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Problems and prospects of wholesale marketing of fresh produce in Bangladesh: Selected case studies

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Abstract

The paper identifies the problems relating to trade, marketing margins and maintenance of quality and safety standards in fresh agriculture produce in urban wholesale markets. It also examines the prospects of wholesale markets in performing the economic function of buying, selling and value-addition. Two central wholesale markets were studied for the supply of vegetables, fruits and fish. An analysis of both primary and secondary data was carried out. Primary data were collected through a pre-tested questionnaire for wholesalers in the two locations, while focus group discussions and key informant groups were conducted with wholesale traders, laborers, consumers, local political elites and relevant government officials. A desk review provided information on agriculture and food policies, market structure and marketing margins across the food chain.

The study confirms that the supply of produce from the northwest Bangladesh to Dhaka usually involves middle men between producers and final consumers and entails three successive stages of delivery from farm to local primary market, from primary market to urban whole sale market, and from wholesale market to the retail market. Alongside, an emerging retailing sector (supermarkets) is gaining popularity among the rich and upper-middle income consumers in big cities. Inadequacies in handling, transportation and storage facilities for fresh produce are noted to be the prime cause of quantity loss and degradation of quality resulting in poor shelf life. Significant informal transactions influence the prices across the market chain. So, promises and potentials of the fresh produce wholesales largely depend on reducing these bottlenecks. Improving the marketing environment would require strategic policies and their implementation through collaborative efforts by government, private sector, traders and NGOs.

Key Words: *Wholesale market, marketing environment, interventions, infrastructure management*

Introduction

With the progress in urbanization, an increasing share of national food consumption takes place at a location other than where it is produced. The marketing system must provide necessary services for consumers' evolving preferences. Consumers tend to seek a wider variety of foods, induced by rising incomes and the demand for convenience in preparation (FAO, 1996; BBS, 2005). The diet of an urban resident tends to consist of a higher share of processed foods, in part because some foods spoil soon after harvest, unless processed. Fresh produce, for example, must move to the market or processors or consumers soon after production to avoid quality damage. Producers' production choices tend to reflect these issues along with the factors such as household needs, agro-climatic factors, available means of production, and the comparative advantage in order to maximize economic returns.

Nonetheless, provided that transportation is reliable and efficient, the flow of food products moving between communities increases over time. This provides the basis for further development of food marketing, processing and distribution systems (FAO, 1996). The flow of food products namely fresh produce like vegetables, fruits and fishes increases with the pace of urbanization. For example, the population of Dhaka city has been increasing at a rate of 0.4 to 0.6 million per year (about 4.33% between 1995 to 2005). The growing demand for high-value agricultural commodities—including fruits and vegetables, fish and livestock products—provide enormous opportunities for producers and suppliers in Bangladesh (World Bank and IFC[3], 2008). The additional demand, according to World Bank, for these commodities is estimated to be about US$8 billion (in 2005 prices). Because high-value agricultural production is usually more labor-intensive than traditional cultivation, this increasing demand also provides an opportunity to raise rural incomes and improve livelihoods.

Although much progress has been made in developing food supplies to cities, urban growth will continue to present enormous problems for the marketing of food. On the one hand, incomes of certain segments of the urban population are rising rapidly, leading to increasing demand for more expensive foods such as fish, horticulture and livestock products, both processed and non-processed. On the other hand, guaranteeing the efficient distribution of low-cost but nutritious food is a challenge for disadvantaged

[3] *High-Value Agriculture in Bangladesh: An Assessment of Agro-business Opportunities and Constraints* by World Bank and IFC (2008) South Asia Enterprise Development Facility (SEDF).

urban dwellers in developing countries. This necessitates an increasingly capable wholesale distribution system along with improvement of rural-urban linkages through continuing investment in marketing infrastructure at all stage of the supply chain. Modern marketing system, beyond basic transport and storage, also requires market information and price-risk management system making room for monitoring, analysis and research for building up knowledge and providing early warning.

Several studies in Bangladesh have conducted market structure and value chain analysis for fresh produce and have identified the evolution of the market structure and bottlenecks of the whole chain, but little attention has been given on individual market segments especially the urban wholesale markets. This is critical for new market opportunities for farmers and guiding their production to meet changing consumer preferences for quantity, quality, variety, and safety. This paper is an attempt to identify the constraints of urban wholesale markets of fresh produce especially for bulk trading of vegetables, fruits and fishes. It has also opted to analyze the prospects of wholesale markets by evaluating perceptions of major stakeholders-traders, retailers and key informants. In the next sections, efforts are made to elaborate the objectives and methodologies, followed by results and discussions on problems and prospects of wholesale marketing, with strategic recommendations.

Objectives and Methodologies

This paper focuses on the wholesale markets for agriculture fresh produce in urban areas in terms of identifying their problems relating to infrastructure (for handling and transportation, storage and packaging), instruments of trade, marketing margins and maintenance of quality and safety standards. It has also examined the prospects of wholesale markets in performing the economic function of buying, selling and value-addition. Three agriculture commodities were considered, such as vegetables, fruits and fishes in two wholesale market places. The locations were *Kawranbazar*, approximately 5 kilometers from the city centre, the receiving point of fresh vegetables, fruits and fishes from the northern districts by road, and *Swarighat* (for fish) and its adjacent *Shambazar* (for vegetables) and *Badamtali ghat* (for fruits), where products are received from the southern and riverine districts by water transport.

Analysis was carried out using primary and secondary data. The primary data are collected using a set of questionnaires for the wholesalers. Thirty wholesale traders (*aaratders, who own shops/warehouses*) were interviewed. Of these, 9 were fish wholesalers *(4 from Kawran bazaar and 5 from Swarighat*), 10 were wholesalers of fruits (*5 from Kawranbazar and 5 from Badamtoli*) and 11 were wholesalers of vegetables (*6 from kawranbazar and 5 from Shambazar),* all randomly chosen from the traders of above market places. The questionnaire includes information on household and socio-economic condition, trade and establishments, facilities available in the shops/markets, personal and institutional hygiene/sanitation, prevailing problems, risks and their probable solutions, awareness about laws and regulations, involvement in associations/groups, potential barriers, prospects of wholesale trade etc. Alongside, eight[4] Focus Group Discussions (FGDs) were organized. Discussions also held with 16 Key Informants[5] who were associated with monitoring, research and management of market infrastructure for ensuring safety and quality of food stuffs. This helped to fill the information gaps and validate opinions obtained from the traders. A desk review was also conducted to gather information on agriculture and food policies of the country and findings of studies about market structure, marketing margins etc. across the chain.

Results, Discussions and Policy Implications

Production of vegetables, fruits and fish in Bangladesh

According to Bangladesh Bureau of Statistics (BBS, 1993-2006), the vegetable growing area of Bangladesh increased from 0.196 million hectares in 1993/94 to 0.302 million hectares in 2005/2006. At the same time, the production of vegetables increased from 0.129 million M. ton to 2.05 million M. ton. On the basis of the seasonal production, vegetables can be categorized into winter vegetables and summer vegetables. The winter vegetables are cabbage, broccoli, tomato, brinjal, beans, different types of bottle gourd, radish, carrots, cauliflower; ladies fingers etc and summer vegetables include sweet gourd, bitter gourd, ribbed gourd, sponge gourd, wax gourd, snake gourd etc. There are more than 90 varieties of vegetables that are grown in

[4] (1 for fish, 2 for fruits and 6 for vegetables)
[5] leaders of wholesale traders association, laborers, consumers, local political elites and central and local government officials

this country, among which 50% of different varieties are produced for commercial purpose.

Fruit crops such as mango, pineapple, papaya, jack fruit, coconut, betel nut, carambola, berfruit, blackberry, guava, litchi, cashew nut and wood apple, cover an area of about 202,024 hectares, nearly 80% of which are in home gardens. Several regions specialize in certain crops, such as banana in Jessore, mango in Rajshahi, pineapple in Chittagong and Sylhet and betel nut and coconut in the delta regions. Most of the fruits produced in the country are consumed at domestic level. About 30% of them are generally marketed, especially pineapple from Chittagong area (29% of total production), mango from Rajshahi area (about 15%) and banana from Barisal area (about 15%). For a population of 150 million, the consumption of fruits per head per year is staggeringly low, only 13.6 Kg/head/year (BBS, 2005). This is about one quarter of the fruit consumption in Europe and one-ninth of that in Australia, Hong Kong and Taiwan. This explains why a large number of fruits, particularly in the winter season, are imported to Bangladesh every year. In general, production of fruits is an attractive alternative for farmers, as the gross margins may go up to 10-12 times compared to paddy. But the risk involved is much higher for many fruits, because of price volatility and market gluts during peak season.

The total fish production in 2007-2008 was about 2.4 million MT of which nearly 80% were from inland fisheries and 20% from marine sources. Major portion (97%) of the total harvested fish is marketed internally for domestic consumption. About 50% of the inland fish production is consumed in fresh form (Chowdhury, M.H. 2004).

Marketing chain of fresh produce in Bangladesh

Several studies have analyzed market structure, done value chain analysis and identified market impediments in Bangladesh. Studies by World Bank, FAO and others reveal a generalized picture of the market structure of fruits and vegetables as follows*:* Farmer > Collector>Local Assembly Market>Primary wholesale markets> Secondary wholesale markets>Tertiary Wholesale Market>Retailers (ranging from shops to street hawkers) > Customers (see figure-1). A new dimension has been increasingly visible into the scene, that is, the modern retailing (supermarkets, hypermarkets, convenience stores) driving innovation in the wholesale sector (Shepherd, 2005; Regoverning

Markets, 2007). Thus farm produce from the northwest to consumers in Dhaka usually involves at least three different sets of agents between primary producers and final consumers. They are: collectors, traders, and retailers. It also involves three successive stages in general, viz., from farm to the local primary market, from the primary market to the urban wholesale market, and from the wholesale market to the retail market.

In Bangladesh, vegetables are generally sold by farmers immediately after harvest because of their need for cash and lack of storage facilities. FAO survey reveals that about 82% of farmers in all the regions sell horticultural crops immediately after harvest. They use head load and rickshaw vans to carry the produce to markets. Traders, wholesalers and buyers mainly use rickshaw vans and trucks. About 66% of the farmers sell their produce in weekly markets and 22% in the daily markets. Farmers usually get price information from other farmers and traders, and radio, television and newspapers. Marketing channels and involvement of intermediaries vary among regions. The FAO survey indicates that about 19% of retailers, 41% of traders and 21% of consumers buy vegetables directly from farmers. The commission of intermediaries varies by region and from crop to crop. The margin between the trader's price and the retailer's price could be as high as 150% during peak season and 200% during off season[6]. Retail and wholesale prices of vegetables fluctuate substantially from year to year and also from month to month, depending on the supply situation. Seasonality, underdeveloped marketing and transportation system, poor infrastructure and insufficient storage facilities intensify price volatility.

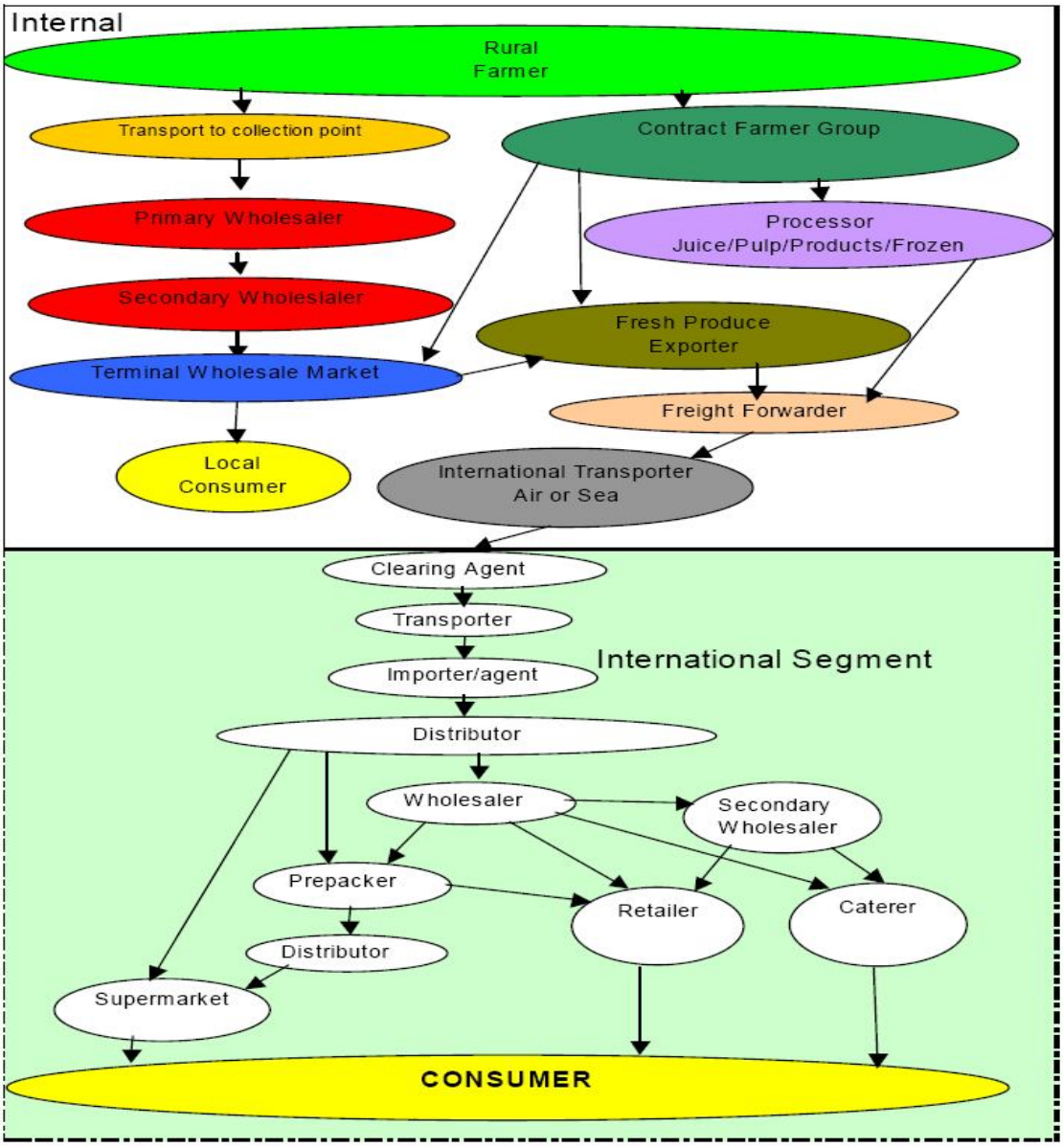
Marketing system of fruits is similar to that of vegetables. FAO survey indicates that about 36% of retailers, 27% of traders and 22% of consumers buy fruits directly from the farmers who usually sell their crops mostly in the weekly markets and partly in the roadside and daily markets.

An IFPRI study (quoted in Chowdhury, 2009) suggests a wide price spread between the prices that farmers received and the prices that consumers paid in Dhaka. Between farmer's price and wholesale price, the spread is about 42% to 46%; between farm and traditional retail price it is about 162% to 176%; and between farm and supermarket it

[6] For brinjal alone, as revealed from the study by Murshed et al (2009), however, the gross marketing margin of traders (*farias* and *beparis*) is 24.5%, where as for the *aratder*/wholesalers and the retailers it is 25.83% and 35.58% respectively.

is about 181% to 198%, while the highest price spread occurs between wholesale and retail.

Fig-1: Fruit & Vegetable Value Chain



Source: ITC (2008), *A strategy for developing the Horticulture sector of Bangladesh*

The fish marketing system in Bangladesh is traditional, complex, and less competitive but plays a vital role in connecting the fish producers and consumers. Fish marketing is almost entirely managed, financed and controlled by a group of powerful intermediaries who played a big role in fish marketing channel. The dominant marketing channel (product route to ultimate consumers) of freshwater fish for domestic consumption includes farmer>*bepary*>*aratdar*>*paiker*>retailer>consumer (Figure-2 shows a typical

structure of Hilsha fish marketing in Bangladesh). This simple channel covers primary and secondary market levels up to Upazila. Beparies do not generally hold any trade licenses, unlike aratdars. Some *beparies* get advance business loans from the *aratdars* during lean periods on the condition that they will sell their purchases through *aratdars*. From the higher secondary markets, fish flow down again to the town and peripheral village primary markets (final consuming markets) through paikers/retailers (FAO, Fish Marketing Practices). Communication between the traders in different markets is generally good and takes place by cellular phones nowadays. The least informed party is the fisherman, because of his physical isolation and that dependence on credit weaken the fisherman's bargaining position.

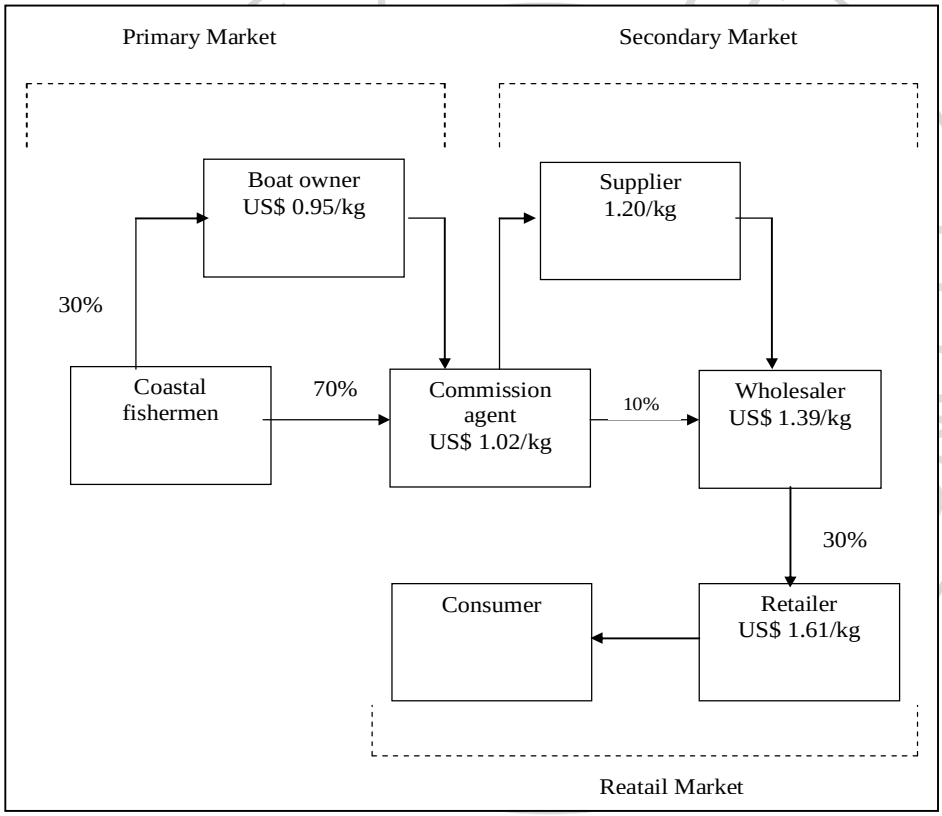


Figure-2: Hilsa marketing systems and its value chain (Nesar, 2007)

Alam (2000) identifies a new pattern for pond fish farmers who directly approach *Aratdars* at the higher secondary market. Fish farmers get 8-10% of the total sale proceeds from the lot of each catch. The farmers bear the transportation costs to the *Aratdars* in the markets and arrange bidding for open sales of fish to *paikers*[7]*/retailers.*

[7] Wholesalers also called locally as *paikars*

In lieu of providing space for fish landing, icing, and selling, *Aratdars* get commission at different rates of the sale proceeds. Thus the limited number of wholesalers, their joint actions in bidding and close understanding through their associations negate the principles of competitive market structure. Inadequate competition at the *Aratdar* level mean that the *beparies* pay relatively higher commission and the effect of this is borne ultimately by the fish farmers/fishermen, who get lower prices. That means, exploitation prevails from the farm-gate to the higher secondary market level as confirmed by the present study.

Dhaka wholesale markets- location, ownership and management

The *Swarighat* fish wholesale market is by the side of the Buriganga (the river on which Dhaka stands). It has 71 *wholesales/aaratder* trading there. It has a landing station on the river bank owned and managed by Bangladesh Inland Water Transport Authority, a state owned organization responsible for facilitating and regulating water ways and river ports. The market is a privately owned and managed since its inception long back. It has four approach roads linked to it. All are narrow and busy except the Buriganga ring dam which is about 60 feet wide having water ways adjacent to it.

The *Badamtoli ghat* fruits market is also owned and managed by private entrepreneurs, the traders associations of respective markets. It consists of a large number of independent markets having different fruit wholesale shops housed in them. The markets are in one row facing the Buriganga dam as approach road. However, the markets have other roads in between linked to them. Both imported (such as apples, orange, grapes etc) and locally produced fruits (such as banana, pineapples, mango, guava, etc) are sold here in bulk. The *shambazar*, a vegetable wholesale market, is very old. This is also privately owned and managed, except that the waste disposal is done by City Corporation. It is also adjacent to the city's main inland port (locally called 'sadar ghat').

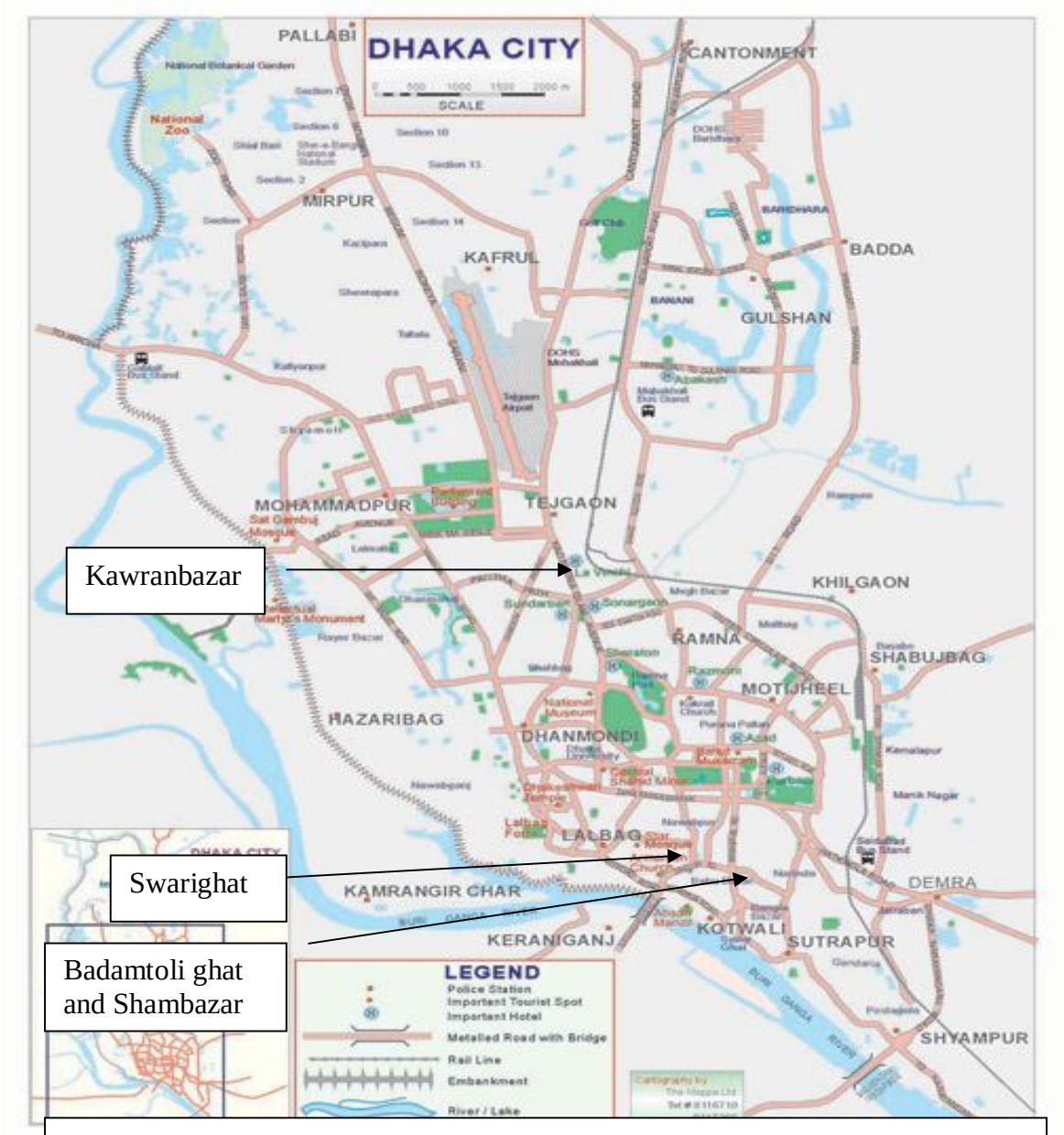


Figure-3: Dhaka city map showing the study locations

The *kawranbazar*, approximately 5 km from the city center, is another market place where all three wholesale markets are available-the fish, the fruits and the vegetables. It is the largest fresh produce wholesale market in Dhaka city, increasingly flourished in the business district of Kawranbazar. While the markets are owned by City Corporation, they are managed by traders association. The approach roads are relatively broader here among the four places depicted in this paper. In all the four markets, the approach roads are very near to the shops as the average distance of the shops from the road/water way is 0.16 km (see the map of Dhaka city in figure-1 for the market

locations). The wholesalers and retailers are mostly in favor of the existing locations, while the key informants (except the association leaders) are skeptical of the locations saying that the wholesale markets in Dhaka city must be relocated near the different entrance of the city. However, all insisted upon broadening of approach roads and more supporting role of city corporation in modernizing and regulating the markets.

The wholesale traders belong to lower middle class and middle class people

The fresh produce wholesale traders are mostly males having average age of 43 years. They do not belong to the educated section of the society as their average year of schooling is only 7 (and 7 out of 30 traders are graduated to SSC and HSC). The average size of household is 5.91, slightly above the national average. Out of 30 respondents, 19 live in *pucca*[8] house, the rest in *semi-pucca* and *kacha* house while 3 stays in the shop/aarat itself. They mostly live in two-roomed residences at an average distance of 5.48 km from the market place (the range being 0 to 50 km). The respondents are mostly dependent on this trade (23 do only fresh produce trade, others do trade plus other economic activities).

Personal and institutional hygiene: poor environment and sanitation

The traders are supported by management and accounts staffs and laborers who assist in handling and on/off-loading of fresh produces. It is revealed that 19 out of 39 respondents depend on WASA supply for drinking water, while the rest on tube wells and other sources. They mostly drink boiled water, but the staffs and laborers do drink WASA (Water and Sewerage Authority) supply water mostly. Although the support staffs and laborers use sanitary latrines in houses as well as in market places, they seldom use soap to wash their hands after defecation [only three of the respondents said they use soap for washing hands after defecation, others use only water]. They also do not wear globes for handling fresh produces. Moreover, the latrines in the markets are not adequately cleaned. The drainage facilities are inadequate as do the waste disposal arrangements run by the city corporation. The fish markets are filled in filth and bad odor making it difficult to breathe in. Usual cleaning process is not applicable as the floors are muddy, uneven and temporary.

[8] *Pucca* means brick built, *semi-pucca* means houses with brick wall but with tin roofs, *kacha* stands for houses having muddy floors and having walls made of bamboo/tin-wooden structures.

The nature and volume of fresh produce wholesale trade

The size of the shops varies from 25 square feet to 1200 square feet depending on the size of the business, the average being 216 square feet. 28 out of 30 have no other spaces to store the fresh produce they trade on. Only 2 traders said they had storage of approximately 0.5 tons. The average size of staffing is 4, with 2 office staffs and 2 laborers mostly part timers. However, in most cases, the wholesalers (except for fish wholesalers) do operate the business themselves without taking support of any staffs.

Of the traders, 3 out of 30 have their own shops, while others use rented shops. The mode of rent payments as per contracts are of four types-i) monthly fixed rental (3000-6000 taka for 15 respondents; 6000-9000 for 2 respondents and above 9000 taka for 5 respondents); ii) daily temporary (taka 200 per day, 2 respondents); iii) fixed rent plus 1/8 of the commission obtained from wholesale trading especially for fish (1 respondent); iv) percent of sale (6.1 % of sale, 1 respondent). About the rolling capital requirement, the traders need to offer '*dadon*[9]' to ensure steady supply of fish, fruits and vegetables to their aarats/shops. This is a sort of forward buying on the part of them and forward selling on the part of local suppliers, farmers and fishermen. The average amount of rolling capital need is 1.2 million taka (highly skewed range of taka 20 thousand to 8.0 million, 50 % having capital of 0.3 million taka while the remaining 50% need over 0.3 million taka). The volume of transaction varies with the type of produce they trade in. The daily purchase per fish wholesaler is over 4 tons on average, where as for fruits it is 4.5 tons and for vegetables it is 1.07 ton. The daily sale is 4.3 tons for fish, 4.3 tons for fruits and 1.0 ton for vegetables. And the average stored quantity is: fruits-0.22 ton, and vegetables 0.06 ton, while no storage for fish. The amounts of produce get damaged partially are 3.8% for fishes, 3% for fruits and 8.5% for vegetables, where as amount gets rotten (on the high side) are zero percent for fish, 8% for fruits and 20 % for vegetables.

The tax payment for wholesalers is rarely applicable as majority of them owns no shops, however, they need to collect trade license from the City Corporation (facing lot of hassle). Moreover, there have been unidentified costs in the business starting from transportation to sitting with shops which they did not disclose. These are identified as extortion in each stage of the business.

[9] Informal credit to local wholesalers and collectors who inturn offer the same to the farmers, fishermen and collectors to ensure steady supply to their ends.

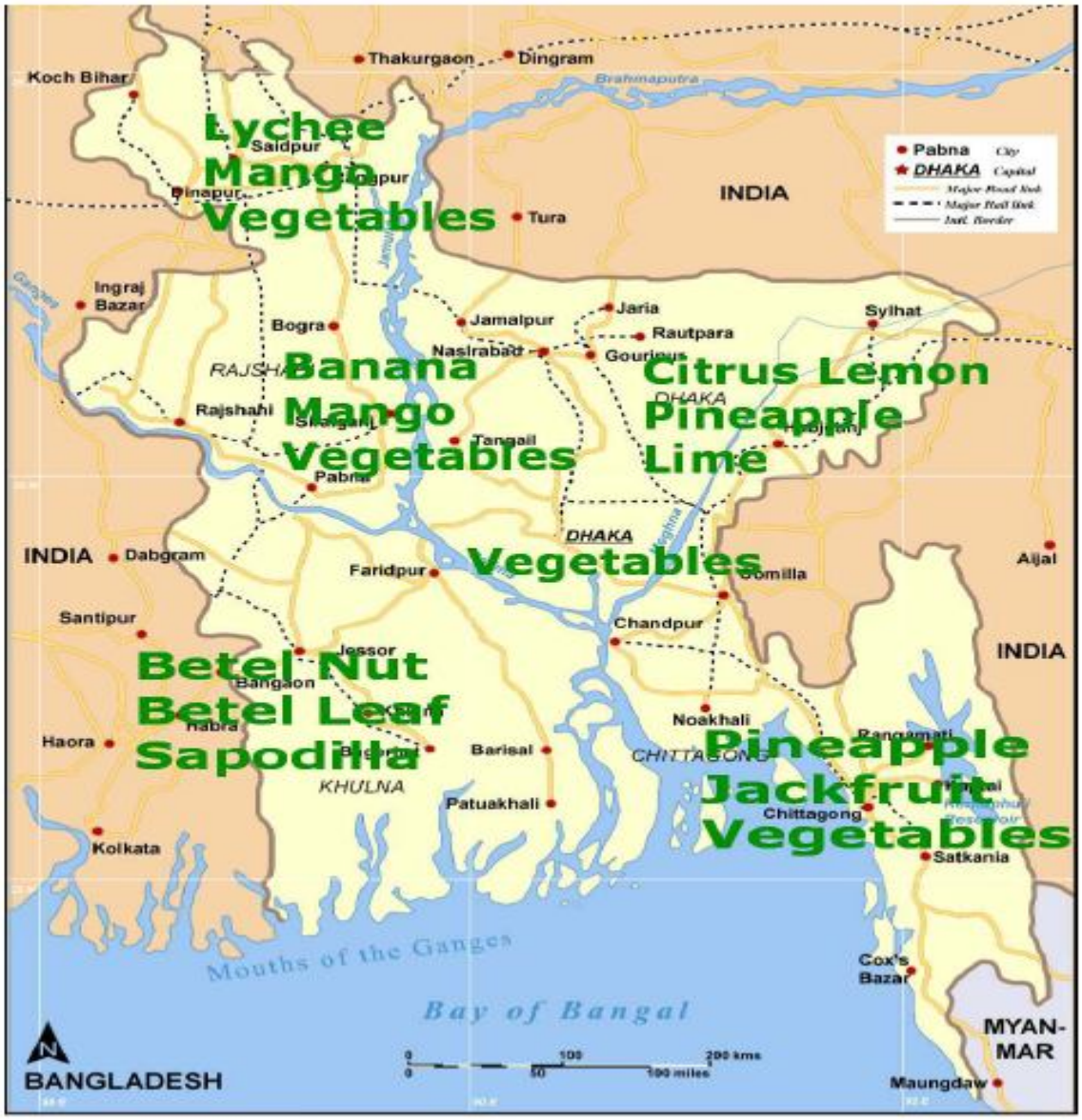
The marketing margin for fish is 5-33% (average is 17.4%) (including the *aratder* commission of 2-4%), for fruit it is 6-40% (average is 24.3%) and for vegetables it is 10-55% (average is 30%) depending on the variety and location of purchase. The average net income per month by fish wholesaler is 39800 taka[10] (taka 10000 to over taka 75000) depending on the volume of business, prevailing price and intended margin of profit. The net income per month by fruit wholesaler is on an average 36977 taka (7200 to 81000) and that for vegetables wholesaler is on an average 33000 taka (9000 to 58000). Some traders have also unrevealed other income sources.

Sources of supply and transportation

The transports used for bringing fresh produce supply to Dhaka city include mainly trucks for road ways and launches and trawlers for the river ways. The sources of fish are: Teknaf in the south-east and Potuakhli in the south west of the country for sea fish; Chandpur, Barisal and Bhola for Hilsha fish; Faridpur, Rangamati, Khulna, greater Mymensingh and for other inland sweet water fishes.

[10] 70 taka equal 1 US$

Fig-4: Main production areas for fruit and Vegetables



Source: ITC (2008)

Sources of fruits are Modhupur of Tangail district for Pineapples, Rajshahi, Dinajpur, Gazipur and Jessore for Mango and Jackfruits, Perojpur, Gazipur and Kaliganj for other domestically produced fruits, where as import is the main sources for apples, orgnges and grapes. The sources of vegetables are Natore, Munshiganj, Faridpur, Brahmin baria, Comilla, Kustia, Jessore, Chuadanga, Norshingdi, Dhaka and Bogra districts (see figure-4).

The average time for arrival of fish supply to Dhaka wholesale markets is 11.75 hours (5-24 hrs), for fruits it is 12 hrs (1-24 hrs) and for vegetables it is 8.24 hours (1.15 to 24 hrs). This implies that adequate measures (e.g. food fit transport and packaging, cool chain, and safe handling practices) are needed to preserve the quality of fresh produce on their way to Dhaka wholesale markets.

Facilities available in the Dhaka wholesale markets

Modern marketing facilities are largely absent from the wholesale market places of Dhaka city. Six respondents said that they have no facility for water washing, where as others use water stored in drums or river water. Majority opined the need for washing the premises after market hours, but the same could not be carried out regularly due to lack of water, manpower and infrastructure etc. However, some said they don't need washing as the produces are washed and retailed by the retailers. They neither get any support from the government organizations in terms of information, nor any advice regarding quality. The transport availability is sufficient according to majority respondents. The handling system is mostly manual which calls for adopting safe handling practices at both ends- load and discharge. Majority use normal storage without any provision of temperature and moisture control while 9 traders have no storage facility at all. Grading is done by eye estimation depending on the sizes and quality of the produce (rotten, partially rotten and good). Majority have no suitable packing facility, others either do not require packing or use boxes, bamboo baskets etc depending on the type of fresh produce (see pictures at appendix for facilities, environment etc.). On the labor availability, majority reported no problems, but admits of inadequacies at times. The traders need access to adequate credit, either formal or informal, the sources which require reduced formalities. Serious inadequacy of resting places for the laborers has been observed. The markets have no fire fighting facility and suffer serious shortages of power supply as well. The traders favor provision of security while transporting goods. They also demand *pucca* market infrastructure, access to associations, and easy access to markets with developed grading, storage and credit facility and ask for government interventions to address the issues and constraints.

Perception of traders about supply, quality and legal requirements

Majority of wholesale traders and retailers are not aware about food quality and safety laws and standards and practices applicable to their business. They could not specify laws they need to adhere to, except a few cited provisions on trade license and other provisions imposed by the traders associations. This resulted in undue satisfaction by majority about the quality of the produce, only four being skeptical about quality. 14 say they are satisfied with the quantum of supply while others face variability of supply.

Perceptions about groups, market information and role of stakeholders

Fifteen of the traders are members of associations while other either non-members or abstain from saying anything. The associations are market as well as product specific. However, there are apex associations of traders like Metropolitan Chamber of Commerce, Dhaka Chamber of Commerce and Industries and Federation of Bangladesh Chamber of Commerce and Industries. The traders take the view that the association can try more to promote the business by providing information, creating modern infrastructure and management. This is also echoed by key informants as well. The traders opined that they get market information from local parties (suppliers of produce-might be primary wholesalers and farmers) through mobile phones. Majority find no problem with the location, narrow roads and unusual vehicle control by the traffic police cause problems they reported.

Perceptions about risks and suggested solutions

Mr. Xian Zhu, World Bank Country Director in Bangladesh observed that *"high-value agricultural products tend to be highly perishable, and there are many risks associated with marketing these commodities. Appropriate policies and investments in key infrastructure are needed to make it viable for farmers to switch to these commodities and increase production."* The statement hold good for Dhaka wholesale markets as well. The problems and risks that are faced by Dhaka wholesale markets vary from traders to traders, types of produce and over time as well. The major risks and problems if ranked according to severity would follow this descending order: financial risks, risk of quality deterioration and security risk. The financial risks, as inherent to every business, involves non-realization of *dadon* offered to local

suppliers/wholesalers/collectors resulting in shortage of capitals and unsteady supply of produce, non-realization of money under credit sale, price variability resulting in negative profit (in case of fruits and vegetables) or loss of commission (in case of fish wholesalers). This is further aggravated by road accident, theft and extortion prevailing in different stages of transportation and handling and finally with the asymmetry in market information-prices, supply and demand. The risk of quality deterioration is influenced by inadequate storage and cool chain facility, inadequate safe handling system, inadequate personal and institutional hygiene, water unavailability, inadequacy of food fit transportation and packaging system,. This risk is likely to translate into financial risk as well. The security risks arise from inadequacy of law and order situation, robbery, theft, traffic jam and restricted movements of trucks to Dhaka city etc. This results in increased transaction cost for the business affecting profit margin. The focus group discussions with retailers and interview with key informants also confirmed the risks described above.

The solutions suggested are to gear up roles of the government and local authority, traders associations and private sector initiatives. The measures suggested are as follows:

Risks/problems	**Suggested solutions**
Uncertainty of supply	Measures to boost/sustain production-support to farmers, preserve water bodies for continued fish production and ensure safe reproduction , reduce transportation bottlenecks, investment in road infrastructure, ensure credit to the farmers/fishermen, symmetric market information
Uncertainty of prices	Strengthen market information, streamline supply
Non-realization of *dadon*	Institutional credit, enforcement of private contracts (this would increase the transaction cost though)
Quality deterioration	Improved infrastructure for storage, transportation and handling, *pucca* shops and market establishments, raising awareness about personal and market environment, ensure sanitation and waste disposal, water supply, efficient traffic control, electricity supply etc

Security risks	Improve law and order situation, ensure justice, provision of security guard, efficient traffic control

Perceptions about future barriers and prospects of fresh produce wholesale business

The present risks and problems, if not addressed with adequate focus and sincerity, might cause future barriers to the fresh produce business. The majority wholesalers are skeptical of the prospects of the fresh produce wholesale business because of prevailing uncertainties. However, the traders, the retailers and the key informants envisaged good prospect if supply is ensured, market information are made transparent, easy entry and exit of market players are ensured, export chains are established and infrastructural and quality impediments are eliminated. Public-private partnership, active professional association and improvement of market place management might bring sustained prospect in the trade. This will bring benefit to all: the consumers, the traders, the retailers and the farmers.

While private sector investment necessarily leads the development of high-value agriculture and agribusiness, the role of the government remains essential in fostering an enabling business environment and investment climate. It does so by providing critical public goods and services and stable and undistorted economic incentives. This is particularly consistent with the 2008 World Development Report '*Agriculture for Development'*, which outlines that GDP growth attributable to agriculture can benefit the income of the poor two to four times more than that are attributable to other sectors. High-value fresh produce from agriculture, together with new markets and technological innovations, are new opportunities to producers and traders alike.

Need for renewed focus of policies and strategies

The perishability of high value fresh produce like fish, fruits and vegetables requires careful handling, special facilities (pack houses, cold storage, and refrigerated transport), and rapid delivery to consumers to maintain quality and reduce physical and nutritional losses. Like many developing countries, Bangladesh's market chains of these products are long and suffer from poor access to roads and electricity, inadequate infrastructure and services etc which add to the transaction costs and cause quality

deterioration and high losses. Market infrastructure and facilities in urban market, as revealed from this study, are often limited and congested, increasing the difficulty of trading such perishable goods.

In addition to the price and supply uncertainty, new and emerging challenges are peeping in- like i) a new business environment where agrifood business is having an increasing concentration of suppliers, intermediaries, and sophisticated retailers like supermarkets and is likely to stimulate new methods of differentiation and spur a more intense drive for new supply sources; ii) a new regulatory environment is emerging as more and more food is traded globally where developing countries like Bangladesh are having barriers of standards. The wholesale markets need to cope with the new challenges. The present study got these signals from the wholesale traders. This could result in disarraying problems for farmers as well as consumers and therefore calls for renewed focus of policies and strategies. Although Bangladesh National Food Policy 2006, the National Agriculture Policy and the revised PRSP II put emphasis on promoting production and marketing of high value agriculture produces, integrated steps are not yet taken to raise awareness of all. It appears that private sector at the level of leading Chambers and Product Association is also not adequately tuned up; firstly, because they consider it the responsibility of the government and secondly, possibly, they neither have adequate resources, nor do they seriously feel the punch yet. Only one private sector foundation (Hortex Foundation) and one NGO (Bangladesh Rural Advancement Committee-BRAC) are apparently working in this area all throughout the chain. The renewed focus of policies should therefore pursue the following: i) the extent and usefulness of the wholesale sector in quality management across the chain and in raising competitiveness among the players; ii) pursue a broad-based capacity building, the means of which could be *awareness and recognition* at the level of users, implementers and policy-makers.. The policy should seek public-private partnership, donor-GOB partnership etc as this huge task of capacity building ahead cannot be taken care of by the Government of Bangladesh (GOB) alone. Moreover, the policies need to address the bottlenecks at the operational level- lack of infrastructural facility; lack of access to information; lack of coordination and monitoring system; limited technology choice; vulnerability to market access barriers; diseconomies of scale of operation etc. Associations of wholesale traders have the potential to both facilitate the work of their

members and to achieve greater efficiency in the marketing chain. By working together as associations of traders, they can contribute to the reduction of marketing transaction costs, reduction of risk, improvement of liaison with market managers and provide important welfare services.

Conclusion

The wholesale markets provide most small farmers with effective and profitable outlets. They are important for maintaining sustained flow of fresh produce to the retail markets, thus offering benefits to the low income consumers as well. While the private sector will continue to take the lead in developing high-value agriculture and related agro-business, the role of government remains essential in fostering an enabling business environment for market-led growth through stable and undistorted economic incentives and in providing critical public goods and services where private sector is less interested in. Closer collaboration between the public sector, nongovernmental organizations, and the private sector would be extremely beneficial in addressing the combinations of opportunities, risks, and challenges embedded in the wholesale marketing environment in Bangladesh.

This study findings, although commensurate with those of other studies, the results need to be used keeping in mind of the limitations-the low sample size, focus on only one segment etc. Close observation and analysis of each segment of the market chain is likely to help get a better picture.

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Appendix: Environment & Facilities-Fresh produce wholesale market