops (HVCs) under a strategic partnership agreement, putting emphasis on improved post harvest management practices and a better marketing system. NATP-2 project activities at Hortex started quite late from January 2018. This annual report covers activities for 2018 – 19 and also refers to data, in relevant cases, from the project inception.

During the reporting period, the remaining 21 CCMCs were established on rent, bringing all 30 CCMCs to function. The capacities of the CCMCs were greatly enhanced as each was supplied with 10 sorting mats, one grading table, one weighing machine, 100-150 plastic crates, two to four electric fans, one or two rickshaw vans, one display board, 10 plastic chairs in addition to usual office furniture. Up to June 2019, a total of 6137.11 tons of vegetables were marketed through the CCMCs. Also, a total of 770 tons of vegetables were exported through the CCMCs at Shibpur, Belabo, Madhupur and Mithapukur to Saudi Arabia, Malaysia, Dubai and Kuwait.

Like previous year, training events dominated the project activities. A total of 9052 participants covering DAE officers for ToT, LBFs, CIG farmers, PO members and traders were trained through 322 events during 2018–19. Among them 1909 were women and a total of 9224 client-days of training were completed. The common topics in the training courses included proper PHM practices, food safety, marketing and linkages through CCMCs for better marketing. Hands-on PHM practices were the hallmark of CIG farmers' training. It is to be noted that the training manuals for the courses were prepared and were made available.

A big thrust during 2018-19 was for making the PO-MMCs to be better organized and for taking lead in the functions of the CCMCs. Methods and procedures for their functions, such as monthly meeting, were given priority in their training events. CIG farmers at clusters were coming to CCMC in increased numbers to take advantage of PHM practices and better marketing. Other significant activities included linkage meetings with traders and for such facilitations officials at various tiers of DAE were helpful.

A national workshop entitled "**Postharvest Management of Fruits & Vegetables for Food Safety & Quality Assurance**" was held on 6th February 2019 at Hortex Foundation. A keynote paper on the title was presented by the PHM expert, which was thoroughly discussed at the technical session. The paper detailed the prevailing traditional postharvest situation, and elaborated on the requirements for food safety and quality.

Publication and printing of documents included a PHM Manual, a poster on depicting traditional versus improved PHM practices in banana and video clips to discourage traditional PHM.

The challenges were faced in establishing CCMCs due to scattered CIG clusters in the upazilas as well as due to small sized structures in the rural markets being inadequate for a proper space requirement. In spite of that all CCMCs were established. The good learning is that CCMCs are proving beneficial to farmers as a better alternative to the middlemen. The potentials to realize the project targets and objectives are appearing to be positive and achievable.

Improvements were suggested, such as, for more ToTs for DAE officers who were newly posted in these pilot upazilas. Further additional input of the Training Expert was emphasized, while over 40% of the training was yet to complete as the events continue to 3<sup>rd</sup> and 4<sup>th</sup> project years as per the DPP. Tablet computers for LBFs were sought for more efficient data & info transfer. Salaries of LBFs were sought for enhancement as current pay remained too little for their services. VAT for consultants, support for MMC meetings, quarterly conference-cum-training for LBFs were some of the important remedies proposed.



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## Abbreviations

AAO	Additional Agriculture Officer
AAEO	Assistant Agriculture Extension Officer
AEO	Agriculture Extension Officer
AIF	Agricultural Innovation Fund
BARI	Bangladesh Agricultural Research Institute
BLS	Baseline Survey
CCMC	Commodity Collection & Marketing Centres
CIG	Common Interest Groups
CP	Collection point
DAE	Department of Agricultural Extension
DLS	Department of Livestock Services
DOF	Department of Fisheries
DPP	Development Project Proposal (formulated by the Govt of Bangladesh)
Hortex	Hortex Foundation
HVC	high value crop
IFAD	International Fund for Agricultural Development
LBF	Local Business Facilitator
M&E	Monitoring and Evaluation
M&IE	Monitoring and Impact Evaluation
MMC	Market Management Committee
MoU	Memorandum of Understanding
NATP-2	National Agricultural Technology Program- Phase II Project
PAD	Project Appraisal Document (of the World Bank)
PHM	post harvest management
PIMS	project information management system
PMU	Project Management Unit, NATP-2
PO	Producer Organization
PSO	Principal Scientific Officer
RFM	Results Framework and Monitoring
SAAO	Sub-Assistant Agriculture Officer
ToR	Terms of Reference
ToT	Training of Trainers
UAO	Upazila Agriculture Officer
USAID	United States Agency for International Development

## 1.0 Introduction

Hortex Foundation is working as a 'Strategic Partner' of the DAE for the NATP-2 project, providing technical services in value chain development for selected high value crops (HVCs) with emphasis on improved post harvest management (PHM) practices and a better marketing system. NATP-2 project activities at Hortex could only be started from January 2018 whence all staff could be mobilized. This Annual Progress Report covers activities for the year 2018 - 19 and includes data from 2016-17 up to June 2019.

The activities are piloted in 30 upazilas of 22 districts for vertical expansion of six selected HVCs, namely, brinjal, bitter gourd, sweet gourd, tomato, banana and aromatic rice (Table 1.1). Figure 1 shows the 30 upazila locations on the map of Bangladesh. Also there are other identified vegetables and fruits for horizontal expansion of the practices.

### 1.1 Objective

The **objective** of this strategic partnership is to provide technical support to DAE in value chain development in the selected upazilas having small farmers organized in production clusters as common interest groups (CIGs) and producer organizations (POs) through improved PHM practices and better market linkages involving the selected HVCs.

**Table 1.1: Selected HVCs for vertical expansion shown against Value Chain Cluster upazilas in NATP-2**

Brinjal-6 clusters	Bitter Gourd - 5 clusters	Tomato-6 clusters		Sweet Gourd-5 clusters	Banana - 5 clusters	Aromatic Rice-3 clusters
		Winter	Summer			
1.Raipura, Narshingdi	1.Kaliganj, Jhenaidah	1.Chandina, Comilla	5.Bagharpara, Jessore	1.Sadar, Bogra	1.Shibganj, Bogra	1.Birganj, Dinajpur
2.Shibpur, Narshingdi	2.Madhupur, Tangail	2.Dakkhin Surma, Sylhet	6.Jhikorgachha, Jessore	2.Baraigram, Natore	2.Polashbari, Gaibandha	2.Chirirbandar, Dinajpur
3.Sadar, Jessore	3.Belabo, Narshingdi	3.Mirersorai, Chittagong		3.Delduar, Tangail	3.Kapasia, Gazipur	3.Nakla, Sherpur
4. Islampur, Jamalpur	4.Sadar, Naogaon	4.Godagari, Rajshahi		4.Sadar, Kishoreganj	4.Sadar, Khagrachhari	
5.Sreemangal, Moulvibazar	5.Mithapukur, Rangpur			5.Savar, Dhaka	5. Muktagachha, Mymensingh	
6.Parbatipur, Dinajpur						



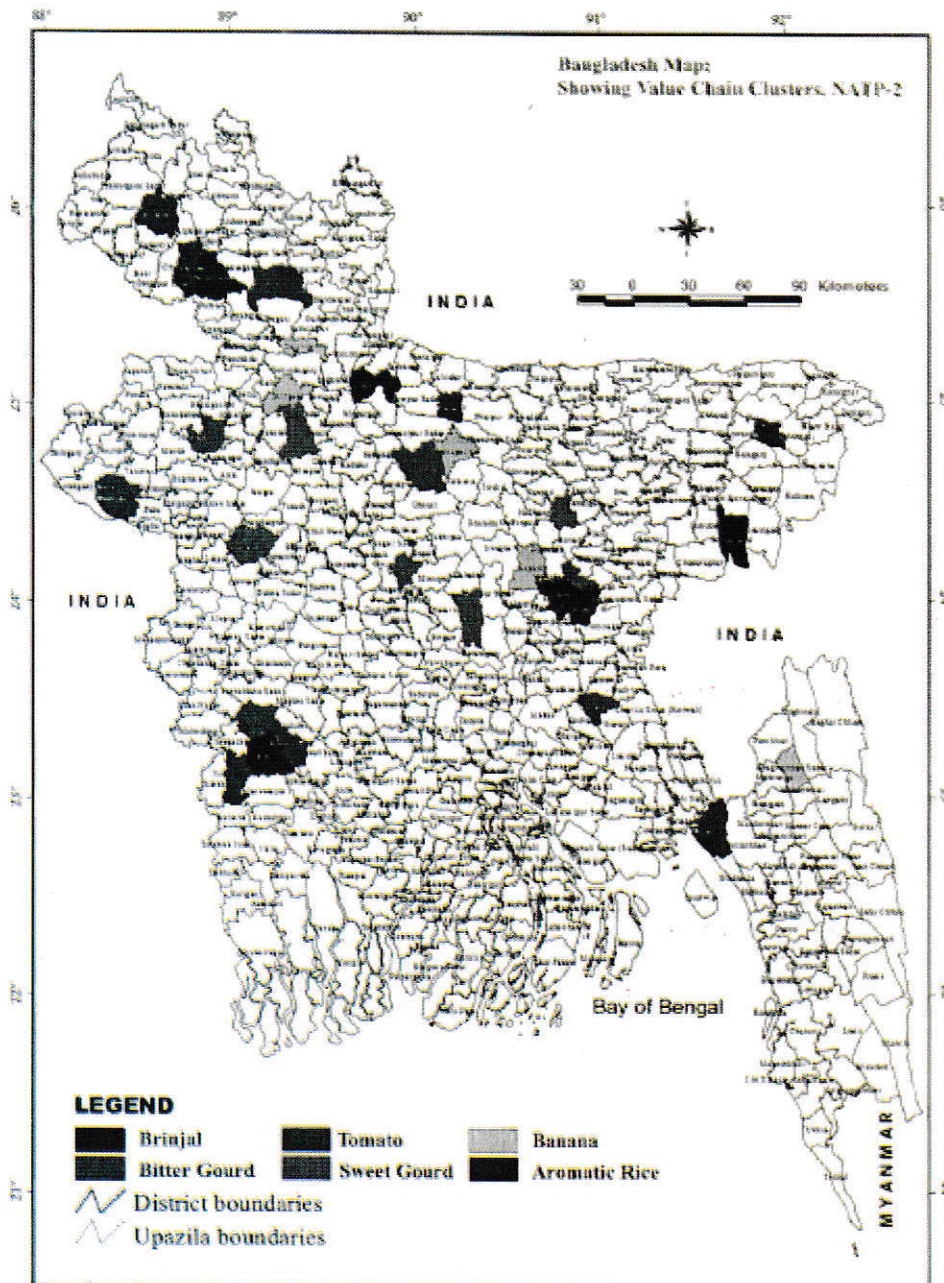


Fig 1: Locations of the 30 pilot upazilas showing the value chain clusters.

## 1.2 Implementation Strategy, activities and work modalities

Hortex Foundation is providing “technical services on value chain development” by carrying out various capacity building and market linkage activities. These activities are highlighted below.

- (a) customized training courses for DAE officials, target farmers in the CIGs, POs, the identified traders and related professionals in the value chains;
- (b) organizing the CIGs and POs and acquainting them with better governance mechanisms including financial management;



(c) establishing Commodity Collection & Marketing Centres (CCMCs) and Collection Points (CPs) through minor repairs or lease, refurbishing with basic furnitures and operationalizing with support of simple items like sorting mats, grading table, plastic crates, rickshaw-vans, washing bay, etc.;

(d) providing hands-on training to the CIG/PO farmers and other value-chain actors on post harvest practices of their produces in handling, sorting, grading, washing, packaging, carrying, etc. for value addition;

(e) linking the CIGs /POs with markets and traders in order to gain better prices; and

(f) mentoring the CIGs/ POs to apply for the Agricultural Innovation Fund (AIF) support in improving their investment ability and sustainability.

These activities are further strengthened by

(g) undertaking surveys and studies to characterize value chain performances for feedback and validation of the project activities;

(h) organizing communication campaigns, and popularising appropriate post harvest management (PHM) practices through demonstrations, posters, leaflets, fairs, etc.;

(i) carrying out public relations through workshops and seminars on contemporary issues for food safety, sensitizing the facts about the huge post-harvest losses to emphasize the need for proper PHM.

In order to share experiences from similar efforts in other countries, related project persons will join such international seminars or workshops to share and exchange results &/or ideas.

The execution of the project activities in value chain development at the upazila and block levels is MOSTLY contingent upon implementation by the DAE personnel. They are: Upazila Agriculture Officer (UAO), Additional Agriculture Officer (AAO), Agriculture Extension Officer (AEO), Assistant Agriculture Extension Officer (AAEO), from the office of the UAO, and the Sub-Assistant Agriculture Officers (SAAOs) at block level.

Technical support from Hortex for imparting relevant knowledge, skills, roles and activities in value chain development was provided last year through six 'Training of Trainers' (ToT) courses for the upazila level and selected district level officers of DAE. They in turn have been training the CIG farmers, traders and others in addition to training the AAEO/SAAOs. Hortex is arranging the whole work through expertise support in (i) Post Harvest Management, (ii) Supply Chain Integration and Marketing Development, (iii) Training Management, and (iv) Monitoring and Evaluation, including backstopping from time to time to the DAE personnel in the field. At the upazila, Hortex has deployed LBFs (Local Business Facilitators), mainly to help operationalize the CCMCs, assist Market Management Committee (MMC) to gradually take command of the CCMC functions, monitor the local markets for HVC landing and export, keep contacts with CIGs, organize CPs, maintain linkages with traders and other market actors while remaining in constant contact with the SAAOs and UAO.



Hortex is keeping regular liaison with other project counterparts and participants, carrying out concurrent monitoring for activities and outputs, and reviewing progress of the Project periodically using appropriate tools and data gathering system, in order to maintain project activities on course to ensure that the designed outcomes are achieved.

## 2.0 Supply Chain Development and Market Linkage Activities through the CCMCs

The value chain development work essentially involved establishing and opening up of CCMCs gradually in the pilot upazilas to facilitate the marketing capacity of the farmers, and equipping those with necessary tools and material. In doing so, related activities also ensued, which were: facilitation of linkage meetings with organized groups of farmers (in CIG and POs) and the related market actors; continuation of training programmes for capacity building of CIG farmers, POs and traders; market survey and selected value chain study; participation in fairs; campaign on PHM and food safety; and furnishing publications.

### 2.1 Establishing and initiating the CCMCs

During the previous year (2017-18), Hortex Foundation could mobilize full-scale project activities during the last six months only as necessary recruitments took six full months to complete. So only nine (09) CCMCs could be initiated, and by end of the FY 2017-18, vegetables were being marketed through six of these CCMCs. During the financial year under report (2018-19) rest of the CCMCs were established and all 30 were brought into function. Table 2.1 below shows the year-wise completion of CCMC establishment.

**Table 2.1: Year-wise establishment of CCMCs in the pilot Upazilas**

2017-18		2018-19	
Parbatipur, Dinajpur;	Madhupur, Tangail	Birganj, and Chirirbandar in Dinajpur	
Belabo, Narshingdi;	Savar, Dhaka	Mithapukur, Rangpur;	Bogra Sadar
Shibpur, Narshingdi;	Nakla, Sherpur	Shibganj, Bogra;	Naogaon Sadar
Rajpura, Narshingdi;	Palashbari, Gaibandha	Baraigram, Natore;	Godagari, Rajshahi
Delduar, Tangail		Kaliganj, Jhinaidah;	Sadar-Bagharpara &
		Jhikorgarcha in Jashore;	Islampur, Jamalpur
		Muktagachha, Mymensingh;	Kapasia, Gazipur
		Sadar, Kishoreganj;	Dakkhin Surma, Sylhet
		Srimangal, Moulvibazar;	Chandina, Cumilla
		Mirsarai, Chittagong,	Sadar, Khagrachhari
Total 09 CCMCs established		Total 21 CCMCs established	
<b>Total CCMC tally:</b>		<b>All 30 CCMCs established and made functional</b>	



The details of the CCMCs on their location, renting date, condition with status of PO-MMC are provided in Annex Table 1.

It is important to note that there were consequences of a delayed project mobilization as recruitments of necessary consultants and staff could only be completed in January 2018. Thereafter the value chain development implementation work could start in full swing to carry out the project mandate. The day after their joining, the LBFs were provided necessary training. To ensure quick and full-scale implementation of their activities in the upazilas, the training manual was also provided to the LBFs. The first training events (ToTs) for the DAE officers were held by late January 2018 complete with a training manual. At the same time the LBFs were getting in touch with the CIGs and started forming the POs. The first few CCMCs could be established on hire by May 2018. Gradually, the other CCMCs were rented. However, necessary process for procurements to equip the CCMCs had to follow the finalization of the CCMC structures as procurement packages could not be administered for few or single CCMC. Finalization of CCMCs could not wait for the organization of POs, and in many cases POs were formed after finalization of a CCMC. But ideally the opposite process is normally warranted.

### 2.1.1 Capacity building of the CCMCs: Logistics and support provided

Annex Table 2 provides the status of the CCMCs indicating its location in the upazila, date of establishment, current functional status and the formation of the POs and MMCs. This depicts a full functionality for all the 30 CCMCs along with full functionality of the PO and the MMCs. Accordingly, the logistics and supports provided are detailed in Annex Table 3 and lists all the support equipment and items. Basic furniture like office table and chairs are supplied. The operational items for PHM activities, such as, weighing machine, sorting mat, grading table, washing facility, ceiling fans for drying are provided and are being used (Photo 1 & 2). Running water for washing had been an issue, and to start with, plastic buckets were provided. So far 23 CCMCs are fitted with a full washing facility complete with source tubewell, pipes, pump machine, overhead tank and a wash-bay (house). The rest will be completed by August/September, as procurement procedures are methodically followed.



Photo 1: Washing brinjal in Shibpur CCMC.



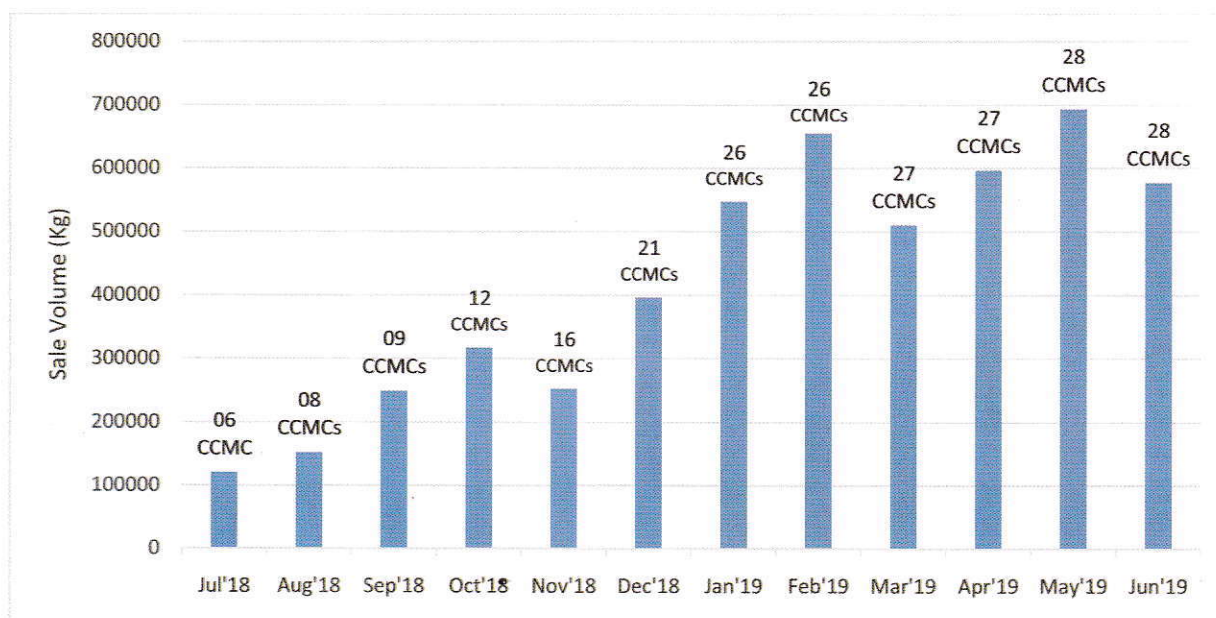
Photo 2: Packaging cucumber & country bean in Shibpur CCMC.



## 2.2 Agri-commodity marketing

More than 6137 metric tons of agricultural commodities were sold through the CCMCs up to June 2019. It includes the amount of 1065.31 tons marketed from 2016 to 18. During the year 2018-19, a total of 5071.807 tons were marketed through the CCMCs. Figure 2 below shows a month-wise total marketing of HVCs through the CCMCs for the reporting year. In terms of months, the last few months showed a robust sale of vegetables between 577 to 693 tons from all the CCMCs combined (Annex Table 3.1).

**Fig 2: Volumes of agricultural commodities marketed through CCMCs during Jul 2018 – Jun 2019**



Note: Number of CCMCs at bar tops indicates the number of those reporting (also indicating the number of CCMCs gradually coming to operation, while 04 of these during the last six months relocated to other facility.)

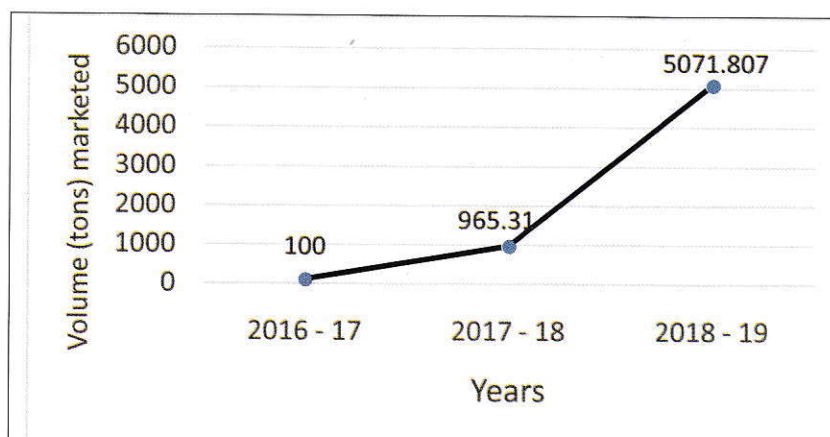
By vegetables, the most traded item was brinjal at about 782 tons, followed by lemons at 610 tons and country bean at 472 tons (Annex Table 3.2). These figures are for the period between July 2018 and June 2019.

The gradual increase in agri-commodity marketing between the years is depicted below in Table 2.2. This is followed by the graph in Figure 3 to visually demonstrate the rise in marketing volumes.

**Table 2.2 : Progress in agri-commodity marketing thru CCMCs during the years 2016-17 to 2018-19.**

Years	2016 - 17	2017 - 18	2018 - 19	Total (tons)
Volume (tons) marketed	100.00	965.31	5071.807	6137.11

**Figure 3: Graph showing progress in agri-commodity marketing thru CCMCs during the years 2016-17 to 2018-19.**



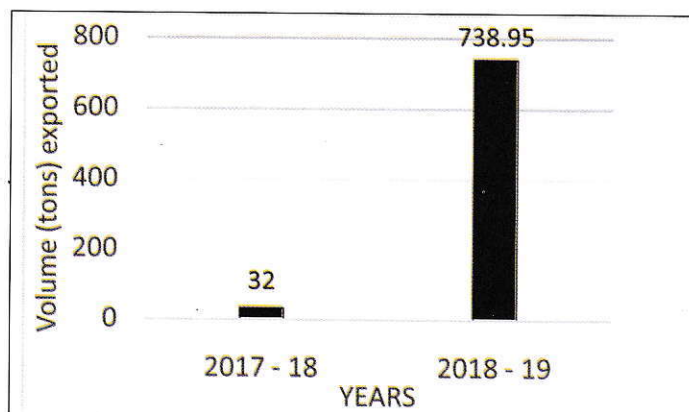
### 2.2.1 Export of vegetables through CCMCs

A significant achievement during this period had been export of vegetables to countries like, Malaysia, Dubai, Qatar and Saudi Arabia using the facilities of some of the CCMCs. Over 770 metric tons of vegetables have been exported so far (Table 2.3). Mostly brinjal, teasel gourd, bottle gourd, bitter gourd, lemon and potato have been exported to these countries. Over 700 tons have been exported using the CCMCs at Shibpur & Belabo of Narshingdi, Mithapukur of Rangpur, Madhupur of Tangail, and Chandina of Cumilla districts during July 2018 to June 2019 (Figure 4). A total of 14 companies were involved in these vegetable exports, who are named in Annex Table 4.

**Table 2.3: Volumes of agri-commodities (HVCs) exported through the CCMCs during the years 2017-18 to 2018-19.**

Years	2017 - 18	2018 - 19	Total (tons)
Volume (tons) exported	32	738.95	770.95

**Figure 4: Graph showing progress in agri-commodity export thru the CCMCs during the years 2017-18 to 2018-19.**





## 2.3 Training programme implementation

During the reporting year 2018-19, training programmes were implemented for DAE officers, LBFs, CIG farmers, POs, and Traders. Table 2.4 below shows all the training activities carried out during 2017-18 and 2018-19.

Two ToT courses were attended by a total of 53 DAE officers during the year, and their topics included production planning, marketing and CCMC functionalities, improved PHM technologies and practices, food safety and quality assurance, and related all relevant issues to address the training needs of CIG, PO and market actors that they need to train for value chain development.

**Table 2.4: Training programmes carried out during 2017-18 and 2018-19, NATP-2, Hortex Foundation.**

Training by Client group	Year						Total no. of client days	
	2017 - 18			2018 - 19			Target	Achieved
	Batches	No. of participants	No. of client days	Batches	No. of participants	No. of client days		
ToT for DAE Officers	4	93 (12)	186	2	54 (17)	108	300	294 (97%)
SAAOs	10	300 (32)	600	--	--	--	600	600 (100%)
LBFs	2	30	120	2	30	120	240	240 (100%)
CIG Farmers	64	1913 (300)	1913	220	6600 (1583)	6600	15000	8513 (57%)
POs	--	--	--	65	1948 (339)	1918	3900	1948 (50%)
Traders	--	--	--	15	450	450	900	450 (50%)
<b>Total</b>	80	2336 (344)	2819	322	9081 (1939)	9226	20460	12045 (59%)

*Figures in the parentheses indicate number of women participants, except for the last column.*

A total of 6600 CIG farmers have received training during this year, which were on maturity and harvest indices, contract farming, PHM practices, marketing, CCMC functionalities, food safety and quality, and especially, hands-on training on sorting, grading, washing (+drying) and packaging. Since previous year, a total of 8513 CIG farmers have so far received the PHM-related training. Training of CIG farmers was given special emphasis and so during the period between ISM 2 and the Mid-term Review mission a higher number of CIG farmers (6099) were trained.

The PO members numbering 1918 have received also similar training, but with more emphasis on market management, especially of running the CCMCs (Photo 3).

The LBFs received two refreshers training this year, also with some additional topics. They got one foundation and one refreshers training last year.





Photo 3 : Training of the PO in Madhupur, Tangail; 14 January 2019.

#### **2.4 CIG farmers from production clusters to the CCMCs**

The farmers in the production clusters are originally organized by the SAAOs from the DAE. They receive production technology training from DAE with orientation on GAP and related extension support. As already mentioned above, Hortex has provided the CIG farmers training on PHM (Photo 4) and relevant maturity & harvest index. Through a series of meetings and with the help of the training courses the operations in the CCMCs were initiated.



Photo 4: Training on proper harvesting index of tomatoes



The producer farmers, both CIG and non-CIG, have access to the CCMC and can use the sorting, grading, washing and packaging facilities there. Local traders are engaged and are procuring from the assembled commodities in the CCMCs. Opening of the CCMCs has helped mobilize the CIG farmers and it has become easier for them to come to the CCMCs and sell their produces. The practice of selling from farm-gate to the *farias* (collectors) by the CIG farmers is thus decreasing. Neighbouring non-CIG farmers also have access, which has a positive impact in society, reflecting the way CCMCs are viewed.

The LBF along with the PO members and especially its executive body - the MMC, organize and manage the activities in the CCMC. The MMC is meeting regularly each month. Gradually these meetings are also being participated by local traders, who are buying from the CCMCs.

## 2.5 Market linkage activities

Improving market linkage for the farmers is one of the most important activities to develop value chains of high HVCs in NATP-2. Hortex Foundation has adopted an **approach** which is detailed below.

The CCMC exists at the heart of this market linkage approach, around which 20 CIGs comprising HVC farmers are organized in clusters in an upazila. A CCMC, in other words a packhouse, is established in each of the 30 pilot upazilas with the objectives of improving produce quality, enhancing food safety, reducing postharvest loss, and improving market linkage for the farmers. Here the farmers can adopt improved PHM practices for their products to add value and earn a better price. The CCMCs are equipped with sorting mat, grading table, weighing scale, plastic crates, etc. to facilitate the vegetable/fruit farmers with the said PHM practices (sorting, grading, washing and packing). These facilities are available to non-CIG farmers also who grow and bring vegetables/fruits to the CCMC.

The responsibility for managing the affairs of the CCMC lies with the Market Management Committee (MMC), which is the 29-member executive body of the PO. A PO is formed with three representatives (the President, Secretary and Treasurer) from each of the 20 CIGs, to form a 60-member general body. The MMC has to organize and oversee the overall marketing of the agri-commodities brought by their fellow CIG farmers. As a start, the LBF appointed by the Project is assisting the MMC/PO to manage operations of the CCMC, while they are gradually being trained to deal with all aspects of the CCMC functions.

In order for the MMC/PO to be able to carry out their responsibilities, Hortex Foundation is going to train them up for certain skills to build their needed capacities through a series of training courses. These include: Production Planning, Marketing, Good Governance, Market Management, Business Management, Financial Management, Contract Farming, PHM & Food Safety, Quality Assurance, etc. The MMC/PO is thus expected to be able to plan their operations, keep records of transactions, build relations with reputable traders and attempt to strengthen the business linkages through contractual agreements, keep track of product prices and demand, etc. in order for better marketing of their products. The MMC/PO meets regularly (Photo 5) to take collective decisions in organizing all their functions.





Photo 5: Market Management Committee (MMC) meeting at Islampur CCMC.

The quality features upon which the MMC/PO are driving their market linkage approach are: (i) safety and quality assurance of the product ensured through sorting, grading, washing and proper packing (ii) larger amounts assembled by CIGs at the CCMC to attract bulk buyers, (iii) shelf life increased as diseased or rotten pieces sorted out and because these are washed and disinfected. The MMC/PO are able to highlight the advantages to the traders/buyers by emphasising that (i) they can save the costs of appointing a number of *farias* (collectors) to collect produce at farmers homes/fields scattered across the areas, (ii) get better product quality and (iii) their possible loss during transport and storage is minimized due to sorting out unhealthy pieces and better packaging.

The MMC/PO therefore engages also in encouraging their fellow CIG farmers to assemble products of better quality, adopt the proper PHM practices to attract big buyers for better margin. In this regard the MMC/PO are also planning for contract farming as the CIG farmers are trained to grow and supply quality products. DAE trains them in quality production, while Hortex trains the CIG farmers in the areas of improved PHM practices using hands-on training methods.

Whilst the MMC/PO establishes links with reputable traders-buyers-processors-exporters, Hortex Foundation is going to orient and train these market actors so that food safety and quality are assured for the products during transport, storage and handling in the value chain. Hortex Foundation is providing plastic crates for vegetable/fruit shipping at the disposal of the MMC/PO at the CCMC, so that the farmers and traders can use them. Support with rickshaw-vans to transport farmers' products from their farms using plastic crates to the CCMC will also be provided by the project. It is important to note here that use of plastic crates in vegetable shipping **reduces transport losses** by more than 90% compared to traditional big packaging with gunnies/sacks and bamboo-baskets.

### 2.5.1 Trader-farmer-extension worker linkage

Hortex Foundation has taken initiative to organize a platform where some leading and reputable local traders/buyers join with representatives of the MMC/PO, and



selected Sub-Assistant Agriculture Officers (SAOs) in a market-linkage committee under the chairmanship of the Upazila Agriculture Officer (UAO) for market-linkage development in each pilot upazila. Hortex Foundation is facilitating the market linkage process also by identifying prospective buyers/processors at regional or national level so that the scope for product marketing of the CCMCs can be widened and the MMCs/POs can appreciate required demands of quality and quantity in the wider sphere.

The market linkage approach is thus anchored around the CCMC, where an institution-building approach brings together farmers through the CIGs and MMC/PO to link up with the traders/buyers/other market actors, who strive together to ensure food safety and quality for a win-win situation in the value chain.

## 2.6 Participation in Fairs

Hortex participated in three fairs during the period under report. The first one was at the 4<sup>th</sup> National Development Fair held during 4 to 6 October 2018; followed immediately for the World Food Day during 16 to 18 October 2018 (Photos 6 & 7).



Photo 6: Hortex introduced its activities at the 4<sup>th</sup> National Development Fair held during 4 to 6 October 2018 at Sher-e-Bangla Nagar Fair ground.

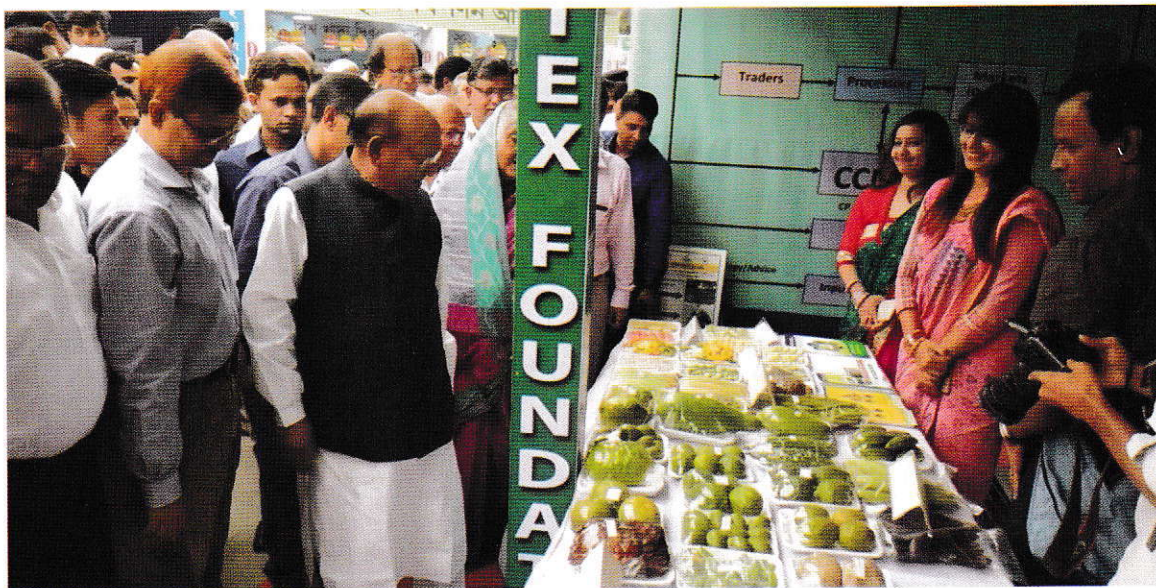


Photo 7: Hortex exhibition at World Food Day 2018 was visited by the Commerce Minister Mr Tofael Ahmed, 16 Oct 2018.



The third fair in which Hortex participated was the National Vegetables Fair held during 17 to 19 January, 2019. In all these fairs Hortex attracted a lot of visitors who inquired about its functions and wondered at the display (Photo 8).



Photo 8: Hortex exhibited its work at the National Vegetables Fair during 17 to 19 January, 2019. The Agriculture Minister Dr M A Razzaque along with Commerce Minister Mr Tipu Munshi visited the stall as the MD, Hortex Mr Manzurul Hannan welcomed the dignitaries.

## 2.7 Postharvest loss and price gap minimisation

It is already an established fact that postharvest loss occurs mostly during transportation due to improper packaging, rough handling during loading/unloading as well as crude way of piling or bundling on vehicles. Introduction of plastic crates for packaging is slowly but significantly preventing the slide. The figures for the losses are being collected, but only partially, as data collection up to retailer level is beyond the present capacity of the project. Reliability of the collected data has not been established yet due to limitations to apply a sound verification system. Currently the traders inform the LBF back at the CCMC about the final figure of sale volume of the trader at the point of his delivery, which has not been so far possible to verify. So the data at this stage are provisional. A preliminary rough estimate suggests that the loss reduction during transport from CCMCs to the next point of delivery ranges around 10-12%. Research figures indicate that changing from sacks to crates reduces postharvest loss by almost 90%. The price incentive due to sorting, grading is also still to materialise, but marginal gains are so far noticed in few CCMCs. In one or two instances around 10% higher price is recorded for sorted and graded produces from the CCMCs. In a number of cases, the farmers can save transport costs for their produces coming to the CCMC instead of going to the distant market.

## 2.8 Market Study and Value Chain Analysis

Value chain analysis was organized through hiring a third party consulting firm during the period of 27 February 2019 to 27 June, 2019 to identify major constraints and solutions of selected high value vegetables, banana, and aromatic rice. The identified problems include absence of commercial production planning, poor infrastructure at the farmer's markets, inappropriate packaging materials, high



transportation cost, inadequate post-harvest infrastructure facilities, un-trusted relationship among the farmers, traders and consumers, lack of market linkages and market relevant information. The solution focuses on capacity building of value chain actors on modern farming practices (of GAP) and post-harvest handlings and packaging, market infrastructures development, and market information with ICT.

Market studies and surveys were organized into two phases of which 1st phase for 12 upazilas and the 2<sup>nd</sup> phase for the rest 18 upazilas through hiring consulting firms. The findings of the market studies and surveys focused on development of niche markets and collection points in the existing target markets of the CIG farmers. In addition, the report included information on existing infrastructures of target markets, trade flows of agro-commodities, procedures of sales and regulations.

## 2.9 Status of the PO

All of the 30 POs have been formed and their executive committees, also known as the MMC, are also formed. The MMCs are regularly meeting in the CCMCs, and getting engaged in discussions (Photo 9) regarding market linkage, savings, plans for AIF-3 project, etc.



Photo 9 : A PO meeting in the Madhupur CCMC, 13 January 2019.

## 2.10 Organizing National workshop

A national workshop entitled “**Postharvest Management of Fruits & Vegetables for Food Safety & Quality Assurance**” was held on 6th February, 2019 at the conference room of Hortex Foundation ((Photo 10). The Chairman of the Bangladesh Food Safety Authority Mr. Mohammad Mahfuzul Haque graced the occasion as the Chief Guest, while the Project Director of NATP-2 Mr Sanat Kumar Saha presided. In addition the Director General (DG) of DAE Mr Mir Nurul Alam, DG



of Department of Agricultural Marketing (DAM) Dr. Msmt. Nazmanara Khanum, and the CEO of ACI Agrolink, ACI Agribusinesses and ACI Motors Dr. F.H. Ansarey joined the workshop as Special Guests. The keynote paper was presented by Dr. Md. Atiqur Rahman, the Postharvest Management Expert of NATP-2, Hortex Foundation. The paper gave a background on postharvest losses of fruits and vegetables in Bangladesh and elaborated on the reasons for this including the various hazards caused by physical, chemical and biological factors. The quality factors and their management were discussed with emphasis on the postharvest handling, processing, transport, storage, etc. A video clip documenting the traditional rough handling of HVCs in terms of packaging, loading, unloading and transport was also shown by the keynote author. The subsequent technical session (Photo 11) was chaired by former Director General of DAE Mr. Hamidur Rahman. Discussants included Professor of Horticulture and a prominent postharvest management expert Dr Kamrul Hassan, Director of ACI Group Ms. Shusmita Anis, Dr M.A. Razzaque-former Chairman of BARC and presently a consultant for PMU, NATP-2 and a number of other experts. A set of recommendations were adopted that included items to include for food safety campaigns, such as, safe pre-harvest intervals (PHI) in applying pesticides, posters to show safe handling procedures, etc.



Photo 10: National workshop on Postharvest management of fruits and vegetables for food safety and quality was held on 6 Feb 2019.





Photo 11: The technical session of the national workshop on Postharvest management of fruits and vegetables for food safety and quality attracted quality discussion.

## 2.11 Documentation and Publications

A manual on improved PHM in Bengali was prepared and published, which was distributed to all related officials, LBFs and selected PO-MMC members (Photo 12).

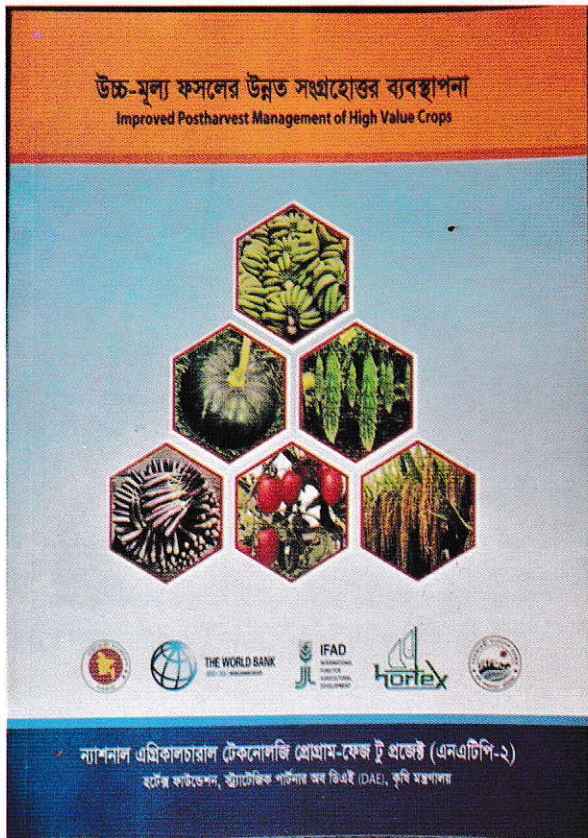


Photo 12: Cover page of the Manual on Improved PHM of HVCs



Photo 13: Poster showcasing improved PHM practices against the existing ones for Banana



Another poster depicting traditional versus improved PHM on banana PHM practices was also printed and distributed to all CCMCs, UAOs and most of the FIACs of the 30 pilot upazilas (Photo 13).

Video clips to document PHM practices were prepared for banana , which was used for training and workshops.

### 3 Monitoring & Evaluation for Value Chain Development

M&E activities at Hortex Foundation for the NATP-2 project are an ongoing phenomenon and a robust one. Mainly the mandatory monitoring tasks are on (i) data on agri-commodities marketed through the marketing structures, such as CCMC, etc., (ii) the marketing solutions provided (CCMCs, collection points, renovated markets, etc.), and (iii) client-days of training provided by Hortex Foundation for value chain development work and better marketing.

The three principal items for complying with the Results Framework and Monitoring as enumerated above are provided in the Table 7.1 below following the format from the PAD of the World Bank for NATP-2 and the figures are adjusted for the part for Hortex Foundation.

**Table 3.1: Progress achieved against the results framework in Value Chain Development, NATP-2, Hortex Foundation.**

Baseline value	Cumulative or Annual values (targets and actuals)							Achieved up to Jun 2019	Comments
	Year 1 (2016-17)	Year 2 (2017-18)	Year 3 Mid term (2018-19)	Year 4 (2019-20)	Year 5 (2020-21)	Project end			
<b>1. Market Access: Volume (in tons) of agricultural commodities sold annually through new marketing structures/arrangements promoted by Hortex Foundation</b>									
Total volume: 0 t	Target	100	1,000	3,000	5,000	5,835	15,000	6137.117	
	Actual	100	965.31	5071.80	--	--			
<b>2. Market access: Marketing solutions implemented by the project (cumulative)</b>									
Marketing solutions: 0	Target	02	10	31	55	60	60	31	'Actual'- figures are only from Hortex Foundation
	Actual	02	09	31	--	--	--		
<b>3. Client-days of training provided [CORE INDICATOR]</b>									
(percentage female) in '000'									
0 (0%)	Target	00 (0%)	3,000 (35%)	14,027 (35%)	3,614 (35%)	Nil	Nil	12,045 (58%)	
	Actual	----	2,819 (14%)	9,226 (65%)					

To this end monitoring data are being collected in well-designed formats.

However, the more significant aspect of M&E lies with proper build-up of information in a regular interval that leads to the assessment of income margins gained due to improved PHM practices by the farmers. Already a sample baseline survey in this regard is being carried out (Annex Report 1 provides preliminary findings), and subsequent data collection to assess the said margins will continue. But such gains by other actors in the value chain who adopt better practices in packaging, transport, storage and sale may not be possible to determine as scope and capacity at NATP-2 in Hortex in terms of fund and personnel is not provided.



However, the M&E Plan remained for long in a draft stage due to the fact that expert team members' inputs for the plan took a backseat. The hugely delayed start of the project at Hortex created an urgency and haste to prioritize and fast-track the foundation-laying activities like ToTs and other training events which consumed total time and efforts of all consultants, but that prevented the work towards the M&E plan. In addition, the long-due appointment of the third-party for organizing the bulk of the implementation of the Results Monitoring and Impact Evaluation (M&IE) system for NATP-2 never really happened and a lack of this crucial support also affected completion of the M&E plan at Hortex. However, on a priority basis the Plan was completed later as a workable draft until the said third-party M&IE firm incorporates the document with the overall NATP-2 monitoring plan.

#### 4. Procurement Progress

Procurement of goods and services had to be carried out in bits and pieces as the packages had to be organized according to implementation sequence. So some changes were necessary. The summary on procurements are given below in table 4.1.

**Table 4.1: Number of procurement packages completed for Value Chain Development, NATP-2, Hortex Foundation during 2016-17 to 2018-19.**

(no. of packages)

Procurement Package (completed)	Years			Remaining Procurement
	2016-17	2017-18	2018-19	
Goods	3	6	11	03 work packages are under scrutiny of/for DPP revision
Services	-	11	3	

The procurement packages were mostly completed albeit in a different step-by-step way. This different ways have been explained through Annex Tables 5.1 to 5.5 and explanatory notes accompanying each table.

#### 5. Financial progress

The late start of project activities at Hortex Foundation between December 2017 and January 2018 began with the gradual recruitment of consultants and staff. Therefore, financial progress slowly took place afterwards and is summarised below in Table 5.1.

**Table 5.1: Summary of the financial progress of Value Chain Development for NATP-2 at Hortex during 2016-17 to 2018-19.**

(in lakh taka)

Financial year	RADP Budget	Expenditure	Achievement
2016-17	22.40	19.70	88%
2017-18	233.00	198.71	86%
2018-19	450.00	430.99	96%
<b>Total</b>	<b>705.40</b>	<b>649.40</b>	<b>92%</b>

This shows that over time expenditure has grown with increasing activities. So far Taka **649.40** lakh has been spent up to June 30, 2018-19. The details are shown in Annex Table 6.

## 6. The Challenges

Mainly two types of challenges were faced in implementing the project activities. The first kind is the one usual for any project: the efforts to achieving the intended results through which objectives of the project are met. The second type of challenges emanated from the weaknesses and deficiencies of the project design, as implemented through the Development Project Proposal (DPP).

In case for the first type, for securing the intended results to improve smallholder farmers' access to markets in the selected districts, process of selection of CCMC had been a formidable challenge. Firstly, finding one agreeable place in an upazila was difficult because of the scattered existence of the CIGs. Between four and nine CIGs could at best be served in an upazila from any one place/market. As a result, more than half of the CIGs were at a disadvantage to access the CCMC. Another challenge was to meet the standards of a CCMC for its size requirement of 2000 sq ft through a rented structure. In the end, most of the selected ones were much smaller and only three CCMCs somehow met the size requirement.

In case of the second type of challenges, there are quite a number of those. The pay of the LBFs has been fixed too low (at Tk. 12,000 only), for whom too many tasks have been assigned by the DPP. This amount of salary cannot really attract suitably qualified persons, and therefore it has been a continuous challenge to get the activities covered and especially the quality has suffered. Necessary data collection (on marketing volumes, postharvest losses, prices) and reporting are the areas which are suffering the most.



Renovation and construction of CCMC/CPs have been listed in the DPP, but such works in rural markets are usually carried out by the LGED (Local Government Engineering Department). If LGED is not assigned by the DPP, these works cannot be carried out. In addition, land for such structures is allotted by the district and upazila civil administration, which is also not mentioned in the DPP.

A big deficiency has been the two-year input of the Training Management Expert (TME), which is insufficient to complete the training mandate and related tasks. It may be noted from Table 2.4 that over 40% of the training events are still to be carried out. Therefore, further additional input of TME is essential. Another significant omission had been the appropriate VAT fund placement for the consultants, as government direction clearly points out that such payments has to be met from project fund and not from consultants' remunerations. Allocation deficiencies for workshops, studies, monthly MMC meetings, collection and processing of postharvest loss data and price differences pose quite serious challenges to complete these activities.

## **7. Lessons Learnt**

CCMC selection process revealed that in each case a preparatory period is needed to organize the PO, who are representatives of the 20 CIGs and who ultimately takes over its day-to-day functions for its sustainability. But a late start of the project activities necessitated quick selection of the CCMC on hire, and in most cases the LBF along with the SAAOs with support from the upazila agriculture office finalized such selection. The 60-member PO, who elects the 29-member Market Management Committee (MMC ) to run this CCMC had to have a say in its selection. More often the selection of CCMC and formation of PO ran simultaneously. Such a move, therefore affects the sense of belongingness on the part of the MMC and so the institution building suffers.

The other learning was also that in most markets, proper size for establishing a CCMC was difficult to find as most existing structures are constructed to suit small shops, whereas a CCMC requires at least 2000 sq ft of covered space. The work of sorting, grading and other handling of bulk assembly becomes difficult in such small spaces, where the project had to hire for a CCMC.

In each upazila, there is provision for one CCMC, but all the 20 CIGs or the production clusters are not in a contiguous range. In most instances, the CCMCs are only accessible for up to 6 to 9 CIGs. The rest of the CIGs are in clusters of 4 to 6 in different corners of the upazila. These farmers feel excluded from the services. It might be a good idea to consider more CCMCs in an upazila to address such situation. However, it has to be borne in mind that in such a possibility additional LBF has to be also recruited, as one LBF will not be enough to cover more than one CCMC.



A positive learning among all these harsh realities has been that the CCMC can offer an alternative to the roaming middlemen buyers, as the farmers find the CCMC to be their promising sell-centre.

The training participants in almost all cases without exception gave the feed-back that the duration of the training events were too short to grasp the very important topics of PHM and related marketing aspects. So it might be an important consideration to increase the training duration for the said topics.

The HVCs as lead crops selected for vertical expansion in Delduar, Tangail and Kishoreganj sadar are no longer widely grown and therefore had to be changed for lemon and tomato respectively. This situation is actually to be recognized for all HVCs and their identified clusters, because farmers change to different crop after a while for many reasons. Diseases, pests, market competition, etc are some of the drivers that force farmers to shift their choice of crop.

## 8. The Way Forward

Value chain development activity has now entered a crucial stage where the POs are looking forward to establish good and reliable linkage with the market and its actors. So far the ground work for training the farmers on recommended PHM practices have mostly been provided and all PO members are covered in this crucial knowledge. The next level of capacity building for the POs in market management, governance, book keeping, business planning is now rolling on. Simultaneously the traders are identified through market and value chain studies, who are also being trained in relation to value addition and safety of the HVCs, and handling, transporting and storage. It is expected that most of these training events will be completed by 2020. By then the full scale application of PHM practices at the CCMC will be a regular phenomenon that will definitely make a significant positive impact on the prices and better margin for the farmers as well as reduce the post harvest losses.

The **potentials** to achieving the results, in spite of all the challenges appear quite encouraging. The first important milestone that looks highly achievable is the agri-commodity marketing target of 15,000 tons through the CCMC/CPs. By now, already 6,137 tons have been marketed, and the target of 3000 tons for 2018-19 has already been surpassed by over 2000 tons. Still three months are left of the year. And given that the CCMCs on an average can sell 500 tons a month, the target of 5000 tons for 2019-20 can also be met or even surpassed. This indicates that the 15,000 tons of agri-commodity marketing can be achieved.

In the **exporting** scenario, the future is also very bright. Already in the upazilas/CCMCs from where the exports are taking place, Hortex has been able to offer better training and facilities of the CCMC for the handlers/agents in the postharvest processing. The commodity producers are streamlined with assistance from DAE, and given that the standards are maintained, the export volumes will certainly rise. However, it is too early to project any quantities for the future.



The value chain activities are intended actually to improve and establish the improved PHM practices so that produce quality and safety are enhanced and post harvest losses are reduced. Obtaining higher prices for the improved PHM (sorting, grading, washing, packaging) is going to realize these goals. However, this process gradual change will need longer period and sustained support to materialize the goals. The PHM practices have slowly started and only marginal differences in prices are now coming up. It is expected that once the training of the value chain actors, especially the procuring traders, processors, transporters, wholesalers, etc. are completed, the market actors will act more positively and given some little more time value additions along the chain will benefit everybody from farmers to consumers.

## 9. Suggested Improvements and Remedies

In the light of the challenges faced and lessons learnt, and given the gravity of the issues, the following improvements and remedies were suggested:

1. Additional THREE (03) ToTs for DAE officers, who have been transferred later to the 30 pilot upazilas or related districts need to receive the ToT

Almost 50% of the trained DAE officers have left their posts from the 30 pilot upazilas and respective districts due to regular transfers following government procedure. Therefore, there is an urgent need to train the newly posted officers in the upazilas and respective districts. The ToT is vital for these officers, firstly, to get proper orientation and direction to assist in the specified value chain development work, supporting the CIGs and POs and overseeing the functions of the CCMCs. Secondly, the trained officers use their new learning to further train the CIG farmers, POs and market actors, as they are the designated resource speakers for such training programmes. The topics are also very special as these guide them to introducing improved postharvest management (PHM) practices, marketing, CCMC operations, needed actions for value chain development, and taking measures to ensure sustainability of the POs and the CCMCs.

2. Extension of Training Management Expert's (TME) input to the duration of the Project

**Input of TME** is provided only for 24 months, but a huge number of training events prescribed in the DPP (a total of over 720 batches) for the duration of the project cannot be completed in such a short time. Rather all these remaining events (340 training events for CIGs, 120 events for POs, & about 70 events for traders, processors, and entrepreneurs) may take the full course of the project time to complete. DPP schedules for the training events also run for 3<sup>rd</sup> and 4<sup>th</sup> project year, Therefore more man-months of the Training Expert need to be allocated.



It is proposed that the **TME's input may be extended for the duration of the project.**

3. Tablet computers for the LBFs and selected officers

The LBFs are required to carry out a lot of activities, among which the most important are running the affairs of the CCMC - which they gradually hand-over to the MMC, and send regular reports and data to Hortex Foundation. A tab with proper apps will ensure timely reporting of data and also proper updating and assisting the CIGs, PO and MMC. A lot of technical knowledge sharing and re-training of the farmers also become easier with support of a tab.

4. Provision of sitting costs for monthly MMC meetings

A 60-member PO is the main organization which represents and is formed from the 20 CIGs (400 to 600 farmers) surrounding one CCMC. The 29-member executive committee of the PO is called the Market Management Committee (MMC), which is entrusted to lead and operate the affairs of the CCMC. One important way of grooming and improving the PO-MMC is to support the monthly meetings of the MMC, where they decide upon the issues of marketing, linkage with traders and CIGs, looking into supply and demand issues, etc. Currently there is no provision to assist these vital meetings with some refreshments. This is important because both participation and regularity of such sittings is increased and the prospect of institution-building brightens with such support.

5. Increasing salaries of the LBFs

**LBFs' salary at Tk. 12,000/month is lower** than that of even the Dispatcher/Support Staff here and also lower than NATP phase I. They indeed have a lot of work to do, which are summarised below:

(i) The LBF should have regular interaction with the selected 20 CIGs to facilitate their marketing and for proper adherence to PHM practices, (ii) he should have regular interaction with the related SAAOs and UAO, (iii) facilitate forming the PO and MMC and work with them onwards for proper functioning of the CCMC and the Collection Point, (iv) facilitate improved PHM practices at the CCMC, (v) facilitate monthly and other meetings of the MMC and help keep the meeting minutes, (vi) maintain the registers at the CCMC for records on sale volume, prices, traders' transaction of commodities, (vii) submit regular reports on sale volumes, prices of traded agri-commodities, (viii) gradually involve and train up the MMC members in all operations of the CCMC including records keeping, (ix) help organize the various training programmes of the CIGs, POs, Traders, etc, (x) attend to any other activity entrusted to him by the MD of Hortex or the Consultants, etc.



This low salary has affected the LBFs' morale and therefore an enhancement in their salary will effectively improve their performance. It is proposed that their salaries be raised to Tk 25,000 per month.

6. Provision of fund for paying VAT on Consultants' remunerations

**VAT** is being deducted from the Consultants' remunerations at Hortex, **but is not deducted in any other component of the NATP-2**. The DPP is clear in its direction on this: "VAT on the national consultants' remuneration and consultancy services will be paid by the project" (p-48). As a consequence, this has inflicted a financial loss on the consultants and caused them a lower morale and motivation.

It is necessary that the VAT on Consultants should be paid by the project in full. VAT should not be deducted from the Consultants' remunerations. Therefore, proper fund to cover the VAT amount may be allocated in the budget of NATP-2 Hortex portion. Also all **the previously deducted amounts should be paid back in full to them**.

7. Bonus for Officers and Staff

**Bonus** is NOT BEING PAID for the officers and staff at Hortex **but is paid for officers and staff of all components. This should also be at par** within all components of NATP-2 including at Hortex Foundation. Therefore, bonus should be paid to the officers and staff as per government rules.

8. Quarterly meeting of LBFs at Hortex Foundation

The LBFs had been trained in four separate occasions including for a refresher. But there are a number of areas where they still need orientation as they have the primary responsibility to provide continuous support to the PO-MMC in CCMC operation. The related areas of marketing, demand-supply assessment and planning, book-keeping, etc need far more proficiency. There is also need to address the dynamic nature of markets and CCMC operation, for which regular training/briefing of the LBF is necessary. It is therefore proposed that the LBFs should get the opportunity to get a training-cum-conference at Hortex Foundation every quarter (every three months).

9. Provision to allow Regional Workshops, not just national workshops

There are 10 national workshops provisioned in the Value Chain Development part of NATP-2. It is proposed that SIX of the workshops may be arranged in the regions and rest can be held nationally. The regional workshops are necessary because related market actors and traders need to be involved



through organized workshops so that necessary improvements in the value chain can be instituted. Also the cost for the workshops at current rate of Tk. 100,000 (One lakh) is not sufficient. It is proposed that the costs of each workshop may be raised to Tk. 150,000 (one lakh fifty thousand) to properly bear the costs.

#### 10. Increasing travel allowance for adequate field visits

The current fund of 45 lakh taka to cover the costs of TA/DA is not sufficient to cover for required field visits by the Consultants. So far nearly Tk. 24 lakh has already been spent, when travels were relatively less frequent. As the activities speed-up, more travels to the project upazilas will be undertaken, and the given amount will not be sufficient. It is therefore, proposed that **total traveling costs and daily allowances should be raised to Tk. 60 lakhs for the project duration.**

#### 11. Promoting packaging technologies

One of the important time of postharvest loss is in transport, which occurs due to poor packaging. Hortex Foundation has the experience of working on different designs of packaging. Appropriate and affordable packaging promotion is deemed necessary while all other areas of PHM are addressed. It is therefore an opportune scope to introduce promotion of such technologies. A proposed amount of Tk. 10 lakh has therefore been proposed for packaging promotion.

#### 12. Help organize and conduct Annual General Meetings (AGMs) of the POs

Since the POs will be finally be the organization/institution who will be running the CCMCs, it is therefore very important that they become organizationally well established. An AGM of the PO will thus guide the MMC to deliberate their responsibilities for the CCMC. This institutional mechanism needs guiding over a number of years, otherwise the such rural institutions lose steam and disappear. It is therefore proposed that the AGMs of the POs may be supported by the project, and proper funds should be allocated for the institution-building effort.



**Annex Table 1: List of the CCMCs with location, condition and status of PO-MMC**

Sl. No.	Upazila	District	Location of CCMC	Rent-contract signing date	Condition of CCMC	Status of PO+MMC
1.	Birganj	Dinajpur	Birganj hat	Oct 2018	Functioning	Formed
2.	Chirirbandar	Dinajpur	Hatkholabazaar	Oct 2018	Functioning	Formed
3.	Parbatipur	Dinajpur	Khayerpukurhat	Constructed CCMC-NATP-1	Functioning	Formed
4.	Mithapukur	Rangpur	Baldipukur bazaar	Sep 2018	Functioning	Formed
5.	Palashbari	Gaibandha	BRAC Sobji Bazaar	Jun 25, 2018	Functioning	Formed
6.	Shibganj	Bogura	Chandihara Bazaar	Nov 2018	Functioning	Formed
7.	Bogura Sadar	Bogura	Pollimangal Hat	Sep 2018	Functioning	Formed
8.	Naogaon Sadar	Naogaon	Tetulia Bazar	Jan' 2019	Functioning	Formed
9.	Baraigram	Natore	Bonpara Bazaar	Dec 15, 2018	Functioning	Formed
10.	Godagari	Rajshahi	Bashlitola bazaar	Dec 2018	Functioning	Formed
11.	Kaliganj	Jhenidah	Kaliganj bazaar	Sep 2018	Functioning	Formed
12.	Jhikorgachha	Jashore	Barbakpur Bazaar	Jul 08, 2018	Functioning	Formed
13.	Jashore Sadar	Jashore	Churamonkathi	Jan 2019	Functioning	Formed
14.	Bagharpara	Jashore	Dadpur Bazaar	Sep 2018	Functioning	Formed
15.	Nakla	Sherpur	Tarakanda bazaar	Jun 25, 2018	Functioning	Formed
16.	Islampur	Jamalpur	Islampur Bazaar	Sep 2018	Functioning	Formed
17.	Delduar	Tangail	Putiajani Bazaar	May 3, 2018	Functioning	Formed
18.	Madhupur	Tangail	Kuragachha Bazaar	Jun 06, 2018	Functioning	Formed
19.	Muktagachha	Mymensingh	Gabtali bazaar	Jan 2019	Functioning	Formed
20.	Kishoreganj Sadar	Kishoreganj	Mulshotal	Jan 2019	Functioning	Formed
21.	Kapasia	Gazipur	Chandpur bazaar	Constructed CCMC-NATP-1	Functioning	Formed
22.	Shibpur	Narshingdi	Kharakmara Bazaar	May 23, 2018	Functioning	Formed
23.	Belabo	Narshingdi	Baroicha Bazaar	May 10, 2018	Functioning	Formed
24.	Raipura	Narshingdi	Lochonpur Bazaar	May 23, 2018	Functioning	Formed
25.	Savar	Dhaka	Horindhara Bazaar	May 31, 2018	Functioning	Formed
26.	Dakshin Surma	Sylhet	Rakhalganj bazaar	Nov 2018	Functioning	Formed
27.	Sreemangal	Moulvibazaar	Notun bazaar	Dec 2018	Functioning	Formed
28.	Chandina	Cumilla	Nimsar bazaar	Mar 2019	Functioning	Formed
29.	Mirsarai	Chattogram	Bhangadokan	Jan 2019	Functioning	Formed
30.	Khagrachhari Sadar	Khagrachhari	Shibmondir Bazaar	Oct 2018	Functioning	Formed



**Annex Table 2: Capacity building of CCMCs - Logistics and other support**

Sl. No.	Name of the Upazila	Office Table	Grading Table	Office Chairs	Plastic chairs	Ceiling fan	Rickshaw van	Plastic crates	Sorting mats	Weighing machine	Washing facility		Display board
											Bucket	Full set	
1.	Birganj	1	1	1	10	2	1	100	10	1	1		1
2.	Chirirbandar	1	1	1	10	4	1	105	10	1			1
3.	Parbatipur	1	1	1	10	5	1	195	10	1		1	1
4.	Mithapukur	1	1	1	10	3	2	135	10	1		1	1
5.	Palashbari	1	1	1	10	3	2	135	10	1		1	1
6.	Shibganj	1	1	1	10	4	2	135	10	1		1	1
7.	Bogra Sadar	1	1	1	10	3	1	135	10	1		1	1
8.	Naogaon Sadar	1	1	1	10	3	1	135	10	1			1
9.	Baraigram	1	1	1	10	3	1	135	10	1		1	1
10.	Godagari	1	1	1	10	4	1	135	10	1			1
11.	Kaliganj	1	1	1	10	4	2	135	10	1		1	1
12.	Jhikorgachha	1	1	1	10	2	2	135	10	1		1	1
13.	Jessore Sadar	1	1	1	10	3	1	135	10	1		1	1
14.	Bagharpara	1	1	1	10	3	2	135	10	1		1	1
15.	Nakla	1	1	1	10	3	1	125	10	1			1
16.	Islampur	1	1	1	10	4	2	130	10	1		1	1
17.	Delduar	1	1	1	10	2	2	130	10	1		1	1
18.	Madhupur	1	1	1	10	2	2	135	10	1		1	1
19.	Mukttagachha	1	1	1	10	3	1	135	10	1		1	1
20.	Kishoreganj Sadar	1	1	1	10	4	1	130	10	1		1	1
21.	Kapasia	1	1	1	10	5	1	150	10	1		1	1
22.	Shibpur	1	1	1	10	2	2	189	10	1		1	1
23.	Belabo	1	1	1	10	2	2	189	10	1		1	1
24.	Raipura	1	1	1	10	2	2	169	10	1		1	1
25.	Savar	1	1	1	10	2	1	143	10	1			1
26.	Dakshin Surma	1	1	1	10	4	1	135	10	1			1
27.	Sreemangal	1	1	1	10	4	1	135	10	1		1	1
28.	Chandina	1	1	1	10	3	2	135	10	1		1	1
29.	Mirsarai	1	1	1	10	3	2	135	10	1		1	1
30.	Khagrachhari Sadar	1	1	1	10	3	2	154	10	1		1	1



**Annex Table 3.1: Month-wise marketing volumes of Vegetables/fruits sold through the CCMCs during July 2018–June 2019**

Month/ Year	Volume (kg)*	Reporting CCMCs from the upazilas
Jul 2018	120,680	Parbatipur, Palashbari, Delduar, Shibpur, Belabo, Raipura (06)
Aug 2018	152,659	Parbatipur, Palashbari, Delduar, Shibpur, Belabo, Raipura, Jhikorgachha, Savar (08)
Sep 2018	249,118	Parbatipur, Palashbari, Delduar, Madhupur, Shibpur, Belabo, Raipura, Jhikorgachha, Savar, (09)
Oct 2018	317,496	Birganj, Parbatipur, Palashbari, Bogura, Jhikorgachha, Bagharpara, Delduar, Madhupur, Shibpur, Belabo, Raipura, Savar (12)
Nov 2018	252,575	Birganj, Parbatipur, Palashbari, Bogura, Shibganj, Jhikorgachha, Bagharpara, Kaliganj, Islampur, Delduar, Madhupur, Shibpur, Belabo, Raipura, Savar, Khagrachhari Sadar (16)
Dec 2018	396,882	Birganj, Chirirbandar, Parbatipur, Mithapukur, Palashbari, Shibganj, Bogura Sadar, Baraigram, Godagari, Kaliganj, Jhikorgachha, Bagharpara, Nakla, Islampur, Delduar, Madhupur, Shibpur, Belabo, Raipura, Savar, Khagrachhari Sadar (21)
Jan 2019	547,987	Birganj, Chirirbandar, Parbatipur, Mithapukur, Palashbari, Shibganj, Bogura Sadar, Sadar Naogaon, Baraigram, Godagari, Kaliganj, Jhikorgachha, Jessore Sadar, Bagharpara, Nakla, Islampur, Delduar, Madhupur, Kishoreganj Sadar, Shibpur, Belabo, Raipura, Savar, Sreemangal, Mirsarai, Khagrachhari Sadar (26)
Feb 2019	655,636	Birganj, Chirirbandar, Parbatipur, Mithapukur, Palashbari, Shibganj, Bogura Sadar, Sadar Naogaon, Baraigram, Godagari, Kaliganj, Jhikorgachha, Jessore Sadar, Bagharpara, Nakla, Islampur, Delduar, Madhupur, Kishoreganj Sadar, Shibpur, Belabo, Raipura, Savar, Sreemangal, Mirsarai, Khagrachhari Sadar (26)
Mar 2019	510,206	Birganj, Chirirbandar, Parbatipur, Mithapukur, Palashbari, Shibganj, Bogura Sadar, Sadar Naogaon, Baraigram, Godagari, Kaliganj, Jhikorgachha, Jessore Sadar, Bagharpara, Nakla, Islampur, Delduar, Madhupur, Kishoreganj Sadar, Shibpur, Belabo, Raipura, Savar, Sreemangal, Chandina, Mirsarai, Khagrachhari Sadar (27)
Apr 2019	597,371	Birganj, Chirirbandar, Parbatipur, Mithapukur, Palashbari, Shibganj, Bogura Sadar, Sadar Naogaon, Baraigram, Godagari, Kaliganj, Jhikorgachha, Jessore Sadar, Bagharpara, Nakla, Islampur, Delduar, Madhupur, Kishoreganj Sadar, Kapasia, Shibpur, Belabo, Raipura, Savar, Chandina, Mirsarai, Khagrachhari Sadar (27)
May 2019	693,670	Birganj, Chirirbandar, Parbatipur, Mithapukur, Palashbari, Shibganj, Bogura Sadar, Sadar Naogaon, Baraigram, Godagari, Kaliganj, Jhikorgachha, Jessore Sadar, Bagharpara, Nakla, Islampur, Delduar, Madhupur, Kishoreganj Sadar, Kapasia, Shibpur, Belabo, Raipura, Savar, Sreemangal, Chandina, Mirsarai, Khagrachhari Sadar (28)
Jun 2019	577,527	Birganj, Chirirbandar, Parbatipur, Mithapukur, Palashbari, Shibganj, Bogura Sadar, Sadar Naogaon, Baraigram, Godagari, Kaliganj, Jhikorgachha, Jessore Sadar, Bagharpara, Nakla, Islampur, Delduar, Madhupur, Kishoreganj Sadar, Kapasia, Shibpur, Belabo, Raipura, Savar, Sreemangal, Chandina, Mirsarai, Khagrachhari Sadar (28)
<b>Total</b>	<b>5071,807</b>	<b>5071.807 tons</b>

\* Some Banana and Bottle gourd were sold in pieces, could not be included in the weight class total

**Note 1: During 2016-18**, a total of **1065.31 tons** HVCs were marketed through the CCMCs, but those months are not shown due to space limitations. Therefore, the total Sale Volume up to June 2019 stands at **6137.11 tons**.



**Annex Table 3.2 : Volumes of Vegetables/fruits sold through the CCMCs during July 2018 – June 2019**

SI No.	Name of Vegetable/fruit	Volume (kgs)	SI No.	Name of Vegetable/fruit	Volume (kgs)
1.	Brinjal	782822	24.	Cauliflower	65069
2.	Bitter Gourd	75734	25.	Radish	13417
3.	Sweet Gourd	121501	26.	Carrots	2950
4.	Pointed Gourd	119166	27.	Coriander	3544
5.	Teasel Gourd	235626	28.	Onion	29220
6.	Bottle Gourd	33100 kg & 21510 (pcs)	29.	Pineapple	8716
7.	Ash Gourd	41884	30.	Bael	1000
8.	Ridged Gourd	11125	31.	Guave	38410
9.	Tomato	311732	32.	Taro stolon	4997
10.	Banana	343349 kg & 4558 (pcs)	33.	Lady's Finger	14913
11.	Lemon	610657	34.	Garlic	10692
12.	Potato	559335	35.	Moringa (stick)	2690
13.	Chili	27503	36.	Ridged	528
14.	Papaya	37294	37.	Snake gourd	33694
15.	Kochu (Taro)	1610	38.	Jute leaf	38415
16.	Cucumber	99842	39.	Sapota	320
17.	Cabbage	82430	40.	Sponge gourd	2884
18.	Red Amaranth	31321	41.	Mango	65438
19.	Long bean	20052	42.	Jackfruit	2789
20.	Indian Amara	33313	43.	Litchi	102835
21.	Okra	280	44.	Rozella Leaf	200
22.	Rice	576818	45.	watermelon	472
23.	County bean	472120			
<b>Total 5071,807 Kgs (5071.807 tons)</b>					
NB: Some Banana and Bottle gourd were sold in pieces, could not be included in the weight class total					

**Annex Table 4 : Names of the companies exporting agri-commodities thru the CCMCs**

1. M/s Ahmed Trading (AT)	8. M/s Tareque Enterprise
2. M/s Mariam & Sons	9. M/s Fresh Vegetables Dot Com
3. M/s Nurul Alam International	10. M/s Sheuli Enterprise
4. M/s Dip International	11. M/s Aziz & Sons Enterprise
5. M/s Sujon International	12. M/s Imon Traders
6. M/s M.K. International	13. M/s Miami Trading
7. M/s Lee Enterprise	14. M/s R R Enterprise



Annex Report 1:

**BASELINE SURVEY ON EXISTING PHM PRACTICES OF FRUITS AND VEGETABLES  
ALONG THE VALUE CHAIN IN SELECTED UPAZILAS OF BANGLADESH**

A survey was carried out on existing postharvest management practices followed by the grower and traders in fresh producer's value chains in Bangladesh during August to October 2018. This study assessed the knowledge, attitude and practices of key actors and the status of market opportunities in the country. A total of 515 farmers and 295 traders were interviewed from 30 selected upazilas of Bangladesh under NATP-2 project. Pre-tested structured questionnaires were used to collect data from the field and markets. Findings of this study revealed that most of the growers (50-70%) showed positive attitude towards GAP, maturity indices, and role of good packaging for keeping the produces safe for the consumers. About 32% farmers aggregate their harvested commodities beside the field on direct soil contact under open sun, which may cause weight loss and microbial contamination of the produces. Washing and grading practice did not follow by most of farmers (58%) and traders (52.2%) during marketing of fruits & vegetables. Nevertheless, 91% farmers and 78% traders sorted their produce before marketing to get better price. More than 56% farmers and traders used jute or nylon sac for packaging fresh fruit & vegetables. Only 20% farmers and 24% traders used plastic crates as a packaging material of fresh produces. Generally, farmers used different local vehicles including three-wheeler van, rickshaw, bi-cycle, tempo etc., whereas the traders transported their produces to the wholesale market using truck and pickup.

The average postharvest losses were estimated to be 8% and 15% at farmer and trader's level, respectively. At farm level, these losses occurred mainly due to knowledge gap in maturity indices, faulty harvesting method, insect-pest and disease infection. On the other hand, the maximum loss occurred at trader's level was due to inappropriate bulk packaging, overloading and rough handling during marketing the produces. Both the farmers and traders suggested various measures to reduce postharvest losses and to keep them safe for the consumers.



## Annex Tables on Details of Procurement Status of NATP-2, Hortex Foundation

### Total packages in DPP

Goods: 06 Nos.

Works: 03 Nos.

Services: 10 Nos.

### Procurement process completed (From FY2016-17 to FY2018-19)

**Goods: 20 Nos.** (Extra 12 packages had to be developed from DPP Code/Sub Code Description like Processing, transport or small equipment for POs, Office Supply, Printing & Documentation, Sorting Mat for POs, Replacement of crates etc which do not exist in DPP original 06 procurement packages of goods)

**Annex Table 5.1 : Completed Goods procurement of Hortex Foundation, NATP-2 during FY2016-17**

Sl. No	Package Name	Package No.	Qty	Allocation (Taka)	Expenditure (Taka)	Status
01	Laptops	GD/Hortex/NATP-2/04/2016-2017	5 Nos.	3,95,000.00	3,95,000.00	Completed
02	Digital Camera	GD/Hortex/NATP-2/05/2016-2017	28 Nos.	4,20,000.00	4,20,000.00	Completed
03	Furniture (File Cabinet-1, Bookshelf-2, Computer table-2 and Wooden chair-3 Nos.)	GD/Hortex/NATP-2/06(a)/2016-2017	8 Nos.	1,00,000.00	99,490.00	Completed
	<b>Total</b>	<b>03 packages</b>		<b>9,15,000.00</b>	<b>9,14,490.00</b>	

**Annex Table 5.2 : Completed Goods procurement of Hortex Foundation, NATP-2 during FY2017-18**

Sl. No	Package Name	Package No.	Qty	Allocation (Taka)	Expenditure (Taka)	Status
01	Digital camera	GD/Hortex-NATP2/05	2 Nos.	40,000.00	40,000.00	Completed
02	Processing, transport or small equipment for POs	GD/Hortex-NATP2/08	LS	2,00,000.00	1,99,854.00	Completed
03	Office supply	GD/Hortex-NATP2/15	LS	2,25,000.00	2,24,740.00	Completed
04	Office equipment and furniture (Executive Chair-2, Steel Almeria-1 & Honored board-1)	GD/Hortex-NATP2/06 (2017-2018)	04 Nos.	1,00,000.00	99,895.00	Completed
05	Replacement of crates	GD/Hortex-NATP2/17 (2017-2018)	150 Nos.	1,00,000.00	99,000.00	Completed
06	Printing and Documentation	GD/Hortex-NATP2/09 (2017-2018)	LS	5,00,000.00	4,97,000.00	Completed
	<b>Total</b>	<b>06 packages</b>		<b>11,65,000.00</b>	<b>11,60,489.00</b>	

**Annex Table 5.3 : Completed Goods procurement of Hortex Foundation, NATP-2 during FY2018-19**

Sl. No.	Package Name	Package No.	Qty	Allocation (Taka)	Expenditure (Taka)	Status
01	Equipment & Furniture for markets and collection points/CCMCs (Office Chair-30, Table-30 and Plastic Chair-300 Nos.)	GD/Hortex-NATP2/03	1 Lot (360 Nos.)	5,00,000.00	4,81,200.00	Completed
02	Procurement of sorting mat	GD/Hortex-NATP2/07	300	3,00,000.00	2,99,400.00	Completed
03	Procurement of processing, transport or small equipment	GD/Hortex-NATP2/19	14	1,00,000.00	99,960.00	Completed



	for POs					
04	Replacement of Crates	GD/Hortex-NATP2/20	190	1,00,000.00	99,960.00	Completed
05	Office Supply	GD/Hortex-NATP2/22	LS	2,00,000.00	1,99,951.00	Completed
06	Office equipment & furniture	GD/Hortex-NATP2/18	1 Lot	5,00,000.00	4,98,650.00	Completed
07	Printing and Documentation (training manual for CIG farmers/POs, annual report, video documentary on banana, newsletter, booklet, poster etc.)	GD/Hortex-NATP2/21	LS	5,00,000.00	4,99,000.00	Completed
08	Furnishing collection points/CCMCs with needed tools & equipment	GD/Hortex-NATP2/16	LS	5,00,000.00	4,97,900.00	Completed
09	Refurbishing, improving the collection points of selected traders	GD/Hortex-NATP2/23	LS	5,00,000.00	4,98,000.00	Completed
10	Procurement of crates for POs	GD/Hortex-NATP2/01	3750 Nos.	20,00,000.00	19,94,300.00	Completed
11	Procurement of rickshaw van for POs	GD/Hortex-NATP2/02	45 Nos.	10,80,000.00	10,57,500.00	Completed
<b>Total</b>		<b>11 packages</b>		<b>62,80,000.00</b>	<b>62,25,821.00</b>	

**Services: 14 Nos.** (Extra 4 packages had to be developed from DPP Code/Sub Code Description like Conducting studies & surveys on existing markets of 30 upazilas, 1<sup>st</sup> part 12 upazilas, Value chain analysis of 5 selected crops covering 30 cluster areas, Compiling a database of service providers along the value chain for POs that do not exist in DPP original 10 procurement packages of services)

**Annex Table 5.4: Completed Services Procurement of Hortex Foundation, NATP-2 during FY2017-18**

Sl. No	Package Name	Package No.	Qty	Monthly Budget (Taka)	Status
01	Postharvest Management Expert	SD/Hortex-NATP2/01	01	2,50,000.00	Completed
02	Supply Chain Integration and Marketing Expert	SD/Hortex-NATP2/02	01	2,50,000.00	Completed
03	Training Management Expert	SD/Hortex-NATP2/03	01	2,50,000.00	Completed
04	M&E Expert	SD/Hortex-NATP2/04	01	2,50,000.00	Completed
05	Accounts Officer	SD/Hortex-NATP2/05	01	40,000.00	Completed
06	Data Analyst/Computer Operator	SD/Hortex-NATP2/06	01	30,000.00	Completed
07	Driver	SD/Hortex-NATP2/07	05	1,00,000.00	Completed
08	Support Staff – Office support	SD/Hortex-NATP2/08	01	16,000.00	Completed
09	Support Staff – Despatcher	SD/Hortex-NATP2/08	01	16,000.00	Completed
10	Local Business Facilitator (LBF)	SD/Hortex-NATP2/09	30	3,60,000.00	Completed
11	Conducting studies & surveys on existing markets of 30 upazilas (1 <sup>st</sup> Part, 12 upazilas)	SD/Hortex-NATP2/13	1 study (2mm)	3,98,000.00 (1 study, 2mm)	Completed



**Annex Table 5.5: Completed Services Procurement of Hortex Foundation, NATP-2 during FY2018-19**

Sl. No.	Package Name	Package No.	Qty	Allocation (Taka)	Expenditure (Taka)	Status
01	Value chain analysis of 5 selected crops covering 30 cluster areas	SD/Hortex-NATP2/12	01 study (2mm)	5,00,000.00	5,00,000.00	Completed
02	Compiling a database of service providers along the value chain for POs	SD/Hortex-NATP2/15	01 study (2.5mm)	1,25,000.00	1,25,000.00	Completed
03	Conducting studies & surveys on existing markets of 30 upazilas (2 <sup>nd</sup> Part, 18 upazilas)	SD/Hortex-NATP2/17	01 study (2mm)	6,00,000.00	6,00,000.00	Completed
	<b>Total</b>	<b>03 packages</b>		<b>12,25,000.00</b>	<b>12,25,000.00</b>	

#### **Remaining Procurement Packages of Hortex Foundation under NATP-2**

**Works: 3 Nos.** (3 packages under Works for renovation of existing markets and creation of collection points/CCMCs)

#### **Renovation and construction works of markets and Collection Points will not be possible due to the following reasons:**

(i) The DPP does not involve the offices of the Deputy Commissioner (DC) or the Upazila Nirbahi Officer (UNO) of the civil administration in district and upazila respectively, who are the principal actors in allocating land in a market or otherwise, that is needed for the construction of the Collection Points. (ii) In addition, Hortex Foundation has no in-house capacity as it has no Engineers and Procurement Specialist to carry out the activity. In-house document processing and preparation has to be carried out by an Engineer/Procurement Specialist, and also for follow-up until such construction/renovation is completed. (iii) Also the DPP has not assigned the LGED (Local Government Engineering Department), which is normally assigned by the government for most of the rural market construction works, to implement such construction/renovation. (iv) With the lapse of time this far, and given that such renovation and construction following government processes take quite a long time, it is anticipated that this activity may not utilize much of the allocated fund.

However, on account of renting of CCMCs and collection points, about Taka 180 lakh may be utilized, if the project runs for a period of five years. The rest of the fund allocated for the said works will still be put to good use because there were crucial omissions and under-funding of certain activities. The input of the Training Management Expert needs to be extended from the allocated two years to the duration of the project and fund for VAT on consultants' remunerations needs to be organized. While the salaries of the Dispatcher and Support Staff are fixed at Tk. 16,000, that of the LBFs are only Tk. 15,000 – which cannot be this low by any measure. This needs to be adjusted to at least Tk. 25,000 per month as the LBFs carry out many functions like running the CCMC, liaising with the CIGs, PO, the MMC, keeping the sales records with prices and estimating postharvest losses along with all data reporting. There are also areas like MMC monthly meeting costs, Market linkage meeting costs, need for annual review meetings with UAOs in Dhaka, etc. which needs to be financed.

Annex Table 6: Financial Statement

## RADP allocation and financial progress : 2016-17 to 2018-19

(in lakh taka)

Code & Description		Financial Years						Total	
		2016-17		2017-18		2018-19			
Code no.	Code Description	*RADP Allocation	Expenditure	*RADP Allocation	Expenditure	*RADP Allocation	Expenditure	*RADP Allocation	Expenditure
<b>A. Revenue Component</b>									
4500	Salary of Officers	-	-	2.42	2.32	4.80	4.80	7.22	7.12
4600	Pay of establishment	-	-	31.32	29.90	62.64	61.12	93.96	91.02
4700	Allowances					-	-	-	-
4800	Supply & Services	10.65	9.70	170.01	152.76	291.76	274.76	472.42	437.22
4900	Repair and maintenance	2.60	0.86	11.25	9.33	45.00	45.00	58.85	55.19
	<b>Sub Total A:</b>	<b>13.25</b>	<b>10.56</b>	<b>215.00</b>	<b>194.31</b>	<b>404.20</b>	<b>385.68</b>	<b>632.45</b>	<b>590.55</b>
<b>B. Capital Component</b>									
6800	Asset acquisition	9.15	9.14	18.00	4.40	45.80	45.31	72.95	58.85
7000	Construction & civil work	-	-	-	-	-	-	-	-
7900	CD VAT	-	-	-	-	-	-	-	-
	<b>Sub-Total B:</b>	<b>9.15</b>	<b>9.14</b>	<b>18.00</b>	<b>4.40</b>	<b>45.80</b>	<b>45.31</b>	<b>72.95</b>	<b>58.85</b>
	<b>Grand Total: (A+B)</b>	<b>22.40</b>	<b>19.70</b> (88%)	<b>233.00</b>	<b>198.71</b> (86%)	<b>450.00</b>	<b>430.99</b> (96%)	<b>705.40</b>	<b>649.40</b> (92%)

\* Only RPA, no GOB allocation



## Annex 7: Glimpses of some Value Chain Activities



Photo A 7.1: Meeting with PO-MMC in Islampur



Photo A 7.2: Quality control of marketing record keeping by the LBFs in Narshingdi. All three LBFs from Shibpur, Belabo and Raipura assembled in Lochohpur CCMC of Raipura with records. M&E Expert, Supply Chain Integration & Marketing Expert and the AGM (Marketing) from Hortex conducted the quality checks and advised the LBFs for required improvements. The AEO, Raipura was also present.





Photo A 7.3: The Director, PIU-DAE, NATP-2 visited the CCMCs in Narshigdi along with DDAE, Narshingdi and Sector Coordinator (Extension) from PMU, NATP-2.



Photo A 7.4: A training session of the Producer Organization.





Photo A 7.5: In Khagrachhari sadar, the training of the PO-MMC was remarkable with participation of women in overwhelming numbers as women constitutes majority of the CIGs.



Photo A 7.6: A meeting of the PO-MMC in Savar being addressed by the Managing Director, Hortex Foundation. UAO, Savar, the local SAO and other experts from NATP-2 at Hortex also joined the meeting.



## Annex 8: List of Personnel

Md. Manzurul Hannan  
 Managing Director  
 Hortex Foundation  
 &  
 Coordinator  
 NATP-2 Project

### Project Personnel (NATP-2)

Dr. Md. Atiqur Rahman	Post-Harvest Management Expert	Imran Hosan	LBF, Muktagachha, Mymensingh
Md. Bazlur Rahman	Supply Chain & Marketing Expert	Md. Limon Talukdar	LBF, Sadar upazila, Kishoregonj
Md. Qudra-E-Ghani	Training Management Expert	Md. Eakir Sarkar	LBF, Kapasia, Gazipur (up to 31 Oct 2018)
Dr. Mofarrah Sattar	Monitoring & Evaluation Expert	Md Tazul Islam Khandaker	LBF, Kapasia, Gazipur (joined 131 Nov 2018)
Biplab Das	Account Officer	Md. Robel Molla	LBF, Shibpur, Narshingdi
Md. Mizanur Rahman	Data Analyst	Md. Safuddin Bhuiyan	LBF, Belabo, Narshingdi
Md. Masud Haque	LBF, Birganj, Dinajpur	Md. Alamgir Hossain	LBF, Raipura, Narshingdi
Md. Ashraful Islam	LBF, Chirirbandar, Dinajpur	Chandan Kumar Ghosh	LBF, Savar, Dhaka (up to 31 Oct 2018)
SDM Monjurul Hasan	LBF, Parbatipur, Dinajpur	Md. Riyazul Islam	LBF, Savar, Dhaka (joined 04 Dec 2018)
Md. Abu Helal	LBF, Palashbari, Gaibandha	Sajib Kumar Das	LBF, Dakkhin Surma, Sylhet (up to 12 May 2019)
Md. Mazharul Islam	LBF, Mithapukur, Rangpur	Md. Shorif Ahmed	LBF, Dakkhin Surma, Sylhet (joined 30 May 2019)
Md. Jahannur Islam	LBF, Shibganj, Bogura	Md. Uzzal Khan	LBF, Sreemangal, Moulvibazar (up to 24 Mar 2019)
Md. Abu Rayhan	LBF, Sadar upazila, Bogura	Aji: Kairi	LBF, Sreemangal, Moulvibazar (joined 21 Apr 2019)
Sreekanto Kumer Sarkar	LBF, Sadar upazila, Naogaon	Sahajahan	LBF, Chandina, Cumilla
Md. Nizam Uddin	LBF, Baraigram, Natore	Shibu Chandra Roy	LBF, Mirsarai, Chattogram
Ahmed Tarique Mannan	LBF, Godagari, Rajshahi	Debashis Tripura	LBF, Sadar Upazila, Khagrachhari
Md. Hafijur Rahman	LBF, Kaliganj, Jhainaidah	Md. Nurul Islam	Driver
Md. Torikul Islam	LBF, Sadar upazila, Jashore	Md. Monirul Islam	Driver (up to 18 Feb 2019)
Md. Mahamudul Hasan	LBF, Jhikorgachha, Jashore	Abu Sated Chowdury	Driver
Md. Raihan Hosen	LBF, Baghapara, Jashore	Md. Sumon Mia	Driver
Ahsanuzzaman Zebu	LBF, Nakla, Sherpur	Shafiqur Rahman	Driver
Anath Chandra Paul	LBF, Islampur, Jamalpur	Md. Rasel Ali	Dispatcher/Office Support
Md. Jafar Ali Khan	LBF, Deiduar, Tangail	Md. Rasel Mia (Abdullah)	Office Support staff (up to 28 Feb 2018)
Md. Abdullah Al Rakib	LBF, Madhupur, Tangail	Mithun Chandra Das	Office Support staff (joined 01 Jul 2018)

### Hortex Foundation Staff

Mitul Kumar Saha	Assistant General Manager	Md. Forkan Ahmed	Driver
Joyal Abedin	Manager	Md. Safiqul Islam	Driver
Syed Miraz Mahmud	Deputy Manager	Md. Maklesur Rahman	Driver
Mohiuddin Md. Nurul Absar	Assistant Manager	Abdul Matin Mollah	Support Staff
Md. Nawab Ali	Driver	Md. Billal Hossain	Support Staff
Mojibur Talukder	Driver	Zitu Mia	Night Guard
		Hosneara Begum	Aid Staff



