

ASSESSING LOCAL AND URBAN NATIVE FRUIT MARKETS IN SYLHET DISTRICT, BANGLADESH

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Abstract

An exploratory survey was conducted to assess the urban and local market situation of native or locally available fruit species in Sylhet district of northern Bangladesh. A total of 95 respondents both from urban and local market were interviewed to understand different market situation in the area. Study identified the availability of thirty-four native fruit species among the markets. The study revealed that, selling of local fruits comprises primary occupation for about 76.36% urban fruit sellers and 12.5% for local fruit sellers. Again 74.74% respondents from both markets engaged full time in fruit selling. It was observed that, the shop condition and marketing channel was varied among different markets. The price, sources and problems regarding local fruits were also found different at different markets. Study concluded that, technical and financial supports and proper policy intervention is obligatory to improve the prevailing market situation.

Keywords: Native fruits; Local market; Urban Market; Seasonal availability; Lean period; Homestead.

INTRODUCTION

Bangladesh is blessed with many tropical horticultural (or fruit) species mainly due to its favorable geo-climatic conditions. More than sixty local or native fruits are being grown in the country for decades (Hosssain, 1998; Das, 1987). In addition to these a lot of new varieties and races have introduced and been naturalized in the country in last years. The total cultivated area of fruit crops in the country is about 0.69 million ha. which is about 5% of the total cropped area.

Beside estimated fruit production in the country is 1.49 million tons and yield per year is 8.24 tons/ha (Abedin, 2006; BBS, 1995). Notwithstanding covering a small proportion of total cropped area, the share of fruit crops to total value of crops in the country is about 7.8% and its contribution to GDP (Gross Domestic Product) is

around 2.04% (Mondal, 1992). The gross incomes from fruit crops are estimated to about 4.7 times higher than that of other crops in Bangladesh (Uddin & Hasan, 2002).

Human civilization is irrevocably linked with the culture of fruit plants for edible fruits. The mango (*Mangifera indica*) for example; has been in cultivation for more than 6000 years, and is one of the oldest tropical fruits indigenous to Indian sub-continent. The commercial production of fruit trees started at the beginning of the 18th century. Traditionally in Bangladesh, fruit trees were cultivated as a backyard crop or as a boarder trees to fulfill the family requirements. These species in fact, considered as one of the prime source of micro-nutrients like vitamins and minerals among the rural farm owners (Shaha, 1997). Since the

beginning of the 20th century, a wide variety of local fruit trees are grown in Bangladesh on a commercial basis and as mentioned earlier contributed to the national economy. Most probably recognition of higher nutritional value, availability in the local markets, seasonal diversity and comparative low price are the most common factors enhanced marketing and production of local fruits the country. So far, several studies have been conducted on various aspects of production and marketing of these local fruit in various parts of the country (see, Hossain & Uddin, 2005; Uddin *et. al.* 2005a; Uddin *et. al.* 2005b; Uddin & Hasan, 2002 for example). However, no studies have yet been conducted to cover such things in northern territory of the country which is as well famous for some endemic fruit species like; satkara (*Citrus hystrix*), orange (*Citrus aurantium*), pineapple (*Ananas sativus*) etc. within the country. Our study was aimed to assess the urban and local market situation of locally available native fruits of the country i.e., their price variation, sources, seasonal availability, major production and marketing problems, marketing channel etc.

MATERIALS AND METHODS

Study site description

The study was conducted in Sylhet district located in north-eastern part of Bangladesh (**Figure 1**). The area lies in between 23°55' and 24°09' north latitude and between 90°55' and 91°08' east longitude. It is one of the four districts (i.e. Sylhet, Habiganj, Maulvibazar and Sunamganj) covered by most recently established Sylhet division of the country. The area of the district is 3490.40 sq. km.; comprising 2.43% total landmass of the country. The district is bounded on the

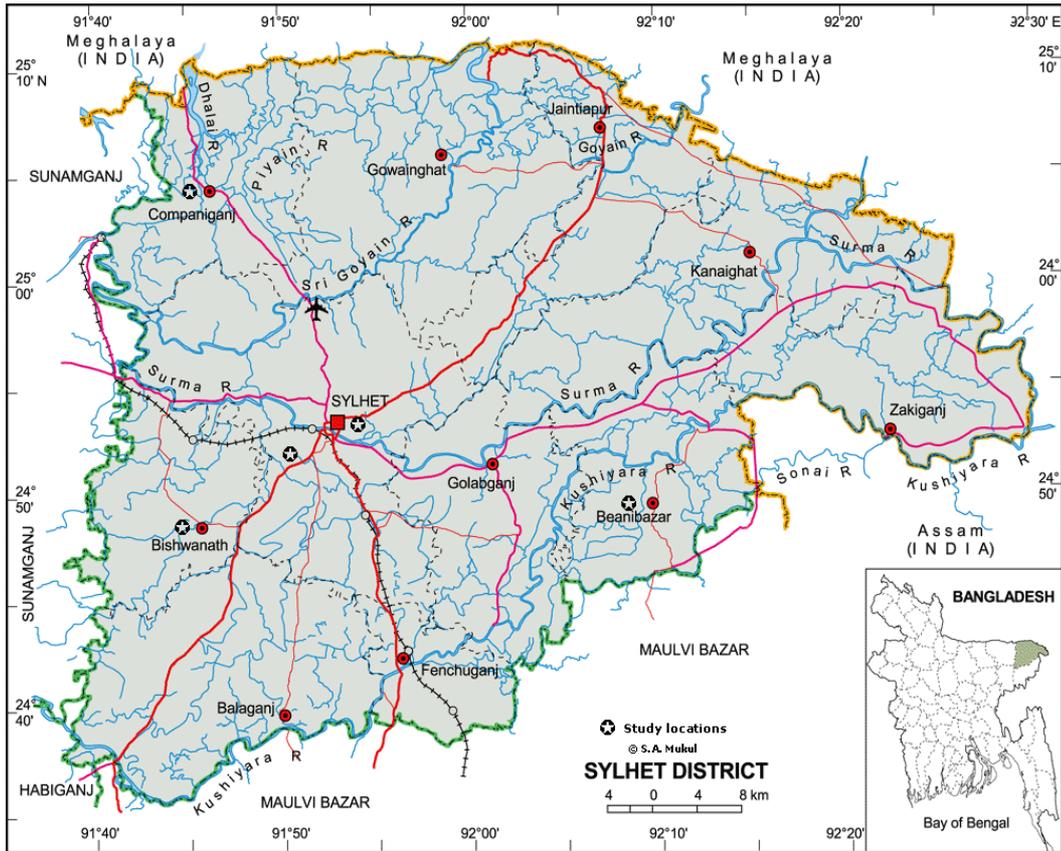
north by Khasia-Jainta hills of India, Maulvibazar district on the south, Kachhar and Kaimganj district of India on the east and Sunaganj and Habiganj districts on the west. Administratively, the district consists of 11 thana/upazillas (administrative entity; sub district) (Islam, 2003).

Geographically the area is ormed mostly by plain land and wetlands with a numerous number of hillocks, locally called *tilla*. The soil of the area is generally sandy loam to clay loam. Average annual rainfall is, 4435 mm; one of the highest rate recorded in the country. The relative humidity of the area remains high most of the year and varies between 75-90%. The three main seasons prevailing in the area are, monsoon (May-August); winter (September-January) and summer (February- April).

Methodology

The study was conducted through a systematic exploratory survey over a period of seven month from November, 2005 to May, 2006. A supplementary study to collect some additional information missing during survey time was also carried out in June 2007. Among eleven thana /upazillas of the Sylhet district, we selected four thana/upazillas, namely; Sylhet sadar, Beanibazar, Companigong and Biswanath randomly. Later we adopted a simple random sampling method to locate the local/urban market as primary sampling unit and local fruit seller as ultimate sampling unit. A total of 12 markets residing both in urban and local areas of the representative thana/ upazillas were selected for the survey (**Table 1**).

Figure 1. Map of study area indicating survey locations



During the survey we interviewed 95 respondents (i.e. local fruit seller) from the selected local/urban markets and there were altogether 55 respondents from urban markets and 40 respondents from local fruit markets. A pre-set questionnaire focusing our study interests

was used while interviewing. On each topic of the questionnaire the respondents were free to express his/her views. We also used information's from our personal observations and from other secondary sources when applicable.

Table 1. Survey locations and number of local fruit seller's interviewed

Name of the Thana/Upazila	Market and no. of respondent (in parenthesis) surveyed	Total no. of respondents
Sylhet Sadar	Bandar bazaar (13), Ambarkhana (11), Subid bazaar (5)	29
Beanibazar	Beani bazaar (7), Bairagi bazaar (9), Thana bazaar (5)	21
Companigonj	Companigonj bazaar (9), Toker bazaar (11), Islamganj bazaar (6)	26
Biswanath	Biswanath bazaar (10), Singher Kach bazaar (4), Bairai bazaar (5)	19

RESULTS AND DISCUSSION

General information of the respondents

The total respondent surveyed in twelve different markets (Table 1) located both in urban and rural areas Sylhet district were 95 people. Among them four were female and the rest were male. A great variation was observed in case of age, sex and educational status of the respondents in different markets (Table 2). We have found four female fruit seller in the local

or rural markets, but all of them were below 13 years of old. Most of the respondents (49.09%) found to sell local fruits at urban markets were found in between 20-31 years of old. Again, majority (42.11%) of the respondents in local markets were found illiterate where most people (43.64%) from the urban markets passed the primary level education. Table 2 shows the summary information of the respondents.

Table 2. Summary information of the respondents

Variables	Category	Urban market (55)		Local market (40)		Percentage (%)
		No. of respondent	Percentage (%)	No. of respondent	Percentage (%)	
Age distribution	<10 years	-	00	1	2.5	1.05
	10-20 years	11	20	9	22.5	21.05
	21-30 years	27	49.09	15	37.5	44.21
	31-40 years	10	18.18	7	17.5	17.89
	41-50 years	6	10.91	7	17.5	13.68
	51-60 years	1	1.82	1	2.5	2.11
Sex	Male	55	100	36	90	95.79
	Female	-	00	4	10	4.21
Educational status	Illiterate	17	30.91	23	57.5	42.11
	Primary	24	43.64	14	35	40.00
	Junior secondary	8	14.55	2	5	10.53
	Secondary or above	6	10.91	1	2.5	7.36

Study revealed that, fruit business was the primary income generating occupation of about 49.5% respondents; however

most of them (42 person) were from urban markets. Agro-farming was found as the primary occupation of the respondents

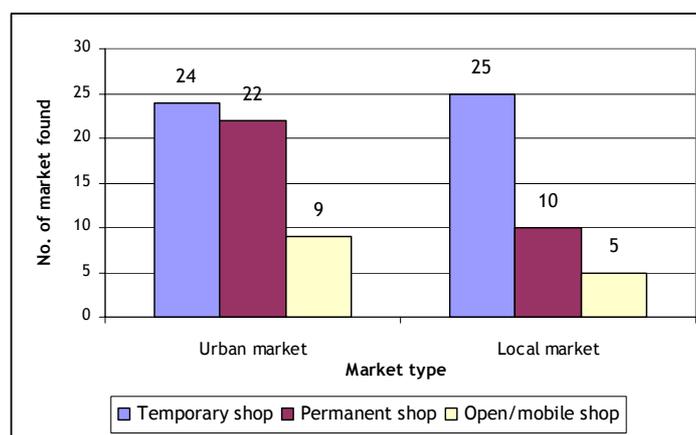
(55%) from local markets, selling of fruits was their side business. It was also found that 78.18% respondents from urban markets engaged full time in fruit selling, 5.45% seasonal and 16.36% do it as a part time basis (**Table 3**). On the other hand 70%, 17.5% and 12.5% respondents from the local markets occupied themselves in full time, part time and seasonally in fruit selling. The mean monthly income of the respondents was also varied between local and urban markets. It was observed that,

majority of the respondents (29.47%) earned between 2,001-4,000 Tk/month. Again most (62.5%) of the fruit shop in local markets was found temporary whereas in urban area; 43.63% was temporary and 40% was permanent shop (**Figure 2**). Only 25% shop in the local markets was permanent (building). There were also some (14.75%) shops without having any permanent place or infrastructure.

Table 3. Primary occupation, working pattern and income (from selling local fruit) category of the respondents

Variables	Category	Urban market (55)		Local market (40)		Percentage (%)
		No. of respondent	Percentage (%)	No. of respondent	Percentage (%)	
Primary occupation	Fruit business	42	76.36	5	12.5	49.5
	Farming	-	00	22	55	23
	Fruit + vegetable business	11	20	12	30	24.5
	Others	2	3.64	1	2.5	3
Working condition	Full time	43	78.18	28	70	74.74
	Part time	3	5.45	7	17.5	10.53
	Seasonal	9	16.36	5	12.5	14.73
Mean monthly income	Below 1,000 Tk	2	3.64	8	20	10.53
	1,001-2,000 Tk	14	25.45	11	27.5	26.32
	2,001-4,000 Tk	15	27.27	13	32.5	29.47
	4,001-6,000 Tk	4	7.27	7	17.5	11.58
	6,001-8,000 Tk	1	1.82	-	00	1.05
	8,001-10,000 Tk	10	18.18	1	2.5	11.58
	above 10,001 Tk	9	16.36	-	00	9.47

Figure 2. Type of local fruit shops in urban and local markets



Fruit species available at different markets and their seasonal availability

A total of 31 local fruit species belonging to 21 families were recorded during our study period (Table 4). Species were recorded mainly from the family Rutaceae (7 spp.) and from Myrtaceae (3 spp). In most cases it was observed that, the respondents use to sell local or indigenous fruits with imported or exotic fruit species (Apple, Grape, Pomegranate etc). A variation was found on the abundance of local fruit species in urban and local

market. The most common species found in the urban markets were– mango, jackfruit, pineapple, and satkara. On the other side, mango, pineapple, satkara, orange and pummelo were the most common species in the local markets. It was also observed that, majority of the local fruit species frequently found in both markets during the summer (12 species) and monsoon (11 species) followed by whole year (7 species) and during the winter (4 species) (Figure 3).

Table 4. Locally available fruit species at different market of Sylhet city

Sl. no.	Family	Scientific name	Local name	Plant form	Season	Reported from (%)	
						U. market	L. market
01.	Anacardiaceae	<i>Mangifera indica</i> L.	Aam	Tree	Summer	87.27	85
02.		<i>Spondias pinnata</i> (L.f.) Kurz	Amra	Small tree	Monsoon	38.18	70
03.	Annonaceae	<i>Annona reticulata</i> Linn.	Ata	Shrub	Winter	65.45	67.5
04.	Apocynaceae	<i>Carissa carandus</i> L.	Karamcha	Small tree	Monsoon	34.55	65
05.	Bromeliaceae	<i>Ananas sativus</i> (Lindley) Schultes f.	Anarash	Herb	Summer	80	80
06.	Caricaceae	<i>Carica papaya</i> Linn.	Pepe	Shrub	Whole year	50.90	72.5
07.	Cucurbitaceae	<i>Cucumis melo</i> L.	Bangi	Climber	Summer	38.18	55
08.		<i>Citrullus lanatus</i> (Thunb.) Mans.	Tormuj	Climber	Summer	52.73	67.5

09.	Dilleniaceae	<i>Dillenia indica</i> Linn.	Chalta	Tree	Monsoon	34.55	60
10.	Ebenaceae	<i>Diospyros embryopteris</i> Pets.	Gab	Medium tree	Monsoon	32.73	62.5
11.	Elaeocarpaceae	<i>Elaeocarpus robustus</i> Roxb.	Jalpai	Medium tree	Summer	43.64	55
12.	Euphorbiaceae	<i>Phyllanthus emblica</i> Linn.	Amloki	Medium tree	Winter	40	65
13.	Guttifereae	<i>Garcinia paniculata</i>	Toikor	Medium tree	Summer	32.73	52.5
14.	Leguminosae	<i>Tamarindus indica</i> Linn.	Tetul	Tree	Whole year	38.18	52.5
15.	Moraceae	<i>Artocarpus lakoocha</i> Roxb.	Dewfal	Tree	Monsoon	34.55	70
16.		<i>Artocarpus heterophyllus</i> Lamk.	Kathal	Tree	Summer	87.27	82.5
17.	Musaceae	<i>Musa</i> spp. Linn.	Kala	Herb	Whole year	69.09	75
18.	Myrtaceae	<i>Psidium guajava</i> Linn.	Peara	Medium tree	Monsoon	67.27	77.5
19.		<i>Syzygium cumuni</i> (Linn.) Skeels	Jam	Tree	Summer	56.36	72.5
20.		<i>Eugenia javanica</i> L.	Jamrul	Medium tree	Monsoon	50.90	60
21.	Oxalidaceae	<i>Averrhoa bilimbi</i> Linn.	Bilimbi	Small tree	Monsoon	38.18	42.5
22.		<i>Averrhoa carambola</i> Linn.	Kamranga	Small tree	Monsoon	43.64	67.5
23.	Palmae	<i>Cocos nucifera</i> Linn.	Narikel	Palm	Whole year	50.91	57.5
24.		<i>Borassus flabellifer</i> Linn.	Tal	Palm	Summer	43.64	55
25.	Punicaceae	<i>Punica granatum</i> L.	Dalim	Shrub	Winter	58.18	45
26.	Rhamnaceae	<i>Ziziphus mauratiana</i> Lamk.	Boroi/ Kul	Tree	Summer	70.91	65
27.	Rutaceae	<i>Citrus medica</i> L.	Adha jamir	Shrub	Whole year	50.91	52.5
28.		<i>Aegle marmelos</i> (Linn.) Correa	Bel	Tree	Summer	69.09	70
29.		<i>Citrus acida</i> (Linn.)	Jambura	Small tree	Monsoon	76.36	82.5
30.		<i>Citrus aurantium</i> Linn.	Kamala	Shrub	Winter	65.45	80
31.		<i>Citrus jambhiri</i> L.	Misti lebu	Shrub	Whole year	50.91	72.5
32.		<i>Citrus grandis</i> (Linn.) Osbeck	Sashni	Shrub	Whole year	49.09	60
33.		<i>Citrus hystrix</i> DC.	Satkara	Small tree	Monsoon	87.27	85
34.	Sapindaceae	<i>Litchi chinensis</i> Sonn.	Lichu	Tree	Summer	38.18	70

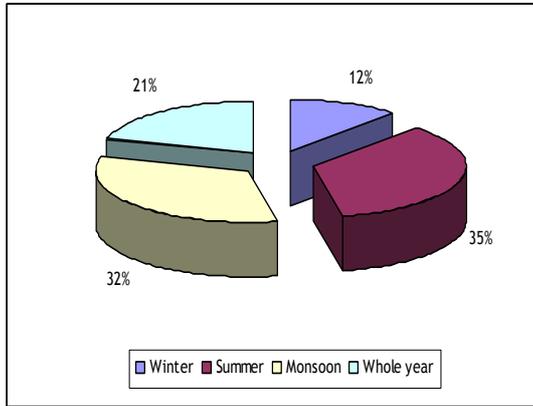


Figure 3. Seasonal availability of local fruit species



Figure 4. A temporary local fruit shop at Amborkhana of Sylhet city (Photo: S.A. Mukul)

Price variation at different markets and season

The price of local fruits was found sensitive to markets and seasons. Price was found lower in local markets and comparatively higher in urban markets. The reason of relative low price in the local markets was mainly due to available flow of local fruits from homestead and other sources. The urban fruit sellers on the other hand reported retail market or whole sell market as their major source of

local fruits. The unit price for buying and selling of various local fruits and available sources at different markets found during the study period is shown in **Table 5**. Our study also evident that, some local fruit species were found in both the markets during lean period (i.e. early season; late season and off period) with comparatively higher prices than that of regular period. **Figure 5** illustrates the average price of some common local fruits species at different markets and in lean period.

Table 5. Price variation and sources of native fruit spp. at different market and in lean period

Sl. no.	Local name	Buying price/unit	Sell price/unit		Price at lean period	Source						
			U. market	L. market		U. market		L. market				
						H		W	O	H	W	O
01.	Aam	15-20 Tk/kg	25-40	20-25	-	-		✓	✓	✓	✓	✓
02.	Amra	40-50 Tk/100 pc	100-200 Tk/100 pcs	100-150 Tk/100pcs	-	-		✓	-	✓	✓	-
03.	Ata (big)	5-7 Tk/pc	20-30 Tk/pc	12-15 Tk/pc	-	-		✓	-	✓	✓	-
	Ata (small)	10-15 Tk/pc	35-40 Tk/pc	25-30Tk/pc	-	✓		✓	-	✓	-	-
04.	Karamcha	5-6 Tk/kg	10-12 Tk/kg	6-8 Tk/kg	-	-		✓	-	✓	✓	-

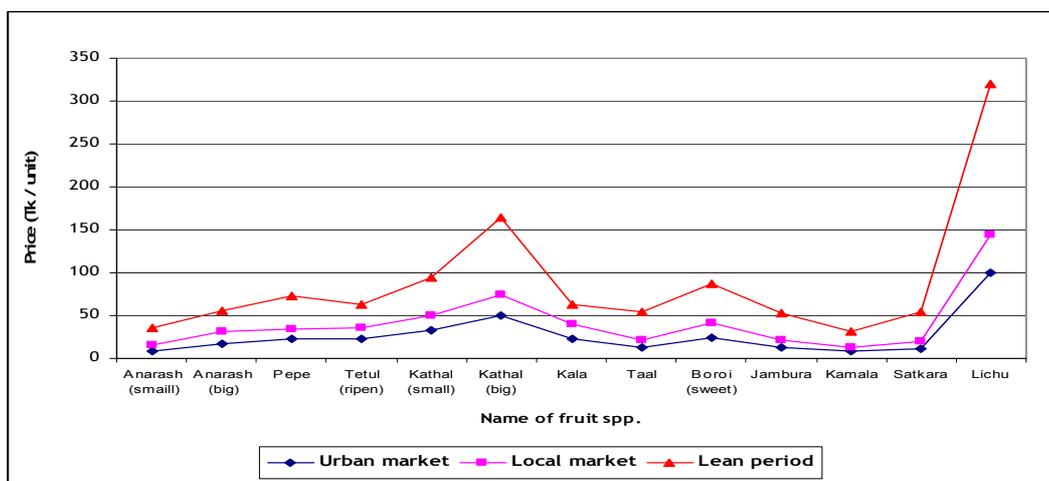
05.	Anarash (small)	5-7 Tk/pc	8-10 Tk/pc	6-7 Tk/pc	15-25 Tk/pc	-	✓	-	✓	✓	✓
	Anarash (big)	10-12 Tk/pc	15-20Tk/pc	12-15 Tk/pc	20-30 Tk/pc	-	✓	✓	-	✓	✓
06.	Pepe	10-15 Tk/pc	20-25 Tk/pc	10-15 Tk/pc	35-40 Tk/pc	✓	✓	-	✓	-	-
07.	Bangi	25-35 Tk/pc	30-35 Tk/pc	20-25 Tk/pc	-	-	✓	-	-	✓	-
08.	Tormuj	10-15 Tk/pc	25-30 Tk/pc	15-25 Tk/pc	-	-	✓	-	✓	✓	✓
09.	Chalta	3-8 Tk/pc	8-10 Tk/pc	5-7 Tk/pc	-	✓	✓	-	✓	-	-
10.	Gab	2-3 Tk/pc	5-6 Tk/pc	3-4 Tk/pc	-	-	✓	-	✓	-	-
11.	Jalpai	7-8 Tk/kg	12-15 Tk/kg	10-12 Tk/kg	-	-	✓	-	✓	✓	-
12.	Amloki	8-10 Tk/kg	25-30 Tk/kg	12-15 Tk/kg	-	-	✓	-	✓	✓	-
13.	Toikor	4-5 Tk/pc	5-7 Tk/pc	4-5 Tk/pc	-	-	✓	-	✓	-	-
14.	Tetul (ripen)	8-9 Tk/kg	20-25 Tk/kg	12-15 Tk/kg	25-30 Tk/kg	-	✓	-	✓	-	-
	Tetul (green)	4-5 Tk/kg	8-10 Tk/kg	4-5 Tk/kg	-	✓	✓	-	✓	-	-
15.	Dewfal	12-15 Tk/kg	25-30 Tk/kg	15-16 Tk/kg	-	-	✓	-	✓	-	-
16.	Kathal (small)	10-15 Tk/pc	25-40 Tk/pc	15-20 Tk/pc	40-50 Tk/pc	-	✓	✓	✓	✓	✓
	Kathal (big)	20-25 Tk/pc	40-60 Tk/pc	20-30 Tk/pc	80-100 Tk/pc	-	✓	✓	✓	✓	✓
17.	Kala	10-12 Tk/dz	20-25 Tk/pc	15-20 Tk/dz	20-25 Tk/ dz	-	✓	-	✓	✓	-
18.	Peara	2-3 Tk/pc	4-7 Tk/pc	2-3 Tk/pc	-	-	✓	-	✓	✓	-
19.	Jam	8-10 Tk/kg	20-30 Tk/kg	10-12 Tk/kg	-	-	✓	-	✓	-	-
20.	Jamrul	10-12 Tk/kg	20-25 Tk/kg	10-12 Tk/kg	-	-	✓	-	✓	-	-
21.	Bilimbi	5-8 Tk/pc	12-15 Tk/kg	7-9 Tk/kg	-	-	✓	-	✓	✓	-
22.	Kamran ga	5-6 Tk/kg	10-12 Tk/kg	5-6 Tk/kg	-	-	✓	-	✓	-	-
23.	Narikel	5-6 Tk/pc	10-15 Tk/pc	8-10 Tk/pc	-	-	✓	-	✓	-	-
24.	Taal	5-7 Tk/pc	10-15 Tk/pc	8-10 Tk/pc	30-35 Tk/pc	-	✓	-	✓	-	-
25.	Dalim	7-8 Tk/pc	14-18 Tk/kg	8-12 Tk/kg	-	-	✓	-	✓	✓	-
26.	Boroi (sour)	12-13 Tk/kg	12-15 Tk/kg	10-12 Tk/kg	-	-	✓	-	✓	-	-
	Boroi (sweet)	15-20 Tk/kg	20-30 Tk/kg	15-18 Tk/kg	40-50 Tk/kg	-	✓	-	✓	✓	-
27.	Adha jamir	5-6 Tk/pc	9-10 Tk/pc	5-6 Tk/pc	-	-	✓	-	✓	-	-

28.	Bel (small)	5-6 Tk/pc	8-10 Tk/pc	5-6 Tk/pc	-	-	✓	-	✓	-	-
	Bel (big)	6-8 Tk/pc	12-15 Tk/pc	6-7 Tk/pc	-	-	✓	-	✓	✓	-
29.	Jambura	4-5 Tk/pc	12-15 Tk/pc	7-8 Tk/pc	30-35 Tk/pc	-	✓	-	✓	-	-
30.	Kamala	6-7 Tk/pc	6-10 Tk/pc	5-6 Tk/pc	15-20 Tk/pc	-	✓	✓	✓	✓	✓
31.	Misti lebu	10-15 Tk/pc	20-25 Tk/pc	12-15 Tk/pc	-	✓	✓	-	✓	-	-
32.	Sashni	4-5 Tk/pc	5-7 Tk/pc	4-5 Tk/pc	-	-	✓	-	✓	-	-
33.	Satkara	7-8 Tk/pc	10-12 Tk/pc	8-10 Tk/pc	30-40 Tk/pc	✓	✓	-	✓	✓	-
34.	Lichu	30-40 Tk/100 pcs	80-120 Tk/100pcs	40-50 Tk/100pcs	150-200 Tk/100pcs	-	✓	-	✓	✓	-

Note: pc/pcs- piece/pieces; dz- dozen

H- homestead/homegarden; **W-** whole sell market; **O-** other sources, like; orchards, local market etc.

Figure 5. Average price of the fruit species in local and urban market and in lean period

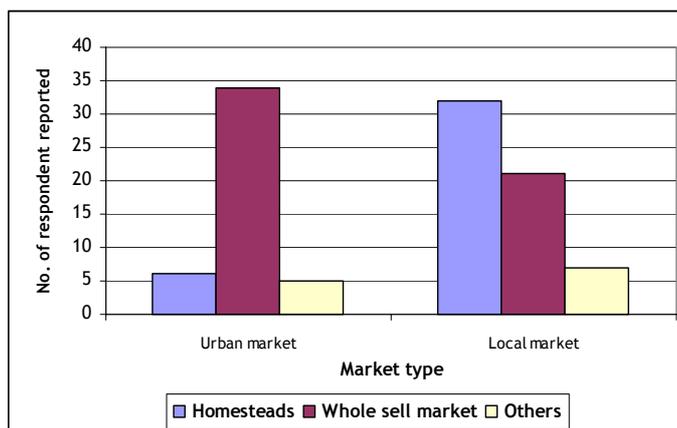


Different sources of local fruits in different markets

During the survey period it was found that, most of the recorded fruit species in local fruit markets were collected mainly from homesteads whereas sellers from

urban market mainly collected fruits from whole sell or retail market (**Figure 6**). Around 41.5% fruit sellers of the area collected fruits from local markets followed by 24.21% from middle men, 18.95% from orchards and 15.79% from homesteads.

Figure 6. Different sources of local fruits in different markets



Local problems regarding production and marketing of fruits

We documented several problems related to marketing and production of local fruits at different markets of the area. These were however, not equally significant for

both the markets. It was found that, lack of capital was the main problem in both markets. We also observed that, the impact of hartals (or ban) and high shop rent had greater impact on urban markets than that of local markets (Table 6).

Table 6. Problems regarding marketing and production of local fruits

Type of problems	Urban market	Local market
Lack of capital	+++	+++
Political uncertainty (i.e. hartal or banns)	+++	++
Poor product price due to middle man	+++	++
Failure to adjust with changing market	++	+++
Poor marketable surplus	++	++
Inefficient marketing facilities	+	++
Lack of co-operation among local traders/producers	++	++
Poor transportation facilities and high charges	+	++
High rent and other cost	+++	+
Lack of adequate storage facilities	+++	+
Inadequate market information	++	+++
Poor technical knowledge regarding handling of local fruit	++	++

Note: Based on respondents perception,

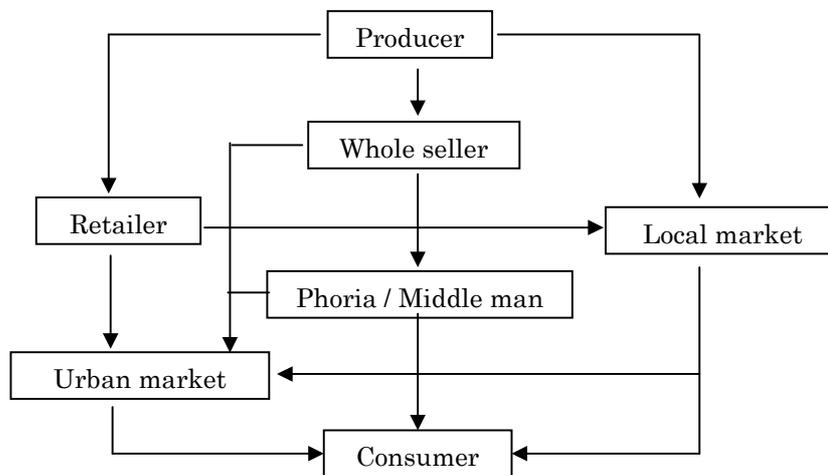
+++having high impact; ++having moderate impact; +-negligible impact

Marketing channel

Marketing channel of local fruit species was found different at different markets. The product flow in urban market was found much more complex than that of local markets. This complex product chain

is in fact one of the main factor resulting comparative high product price at urban markets. A generalized flow chart of local fruits at different markets of the area is described by **Figure 7**.

Figure 7. Marketing channels of local fruits in Sylhet district



CONCLUSION

Although our study was carried out in Sylhet region but some of its results were coincide with the findings of some earlier studies conducted different parts of the country (see Hossain & Uddin, 2005; Uddin *et. al.* 2005a; Uddin *et. al.* 2005b; Uddin & Hasan, 2002 for example). During the study we realized that, selling of local fruits have a significant contribution on the livelihoods and income of the respondents, which has sometimes found as their major livelihood option. However it was observed that, although the supply and production of some common local fruits were increasing due to higher market demand but for some unpopular species it was found decreasing mainly due to poor consciousness and shrinking of local

sources. Government and various non-government development organizations should play immediate role to improve this difficult situation. They should provide technical and other necessary supports to incorporation and cultivation of these local fruit species in homestead agroforestry system and utilize the waste land and other vacant places for planting of fast growing, profitable local fruit species. They should also assist the fruit sellers by providing loan and other technical supports and by improving market facilities.

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