Tea Production and Trade Advances in Bangladesh: A Comparative Analysis in Global Market

Mustari Alam^{1,} Shammi Akter^{2.}

^{1,2} Assistant Professor, Department of Business Administration Stamford University Bangladesh

Abstract: Tea has been one of the main agricultural export items for many developing countries like Turkey, China, Sri Lanka or Bangladesh. According to Wikipedia, Bangladesh ranks tenth in the world production of tea whereas the position was 6th in 2000 AD. Bangladesh faced strong competition with Kenya, Malawi, India and Sri Lanka for good quality tea at cheaper price. Also the shifts in the composition of demand for tea in the developed importing countries have had unfavorable effects on aggregate export earnings from tea following trade imbalance. The economic agenda involved in the production and marketing of tea is markedly different now compared to the 1970's and 1980's. A collective approach to tea production and promotion would eventually result in increased profits and reduced costs to all the producers. The aim of this paper is to figure out the existing scenario of tea sector in Bangladesh and competitiveness of Bangladesh with other producers. Furthermore, tea production, consumption and export levels for Bangladesh and other developing countries have been emphasized. Finally, the development procedure in tea sector of Bangladesh has been highlighted. **Keywords:** Tea production; Trade imbalance.

I. Introduction

Tea is the agricultural product of the leaves. After water, tea is the most widely-consumed beverage in the world. There are at least six varieties of tea; white, yellow, green, oolong, black and pu-erh of which the most commonly found on the market are white, green, oolong and black. The global slowdown that has come in the aftermath of the financial crisis is having an adverse impact on the real economies of South Asia. However, the adverse impact on Bangladesh is not as strong as in some other, more open, economies of the Asia-Pacific region. Bangladesh achieved a robust growth of 6.2% in 2008.

Tea agriculture and production is mostly performed on underdeveloped and developing countries in the world. It has been one of the main agricultural export items for many developing countries such as Sri Lanka, India, china and Bangladesh. Developing countries in South Asia and East Africa account for more than 85 percent of world tea production and exports. The share of black tea in world tea production is 97%. Green tree is alike linden tree and it is especially cultivated in China and Japan and its share in world tea production is 3%. According to Wikipedia, Bangladesh ranks eleventh in the world production of tea.

The growing tea sector has been boosting fast, changing the overall socio-economic condition of the common people and economy of Bangladesh and predicting a brighter prospect of tea sector there. The increased local consumption coupled with high price level compared to some tea exporting countries has caused a widespread fear of becoming Bangladesh, once major tea exporting country, into an importing one in near future if current disproportional and imbalanced ratio between local production and consumption growth continues. The tea plantation workers are not just poor, they are a particularly deprived marginal community in captive situation. They have limited scope to integrate with the people of the majority community and they face great difficulties in exploring livelihood options outside the tea gardens. The tea plantation workers want the State to address their case with care and translate its commitment to them providing political and human protection.

II. Literature Review

The Chinese were the first to use tea as medicinal drink, later as beverage and have been doing so for the past 3000 years (Islam1, Iqbal, Quddus3 and Ali, 2005). Tea has been first carried westwards during 5th century by Turkish traders, who used it in barter trade for Chinese product. Tea plants in Southeast Asia may have been the products of the 19th Century and 20th Century. (wikipedia, 2010)

Tea plantation in India's Assam dates back to 1839. The first experimental tea garden in our parts was established in Chittagong in 1840 and the first commercial-scale tea garden in Bangladesh was established in 1854. Since then the tea industry has been through quite a few historical upheavals -- notable among them are the Partition of India in 1947 and the Independence War in 1971. Through these historical changes, the ownership of tea gardens established by the British companies on the abundantly available forest or government land has changed hands. (Philip, 2009) After the independence of Bangladesh, Tea Ordinance, 1977 was promulgated constituting Bangladesh Tea Board of three whole time members with the provision of an Advisory

Committee to be formed by the Government with not more than twenty five members. Later the members of the Board were raised to eleven by the Tea (Amendment) Ordinance, 1986.

Tea grown in Bangladesh is mainly sold at the country's lone auction centre in the port city of Chittagong in weekly sales with overseas traders increasingly scarce and most of the business now handled by local traders (Reuters, 2010). In marketing program push strategies are practiced to sell the product to Bangladeshi consumers. A Push strategy, involves "pushing the product through distribution channels to final consumers. Here, all the marketing activities (primarily personal selling and trade promotion etc) undertaken by the manufacturer or producer toward channel members to include them to carry the product and to promote it to final consumers.(Kotler, 1991)

Bangladesh, known as a tea-exporting country, will turn into a tea-importing one within the next five years due to the fast-growing domestic demand. (UNB, February, 2010). Presently, more than 7,000 skilled and unskilled workers, mostly women, are working in 246 tea gardens, including 18 big estates, 13 medium-sized and 215 small-scale gardens set up on more than 2,200 acres of land in Tentulia and its surrounding areas. (BSS, 2010). Tea exports from Bangladesh fell by more than a quarter last year as the country's crop lost out to tea from Africa and other South Asian nations. (BBC, 2002). As the foreign currency earners the poor farmers sometimes face payment problems or rationing problems that hamper tea production and tea development activities, and affect earning of foreign exchange. (Bangladesh Tea Board, www.teaboard.gov.bd/).

Objective Of The Study

The broad objective of this study is to identify the comparative scenario of tea production and trade among Bangladesh and various producers. Moreover, the latest situation of Bangladesh in tea sector has been highlighted hereby.

Research Methodology

This paper has primarily been done on the basis of secondary information collected from copies of relevant documents of Bangladesh Tea Board, Bangladesh Tea Research Institute and different newspaper. Online news. letters, internet related web pages like BBC, Reuters have also been observed carefully for cross checking. The latest data from reliable sources has been collected for update result and measurement of latest advance in tea sector in Bangladesh.

III. Discussion And Findings

Comparative analysis focuses the current situation of the tea sector in Bangladesh with the rest of the world.

World Tea Production and Trade

i. Global Production of Tea

Tea is planted in 58 countries in all 5 continents with Asia having the largest area under tea, followed by Africa. The total land under tea cultivation was 3.36 million hectares and production in 2012 was 4.78 million tonnes. Importantly, the size of land required to produce one unit of tea varies across countries. For instance, China produced 1.4 million tonnes of tea in 2011 under an estimated 1 million hectares of land (average yield of 1.4 tonnes per hectare), while India produced 1 million tonnes under 0.5 million hectares (2 tonnes per hectare). (FAO 2012).

	-			. ,	
Rank	Country	2008	2009	2010	2011
1	China	1,257,600	1,359,000	1,450,000	1,623,000
2	India	987,000	972,700	991,180	1,063,500
3	Kenya	345,800	314,100	399,000	377,912
4	Sri Lanka	318,700	290,000	282,300	327,500
5	Turkey	198,046	198,601	235,000	221,600
6	Vietnam	173,500	185,700	198,466	206,600
7	Iran	165,717	165,717	165,717	162,517
8	Indonesia	150,851	146,440	150,000	142,400
9	Argentina	80,142	71,715	88,574	96,572
10	Japan	96,500	86,000	85,000	82,100
Total	World	4,211,397	4,242,280	4,518,060	4,321,011

Table 1.	Global	Production	of Tea	(In Tonnes)
----------	--------	------------	--------	-------------

Source: (Bangladesh Tea Board, www.teaboard.gov.bd/)

Tea production areas are utmost on the continent of Asia in the world. The world tea production is dominated by five countries -- India, China, Sri Lanka, Indonesia and Kenya-- who together produce 75% of the

total output. In the first two months of 2009, Indian tea production has seen a 6.4% dip to 36.8 mkgs, but production is likely to pick up after mid-May's second flush, according to industry sources.

Elsewhere, in Africa, where tea producing countries Kenya, Malawi, Tanzania, Zimbabwe and South Africa account for about 25% of world exports, production has fallen sharply. Kenya saw a drastic fall in production caused by poor rainfall and due to post-election disturbances in the country. According to the latest report of Africa Tea Brokers Ltd, crop in the Nandi region of Kenya is low but has shown slight increase during the last week of April 2009. (The Financial Express, Monday 15, February 2010, Tea Exports Seen Up Despite Low Output). While the crop in Western Uganda also shows some increase, production in Malawi continues to decline due to hot days and very cold nights. But Sri Lanka suffered the highest shortfall (41.3%) in production followed by Zimbabwe (38.3%), Indonesia (12.9%) and Kenya (12.7%). According to the Sri Lanka Tea Board, the country's total tea production in March 2009 declined by 44% to 18.2 million kg from 32.4 million kg in March 2008 owing to drought and reduced crops. Tea output in the January-March 2009 period was down by 41.6% touching 48.8 million kg from 83.5 million kg. The downturn intensified with deliberate efforts to cut the crop towards the end of last year. (The Financial Express, Monday 15, February 2010, Tea Exports Seen Up Despite Low Output).

	tion of itea 2012 (willion Rg.)
Countries	Production (In Million Kg.)
1.China	1,790
2. India	1,126
3.Kenya	370
4.Sri Lanka	328
5.Turkey	147
6.Indonesia	137
7.Vietnam	190
8.Japan	86
9.Argentina	84
10.Bangladesh	62
11.Malawi	42
12.Uganda	58
13.Tanzania	32
14.Iran	15
15.Taiwan	15
16.Myanmar	20
17.CIS	8
18.Rwanda	25
19.Zimbabwe	13
20.Nepal	17
21.Papua N.Guinea	6
22.Burundi	9
23.Other Countries	45

Table 2. Global Production of Tea 2012 (Million Kg.)

In 2003, world tea production was 3.21 million tonnes annually. In 2008, world tea production reached over 4.73 million tonnes. Total production from the major producing countries — India, Bangladesh, Kenya, Indonesia, Malawi, Sri Lanka, Tanzania, Zimbabwe — stood at 254.6 million kg during January-March, compared to 299 million kg in the same period last year. (BS Reporter. 2009).

Sri Lanka is the worst affected with a drop of 41 per cent. Bangladesh comes close with a decline of 34 per cent. India is down 9 per cent, led by south India. The largest producers of tea are The People's Republic of China, India, Kenya, Sri Lanka, and Turkey. Some of the largest commercial traders of black tea globally are: Unilever - Lipton, PG Tips (Multinational); Associated British Foods Twinings (UK); Tata Tea - Tetley (India); Teekanne Group (Germany). The table of the above shows the amount of tea production (in tonnes) by leading countries in recent years. Data is generated by the Food and Agriculture Organization (FAO) of the United Nations, February 2012. There were noticeable increases in China whilst marginal decrease in crop was recorded in Indonesia and Japan. It is also founded world tea production is increasing equally per year. In 2012 total World production of tea was 4,625 Million Kg.

ii. Global Export of Tea

According to the FAO, in 2007 the largest importer of tea, by weight, was the Russian Federation, followed by the United Kingdom, Pakistan, and the United States. Kenya and China were the largest exporters of tea in 2007. The largest exporter of black tea is Kenya. Amid reports that Kenya has been buying tea from India in order to meet its export obligations to key markets in Egypt, Britain and Pakistan, African countries

Source: (Bangladesh Tea Board, www.teaboard.gov.bd/)

have suffered a loss of 12 million kgs during the first two months of 2009.(The Financial Express, Monday 15, February 2010, Tea Exports Seen Up Despite Low Output).

Total global export of tea in 2006 was 1572 million kgs of which Bangladesh exported only 4.97 million kgs occupying 15th position. India, Sri Lanka, Vietnam and Argentina ended the year with higher exports whilst exports from Indonesia, Kenya and Bangladesh dropped. Export from Bangladesh declined about 88% from 9.01 M.kg in 2005 to 4.79 M.kg. in 2006 mainly due to increase of internal demand that pushes the local auction prices up.

iii. Global Consumption of Tea

Tea is consumed by a wide range of age groups in all levels of society. More than three billion cups of tea are consumed daily worldwide. Tea is considered to be a part of the huge global beverage market, not to be seen in isolation just as a "commodity". Africa, South America, the Near East and especially the Asian regions with a reputation in the international markets for high quality, has resulted in Asia enjoying a share of every importing market in the world. Africa, South America, the Near East and especially the Asian regions produces a varied range of teas, this, together with a reputation in the international markets for high quality, has resulted in Asia enjoying a share of every importing market in the world. Huge populations in Asia, Middle East, Africa, UK, EU, and countries of the CIS consume tea regularly and throughout the day.

Besides being inexpensive and delicious, tea demonstrates cavity-fighting properties, contains antioxidants, and hs significant antiviral properties, all of which make it popular in the medical industry as well. The consumption of tea has reached three billion cups a day, with varieties of tea produced in Africa, the Near East, South America, and in the Asian region. In its production and its consumption, it is a truly global commodity. World consumption of tea is estimated to be 3,658 million Kgs in 2008. This estimate is based on the assumption that all tea retained in the producer countries and all teas imported for consumption in the importing countries have been consumed during a year. Among the countries India has become the highest total consuming 175 M.Kgs. Bangladesh ranks 14th in terms of single country total consumption of tea in 2005 consuming 53 M.Kgs internally. Total World Consumption of Tea is 4,400 Million Kg in 2012.

Table 3. Apparent	Global Consum	ption of Tea 2012	(In Million Kg.)

elit Giobal Collsuin	puon or rea 2012 (
Countries	Consumption
1.China	1400
2. India	891
3.Russian Fed.	174
4.Rest of CIS	105
5. Japan	121
6.United Kingdom	123
7. Turkey	152
8.Pakistan	131
9.U.S.A	126
10.Egypt	97
11.Iraq	39
12.Iran	78
13.Morocco	54
Countries	Consumption
14.Indonesia	88
15. Taiwan	42
Bangladesh	61
17.Afghanistan	44
18.Syria	24
19.Poland	29
20. Sri Lanka	27
21. Vietnam	32
22.South Africa	22
23.Germany	30
24.Chile	21
25.Sudan	23
26.Canada	16
27.Malaysia	19
28.Others Countries	431
27.Malaysia	19

Source: (Bangladesh Tea Board, www.teaboard.gov.bd/)

Tea Production and Trade in Bangladesh

i. Annual Tea Production:

A number of factors such as better marketing drive, urbanization, improvement in rural economy, steady population growth and emergence of economically stable middle class have contributed to the growth of domestic tea market. A gradual development of road infrastructure, which helped companies reach remote areas, also has favored the rise in tea consumption. Relatively cheaper price has also helped spur the growth of domestic tea market.

Tea contributes about 0.8% of the GDP in Bangladesh. About 0.15 million people are directly employed in the tea industry, which constitutes about 3.3 percent of the country's total employment. Many more people are indirectly employed in other sectors related to tea. Tea is a labour intensive industry. In the early seventies, some 120,000 permanent workers both men and women with 350,000 dependants were employed. This work group is quite different from workers in other industries of Bangladesh.

The present generation of tea garden workers comprises heirs of workforce recruited by the planters from Orissa, Bihar, Madras and the Central Province of India in the middle of the 18th century. These workers have been living in the tea gardens of Syllhet and Chittagong. Employers arrange subsidised food for them through ration from the Food Department of the government.

Marketing of tea is the process of selling manufactured tea in bulk from tea estates to the buyers through Chittagong Auction who sell it in the local market or export it to other countries either in bulk or in packets. Some of the teas are also sold at estate level with prior permission of Bangladesh Tea Board either directly to overseas buyers or to the internal traders. Tea Traders Association of Bangladesh organizes the weekly tea auction in Chittagong through the appointed tea brokers of Bangladesh Tea Board.

But recent production although is in increasing pace, it is not up to the optimum level. The country's tea export may face a setback within a few years if necessary steps are not immediately taken for increasing tea production. Last year (2013), some 62 million kgs of tea was produced in the country, registering a decline of 3.22 per cent compared to that in the prervious year. The amount was 64 kgs in 2012. The production of tea also saw huge fluctuation between 2003 and 2012, and increased by nearly 23.75 million kgs during the period. The consumption of the cash crop, however, increased more rapidly as the local demand of tea soared up to 61.19 million kgs in 2012 from 37.44 million kgs in 2003. According to data of the National Board of Revenue, 4.76 million kgs of tea was imported in last three years. Despite being a tea exporting country, Bangladesh imported 1.9 million kg of tea in 2012 to meet local demand.

According to survey result about166 tea estates covers the total tea production whereas six tea companies have grabbed over 80 percent share of the country's branded-tea market, driving others almost away from the scene. These six players are MM Ispahani Ltd, HRC Product, Abul Khair Consumer Products, Unilever Bangladesh, Tetley ACI and the Consolidated Tea & Lands Co (Bangladesh) Ltd.

Year	No. of Tea Estates	Area Under Tea	Pluckable Area	Production (In m.	Yield (Kg/ha)
		(ha)	(ha)	kg)	-
1947	103	28,734	28,734	18.36	639
1950	103	31,890	28,734	23.77	827
1955	127	30,274	28,734	23.87	831
1960	127	31,418	30,744	19.01	618
1965	151	36,500	32,335	27.13	839
1970	153	42,685	39,308	31.38	798
1975	153	42,685	39,308	29.09	740
1980	153	43,528	43,201	40.04	927
1985	156	44,609	44,330	43.29	976
1990	158	47,385	44,759	46.16	1,031
1995	158	47,938	43,998	47.67	1,084
2000	160	50,470	46,344	53.15	1,147
2002	161	50,226	44,717	53.62	1,199
2003	162	50,896	44,916	58.30	1,298
2004	162	51,264	45,083	56.00	1,242
2005	163	52,317	45,366	60.14	1,326
2006	163	52,407	45,505	53.41	1,174
2007	163	53,368	46,926	58.19	1,240
2008	163	54,106	47,377	58.66	1,238
2009	163	55,857	48,163	59.99	1,245
2010	163	56,807	49,058	60.04	1,224
2011	163	57,212	49,153	59.13	1,203
2012	165	58,098	49,954	62.52	1,250
2013	166	58,719	50,203	66.26	1,320

Table 4. Tea Area and Production in Bangladesh

Source: (Bangladesh Tea Board,www.**tea**board.gov.bd/)

166 tea estates are managed by five different categories of managements

- Sterling Companies
- National Tea Company
- Bangladesh Tea Board
- Bangladeshi Private Limited Co.
- Bangladeshi Proprietors

Tea is supplied in the internal market in three ways:

- i. buying tea from the auction paying 15% VAT on the auction value known as internal account buying,
- ii. buying tea from the auction for export at nil VAT known as external account buying and subsequently transferring to the internal account and
- iii. tea supplied directly from the tea estates with prior permission of the Tea Board.

ii. Annual Tea Consumption:

:

Bangladesh, after its stint as an exporter, has turned out to be an importer of tea. It is now very much important to raise production in order to avoid heavy drainage of foreign currency in importing tea. This is because internal tea consumption is rising every year to the extent of 12.69 per cent or even more due to the rise of population and urbanisation.

	Production	Internal Consumption	Export (Million	Export Value
Year	(Million kg)	(Million kg)	kg)	(Million Tk)
1990	18.36	14.21	26.95	1565.68
1991	23.77	19.21	25.40	1392.25
1992	23.87	21.77	27.15	1263.35
1993	19.01	14.50	31.92	1686.63
1994	27.13	24.00	23.65	1166.16
1995	31.38	22.00	25.43	1291.75
1996	29.09	20.50	26.13	1349.28
1997	40.04	22.20	25.17	1775.39
1998	43.29	25.17	22.23	1808.57
1999	46.16	32.11	15.18	1008.70
2000	47.67	38.79	18.10	1205.19
2001	53.15	36.95	12.92	894.99
2002	53.62	41.50	13.65	939.93
2003	58.30	37.44	12.18	915.07
2004	56.00	43.33	13.11	934.04
2005	60.14	43.30	9.01	742.62
2006	53.41	40.51	4.79	469.59
2007	58.19	46.27	10.56	899.01
2008	58.66	52.12	8.39	976.95
2009	59.99	53.74	3.15	433.50
2010	60.04	57.63	0.91	176.68
2011	59.13	58.50	1.47	213.51
2012	62.52	61.19	1.50	222.28
2013	66.26	64.00	0.54	133.04

Table 5. Production, consumption and export of Bangladesh

Source: (Bangladesh Tea Board, www.teaboard.gov.bd/)

Tea has emerged as a common man's beverage. Even in remotest village markets and shopping centres, it is a usual sight to see farmers sipping tea quite frequently. Most of them believe tea boosts their physical strength needed in farming while it eases stresses and strains. No wonder, the Bangladeshis consume most of the tea the country produces these days, leaving a small quantity for export. During the last 10 years (2003-12), some 83.40 per cent of tea produced in the country was used for internal consumption, while 11.07 per cent was exported abroad. At present, Bangladesh exports tea to countries such as Pakistan, Afghanistan, Russia, Saudi Arabia, Turkey, Ukraine and UK after meeting the internal demand.

From the chart it is found tea consumption is increasing day by day. Although the prices are also increasing the demand is not less at all due to the quality of Bangladeshi tea. But traders are concerned that exports will fall in coming years as local demand and auction prices continued to rise in the country, comment Reuters.

iii. Export Market:

Tea has been one of the major exportable items of Bangladesh since 1971. Bangladesh had a captive export market in some countries to export tea. The scenario has been changed in recent years because of open market economy, emergence of new entrants in the world market with low priced tea and rapid increase of internal demand. Export of Bangladesh tea in the year 2005 was 9.09 million kg which was 30.66% less than the previous year export of 13.11 million kg. Export earning was 742.62 million taka against 934.04 million taka the previous year. Of the exported quantity 6.57 million kg was sold to Pakistan alone. The Govt. of Pakistan allowed duty free entry of 10.00 million kg of tea per year from Bangladesh since October 2002 and offered to increase the quota up to 15.00 million kg. But Bangladesh could not utilize that quota fully as increasing internal demand pushes the price levels up in the local auction and discourages exports. "Pakistan and Afghanistan, which import some 85 percent of Bangladesh's tea exports, are now turning to Kenya and Malawi due to high prices (in Bangladesh)." Mohammad Idris, director of a leading exporting firm, told Reuters. Other tea producing countries like India, Srilanka, Indonesia, Vietnam, Kenya and some other African countries have relative advantages to supply better quality teas at lower prices that makes export market extremely competitive for Bangladesh Tea.

iv. Competitive Strategies :

HRC Product, Abul Khair, Unilever Bangladesh, Consolidated Tea and Tetley ACI are competing with each other for the second position. Except Unilever, all these companies entered the market with their brands since 90s, inspired by a steady growth of tea consumption in the local market, which also led to a drop in exports over the years.

Generally A Push strategy involves pushing the product through distribution channels to final consumers. In case of pull strategy the producer, directs its marketing activities (primarily advertising and consumer promotion) toward final consumers to include them to buy the product. If the pull strategy is effective then consumer will demand the product from channel members, who will then in turn demand it from the producer. Thus under a pull strategy, consumer demand "pulls" the product through the channels. Agricultural Marketing Company Ltd (AMCL)-Pran has already planned to pull out, while ACME Agrovet & Beverage suspended production earlier amid high price of tea. The rest such as Union Tea and some others are catering to a very small segment. Ispahani thinks tea is related to taste. This company specializes the quality management system to gain consumer confidence, which now has around 40 percent share in branded tea segment. ACME however said it would resume production.

v. Marketing System:

There are 12 categories tea is being produced in Bangladesh. Marketing of tea is the process of selling manufactured tea in bulk from tea estates to the buyers through Chittagong Auction who sell it in the local market or export it to other countries either in bulk or in packets. Some of the teas are also sold at estate level with prior permission of Bangladesh Tea Board either directly to overseas buyers or to the internal traders. Tea Auction is held on usually every Tuesday at Chittagong, a major port city with sufficient warehouse and port facilities and well connected by road, railways and air. Tea Traders Association of Bangladesh organizes the weekly tea auction in Chittagong through the appointed tea brokers of Bangladesh Tea Board.

Category Grades	
Broken:	
FP	Flowery Pekoe
FBOP	Flowery Broken Orange Pekoe
BOP	Broken Orange Pekoe
GBOP	Golden Broken Orange Pekoe
Fanning:	
OF	Orange Fannings
FOF	Flowery Orange Fannings
PF	Pekoe Fannings
Dust:	
RD	Red Dust
PD	Pekoe Dust
CD	Churamoni Dust

Source: (Bangladesh Tea Board, www.teaboard.gov.bd/)

Problems of Farmers

As the foreign currency earners the poor farmers sometimes face payment problems or rationing problems that hamper tea production and tea development activities, and affect earning of foreign exchange. The wages -- daily or monthly -Terai and Doars of W- is the single most concern. The maximum daily cash pay for the daily rated worker in 2008 was Taka 32.50 (less than half a US\$). This is a miserable pay having a severe effect on the daily lives of the tea workers. Although the workers get rations at a concession, a family can hardly have decent food items on their plate. They indeed have very poor quality and protein-deficient meals. Their physical appearance tells of their malnourishment. If compared with wages of the Indian tea workers, the wages of Bangladeshi tea plantation workers is much lower. In Darjeeling, est Bengal in India the daily wages of a tea plantation worker was Rs.53.90 in 2008. The wages, increased in three steps, will reportedly become Rs.67 in 2011. Strong labor movements have been instrumental in such wage increase. In West Bengal about 400,000 workers will get this increased wages. Compared to the Bangladeshi tea plantation workers, the Indian workers also get a better deal in accessing fringe benefits such as rations, medical care, housing, education, provident fund benefits, bonus, and gratuity. What puzzles one is that the auction of prices of tea in Bangladesh is high compared to the international auction prices while its production cost is comparatively lower than other tea producing countries (India, Sri Lanka and Kenya for example). Of course the productivity of tea per unit in Bangladesh is lower compared to those countries. Many believe that there is no justification for low wages of the tea plantation workers in Bangladesh. They deserve much higher wages.

The work condition of the tea workers who spend most of their working time under the scorching sun or getting soaked in rains is a concern. A woman tealeaf picker spends almost all her working hours for 30 to 35 years standing before she retires. The working hours for the tealeaf pickers, mostly women, are usually from 8 AM to 5 PM [7-8 hours excluding break for lunch] from Monday to Saturday. Sunday is the weekly holiday. To earn some extra cash, the extra work brings additional grief. Education, an important ladder for transformation of a community or society for betterment is at the root of the social exclusion of the tea workers. There are schools in the tea gardens. According to the Bangladesh Tea Board (2004), in 156 tea gardens (excluding those in Panchagarh) there were 188 primary schools with 366 teachers and 25,966 students. Given that the employers provide education, the government schools in the tea gardens are just a few. In the recent times, the NGOs run significant number of primary schools. The quality of education provided in these schools remains to be a concern. An overwhelming majority of the children of the tea plantation workers drop out from school before they can use education to step into other professions and thus they have to enter the tea gardens as laborers.

The tea communities are one of the most vulnerable people of Bangladesh. They deserve special attention of the State, not just equal treatment. But unfortunately they continue to remain socially excluded, low-paid, overwhel-mingly illiterate, deprived and disconnected. They have also lost their original languages in most part, culture, history, education, knowledge and unity. In the labour lines of a tea estate, they seem to be living in islands -- isolated from the majority Bangali community who sometimes treat them as untouchables. Without fertilisation of minds, they have lost dignity in their lives. These are perfect conditions for the profiteers from the tea industry to continue exploitation of the tea workers. Deprived, exploited and alienated, the majority of the tea workers live an inhuman life. (Philip, 2009).

Development Projects

The ministry of food decided to discontinue supply of food grains to the tea garden workers from January 2008 to June 2008 in consideration of the existing stock position. Ministry of food order suspending supply of ration — food grains (wheat/rice) — to tea gardens workers for six months (from January to June) would seriously affect one lakh tea workers and their 3.5 lakh dependents. Bangladesh Tea Association apprehends serious unrest in tea estates creating law and order situation. Finally Bangladesh Tea Association finds no other option but to advise all managements of tea gardens to arrange for procurement of food grains for their garden workers through local purchase or otherwise as convenient to them from the month of January 2008.

For a long time, The Tea Plantations Labour Ordinance, 1962 and The Tea Plantation Labour Rules, 1977 defined the welfare measures of the tea plantation workers among other things. In 2006 these laws along with other labour related laws (25 in total) were annulled and a new labour law, Bangladesh Labour Act 2006, was introduced. The tea plantation workers were brought under this Act. The new Act has fixed the minimum wages of industrial workers at Tk. 1,500 (US\$22). The tea plantation workers, who got lower wages in cash than this minimum wages, raised their voices for an increased cash pay. They were turned down. In a letter dated 20 July 2008 the Deputy Director of Labour, Tea-industry Labour Welfare Department in Srimangal, Maulvibazar announced, "the minimum wages announced in the gazette was not for the workers in the tea gardens." The letter also mentioned that "the government has already formed a separate wage board to determine the wages for the tea workers and the issue of minimum wages is under consideration." (Philip, 2009). It is yet to be seen how the wage board makes progress in its work.

To overcome the problems in tea sectors different projects have been taken by Bangladesh tea Board along with local and foreign projects. Those are:

a) Small Holding Tea Cultivation in Chittagong Hill Tracts Project: The project is sponsored by ministry of commerce, government of Bangladesh with the cost of Tk.1029.33lakh for the period of August, 2003 to July, 2010. The budget is collected from own fund under the supervision of Bangladesh Tea Board. The objectives of this project are:

- 1. To supply HYV tea plants, fertilizers, sprayers, etc. to small tea growers for cultivation of tea in improve method
- 2. To provide training and technical know how to the farmers of that locality regarding cultivation and production of quality tea. To provide training and technical know how to the farmers of that locality regarding cultivation and production of quality
- 3. To motivate the small farmers for cultivation of tea in small holdings, to create self employment, alleviate poverty and to improve the socio-economic condition of the poor farmers of those localities
- 4. Plantation of 100 hectares of tea at Rangamati, 100 hectares of tea at Khagracherri and 300 hectares of tea at Banderban district by organising the farmers to grow tea in small holding
- 5. To utilize the privately owned and uneconomic lands of greater Chittagong Hill Tracts area in more productive and economic way
- 6. To establish a BTRI Sub-station at CHT area to facilitate Small Holding Tea Plantation there

b) Expansion of Tea Export by Raising and Distribution HYV Clonal Tea Plants to the Poor Ethnic Small Growers of Bandarban Hill District: The project is sponsored by European Commission with the cost of Tk.93.6lakh for the period of January,07 to September,08. The budget is collected from European Commission under the supervision of Bangladesh Tea Board. The objectives of this project are:

- 1. To alleviate poverty of the small growers belonging to the ethnic minority people of Bandarban Hill District and to increase their standard of living.
- 2. To impart knowledge, skill and training to small growers and project related officers of BTB on small tea holding concept and tea culture.
- 3. To facilitate tea production by raising 1,500,000 HYV clonal tea plant for distributing to the poor ethnic small growers at Bandarban for planting in the field.
- 4. To facilitate for producing more tea for export and meeting growing internal demand in Bangladesh.

c) Development of Small Holding Tea Cultivation in Northern Bangladesh: The project is sponsored by Ministry of Commerce, Government of Bangladesh with the cost of Tk.1096.7lakh for the period of January 2002 to December 2009. The budget is collected from Own Source & Rajshahi Krishi Unnaya Bank (RAKUB) under the supervision of Bangladesh Tea Board with RAKUB. The objectives of this project are:

- 1. To alleviate the poverty of the poor people living in the project area through creation of jobs and other income generating activities
- 2. To train the farmers who will be participating in the programme
- 3. To acquaint the farmers with the different released verities.
- 4. To organize the farmers of Northern Districts of Bangladesh to grow tea in 600 ha.
- 5. To establish 1 demonstration plot and 2 nucleuses plot each of 1.00 acre to disseminate the technical knowhow for tea plantation and supply planting material.

d) Rehabilitation and Development of 44 Least Developed Tea Estate (LDTE) in the greater Syllhet & Chittagong District: The project is sponsored by Ministry of Commerce, Government of Bangladesh with the cost of Tk.1532.08lakh for the period of July 2004 to June 2009. The budget is collected from Own Source and Bangladesh Krishi Bank under the supervision of Bangladesh Tea Board in Collaboration with Bangladesh Krishi Bank (BKB) and Bangladesh Tea Association (BTA) and concerned tea estates. The objectives of this project are:

- 1. To organize & motivate the owners and management of 44 Least Developed Tea Estates (LDTE) for bringing their land utilization ratio close to National Tea Land usage target by planting tea.
- 2. To contribute more to the national tea production and export earnings by enhancing the quality and quantity of tea.
- 3. To improve their cost effectiveness and to make Least Developed Tea Estate (LDTE) viable and to bring them to a profitable level.
- 4. To improve the current yield of the Least Developed Tea Estate (LDTE) through increasing per hectare yield from 350-773 kg to 1176 kg of national average.

IV. Conclusion

Numerous livelihoods depend on tea cultivation and processing in the world. Also in Bangladesh, thousands of people are engaged in tea cultivation. Bangladeshi tea is enriched in standard quality having escalation in domestic consumption and export of consumption excess. But tea sectors in Bangladesh are facing numerous problems.

Problems are mostly related with poor labor facilities, unexpected natural calamity, deterioration of law and order situation of the tea estates, log stealing, political or outsider influence on their internal arrangements, illegal occupation of land by the outsiders, lack of medical facilities, unhealthy atmosphere in the labor lines, lack of infrastructure (road, quarter, water supply network etc), lack of capital and modern machineries, lower market value of made tea in comparison to increasing production cost, lower yield per hectare in comparison to increasing domestic need, improper use of Govt. loans by some owners of the tea gardens, lack of perennial water source for irrigation during dry season and also in prolonged drought, lack of educational institutions, malnutrition among the children of the labor line.

Market conditions are varying rapidly in the world. In order to accord with these conditions, full weight must be given to research and development studies. Some long term development projects are running now with the assistance of Bangladesh Tea Board, government of Bangladesh and foreign fund. As a prosperous field continuous research process may pose Bangladeshi tea in a sophisticated place one day.

References

- Alkan, Isil, Koprulu, Onur and Alkan, Bora. 2009. Latest Advances in World Tea Production and Trade, Turkey's Aspect. World Journal of Agricultural Sciences 5 (3): 345-349, 2009. ISSN 1817-3047
- [2]. Alam, A.F.M. 2002. Research on varietal improvement of tea and their utilization in the tea industry of Bangladesh. Proceedings of the International Seminar on "Varietal development of Tea in Bangladesh", 13 July 2002. Organized by Bangladesh Tea Research Institute, Srimangal-3210, Maulvibazar, Bangladesh, pp 7-26.
- [3]. Asia Pulse Data Source via COMTEX, 2010. http://www.tradingmarkets.com, Tea-exporting Bangladesh to become importer in five years? time; Fast-growing domestic demand considered to be the reason. Sun, 07 Feb 2010 05:34:32 EST
- [4]. **Banerjee, B.** 1992. Botanical classification of tea. In: Tea cultivation to consumption. Eds. Wilson, K.C. and Clifford, M.N., pp. 25–51. Chapman and Hall, London.
- [5]. Bangladesh Tea Board. Copyright 2007. www.teaboard.gov.bd.
- [6]. BBC. 2002. Bangladesh tea exports fall. http://news.bbc.co.uk/2/hi/ business/1788816.stm
- [7]. BBS. 2000. Statistical Year Book of Bangladesh. Bangladesh Bureau of Statistics. Ministry of Planning, Government of People's Republic of Bangladesh, pp.81 & 327. Dhaka, Bangladesh.
- [8]. BS Reporter. 2009. Global tea production likely to fall 15 per cent. 0:12 IST. http://www.business-standard.com/india
- [9]. **BSS**, 2010 Growing tea sector boosts Panchagarh economy. www.zimbio.com. http://209.85.229.132/search?q=cache:_DaTM1c9_mMJ:www.zimbio.com/Bangladesh/articles/AeHSFc7pa0h/Commercial%2Bora nge%2Bfarming%2Bexpanding%2Bfast+www.zimbio.com,+BSS,+Bangladesh+Tea&cd=1&hl=en&ct=clnk&gl=bd
- [10]. BTRI. 2003. Biennial Report. Bangladesh Tea Research Institute, Government of People's Republic of Bangladesh, pp. 94-98, Srimangal, Moulvibazar, Bangladesh.
- [11]. Chen, Z. 1999. Pharmacological functions of tea. In: Global Advances in Tea Science. Ed. Jain, N.K., pp.333-358, Aravali Books International (pvt) Ltd., India.
- [12]. Chengyin, L., Weihua, L. and Mingjun, R. 1992. Relationship between the evolutionary relatives and the variation of esterase isozymes in tea plant. J. Tea Sci. 12:15–20.
- [13]. Eden, T. 1958 The development of tea culture. In: Tea. Ed. Eden, T., pp. 1–4, Longman, London.
- [14]. FAO, Copyright 2013.www.fao.org/statistics /en/
- [15]. Gain, Philip.2009, June. The story of tea workers. forum@thedailystar.net
- [16]. 16.G.M.R. Islam1, Iqbal, M., Quddus, K.G. and Ali, M. Y. 1985. Present status and future needs of tea industry in Bangladesh. Proc. Pakistan Acad. Sci. 42G (4.M):.3R0.5 I-s3la1m4. 2et0 0a5
- [17]. **ITC**. 2001. International Tea Committee report 2001.
- [18]. Khisa, P. and Iqbal, I. 2001. Tea manufacturing in Bangladesh: Problems and prospects. Proceedings of the International Conference on "Mechanical Engineering", 26-28 December 2001, Department of Mechanical Engineering, Bangladesh University of Science and Technology, Dhaka.
- [19]. Kotler, Philip and Armstrong, Gary. Principles of Marketing. Twelfth edition.
- [20]. Mondal, T.K., Bhattacharya, A. and Ahuja, P.S. 2002. Induction of synchronous secondary embryogenesis of tea (Camellia sinensis). J. Plant Physiol. 158:945–951.
- [21]. Mondal, T.K., Bhattacharya, A., Laxmikumaran, M. and Ahuja, P.S. 2004. Recent advances of tea (Camellia sinensis) biotechnology. Plant Cell, Tissue Culture 76:195–254.
- [22]. Prakash, O., Sood, A., Sharma, M. and Ahuja, P.S. 1999. Grafting micropropagated tea (Camellia sinensis (L.) O. Kuntze) shoots on tea seedling- a new approach to tea propagation. Plant Cell Rep. 18:137–142. 3. Sana, D.L. 1989. Tea Science. Ashrafia Boi Ghar, Dhaka, pp. 248-266.
- [23]. Reuters. 2010. Bangladesh tea yields rise, exports fall trades., reuters.com/article/domesticNews/idINSGE61009920100201, Mon Feb 1, 2010 5:36am EST
- [24]. Sealy, J.R. 1958. A revision of the genus Camellia. R. Hortic. Soc. London 19:519-524.
- [25]. Sharma, V.S. and Venkataramani, K.S. 1974. The tea complex.I. Taxonomy of tea clones. Proc. Ind. Acad. Sci. 53:178–187. 20. Sharma, V.S. 1984. Pruning of tea—precepts and practices. UPASI Tea Sci. Dep. Bull.39:63-67.
- [26]. Sharma, V.S., Ramachandran, K.V. and Venkata Ram, C.S. 1981. Tipping in relation to pruning height and its effect on the yield of tea (Camellia spp.) J. Plant Crops 9:112-118.
- [27]. Sharma, V.S. 1983. Plucking styles. UPASI Tea Sci. Dep. Bull.38:33-38.
- [28]. Sharma, V.S. and Venkata Ram, C.S.1980. Motorized mechanical aids to prune/skiff tea (Camellia L. spp) Proc. PLACROSYM-III:283-288.

- [29]. Sharma, V.S. and Ranganathan, V. 1985. The word of today: Outlook of agriculture 14:35-41
- [30]. The Financial Express, 2010, Tea Exports Seen Up Despite Low Output
- [31]. UNB, February, 2010.Tea exporting Bangladesh to become importer in five years' time. www.unbconnect.com
- [32]. Visser, T. 1969. Tea (Camellia sinensis (L.) O. Kuntze). In: Outlines of perennial crop breeding in the tropics. Eds. Ferwerdu, E.P. and Wit, F., pp. 459–493. Veenaran and Zonen, Wageningen, The Netherlands.
- [33]. Wealth of India. 1950. A directory of Indian raw materials and industrial products. Vol. II. S.S. Bhatnagar. Chairman, Editorial Committee, pp. 26–51. Council of Scientific and Industrial Research, New Delhi, India.
- [34]. Wettasinaghe, D.T., Nathaniel, R.K. and Kroon, D.D. 1981. Effect of severity of plucking on the growth and yield of low-grown tea. Tea Quart. 50:123-130. 24. Reddy, G.P. 1983. Areas for exploitation in harvesting technology to enhance productivity in tea. UPASI Tea Sci. Dep. Bull. 38:53-56.
- [35]. Wight, W. 1959. Nomenclature and classification of tea plant. Nature 183: 1726–1728.
- [36]. Wight, W. 1962. Tea classification revised. Curr. Sci. 31:298–299.
- [37]. Wood, D.J. and Barua, D.N. 1958. Species hybrids of tea. Nature 181:1674–1675.
- [38]. Wikipedia, Tea. 2014. http://en.wikipedia.org/wiki/Tea.