

The Hong Kong Declaration and Agriculture:  
Implications for Bangladesh

Paper 60

**Uttam Kumar Deb**  
**Narayan Chandra Das**

Publisher

**Centre for Policy Dialogue (CPD)**

House No 40/C, Road No 11 (new),

Dhanmondi R/A, Dhaka-1209

Bangladesh

Tel: (880 2) 8124770, 9141703. 9141734

Fax: (880 2) 8130951

E-mail: [cpd@bdonline.com](mailto:cpd@bdonline.com)

Website: [www.cpd-bangladesh.org](http://www.cpd-bangladesh.org)

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The present paper titled ***The Hong Kong Declaration and Agriculture: Implications for Bangladesh*** has been prepared under the CPD programme on *Trade Related Research and Policy Development (TRRPD)*. This programme aims at strengthening institutional capacity in Bangladesh in the area of trade policy analysis, negotiations and implementation. The programme, *inter alia*, seeks to project the civil society's perspectives on the emerging issues emanating from the process of globalisation and liberalisation. The outputs of the programme have been made available to all stakeholder groups including the government and policymakers, entrepreneurs and business leaders, and trade and development partners.

The paper has been prepared by *Uttam Kumar Deb*, Senior Research Fellow, CPD and *Narayan Chandra Das*, Research Associate, CPD.

**Assistant Editor:** *Anisatul Fatema Yousuf*, Head (Dialogue & Communication), CPD.

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## Table of Contents

	Description	Page
	Abstract	iv
I	Introduction	1
II	Agriculture in the Hong Kong Declaration	2
	II.1 Domestic Support	2
	II.2 Export Subsidy	4
	II.3 Market Access	5
	II.4 Cotton Issue	7
	II.5 Food Aid	7
	II.6 Special and Differential Treatment	8
III	Identification of Potential Agricultural Export Items from Bangladesh	9
	III.1 Trends in Agricultural Trade	10
	III.2 Agricultural Products with Export Potentials	16
	III.3 Potential Agro-products for Export to the USA	17
IV	Potential Impacts of Various Decisions and Negotiating Proposals	19
	IV.1 Potential Impact on Tariff Reduction	24
	IV.2 Potential Impact on Domestic Support	26
	IV.3 Potential Impact on Prices and Welfare Gains	27
	IV.4 Potential Impact on Production, Consumption and Trade	31
	IV.5 Potential Impact on Bangladesh's Balance of Trade	39
	IV.6 Potential Impact of Duty-Free and Quota-Free Market Access	41
V	Conclusions	44
VI	References	46

## List of Tables

Table	Title	Page
1	Domestic Support Cut Possibilities	4
2	AMS Reduction Possibilities	4
3	Possibility in Tariff Cuts	6
4	EU Proposal on Tariff Cuts	6
5	Product Coverage in the WTO Agreement on Agriculture (AoA)	10
6	Trends in Agricultural Exports of Bangladesh: 1991-2004	11
7	Trends in Agricultural Imports by Bangladesh: 1991-2004	12
8	Major Agricultural Export Items (6-digit HS) of Bangladesh: 2002-04	13
9	Annual Compound Rate of Growth (%) in Agricultural Exports (6-digit HS) of Bangladesh: 1991-03	15
10	Bangladesh's Agricultural Exports to USA: 2002-04	18
11	Agricultural Products Considered for the Present Study	19
12	Basic Assumptions of the Present Study about the Likely Outcomes of the WTO Negotiation on Agriculture under Doha Development Round	22
13	Potential Impact on Applied and Bound Tariff Rates in Developed and Developing Countries	25
14	Potential Impact on Domestic Support Expenditure in Selected Developed and Developing Countries	26
15	Potential Impact of Negotiation Outcomes on World Prices	28
16	Potential Impact on Welfare Gains by Bangladesh	29
17	Product Specific Potential Impact on Welfare Gains in Bangladesh	30
18	Potential Impact on Export, Import, Production and Consumption of Bangladesh	31
19	Potential Impact on Export of Agricultural Commodities by Bangladesh	33
20	Potential Impact on Bangladesh's Export Level	34
21	Potential Impact on Bangladesh's Import Cost	35
22	Potential Impact on Bangladesh's Import Level	36
23	Potential Impact on Agricultural Production in Bangladesh	37
24	Potential Impact on Consumption Level in Bangladesh	38
25	Potential Impact on Bangladesh's Trade Balance	40
26	Tariff Revenue Earnings from Bangladesh's Agricultural Exports in Selected Developed Countries, 1999-2001	42
27	Tariff Revenue Earnings of Selected Advanced Developing Countries from Bangladesh's Agricultural Exports	43
Appendix		
1	Definition of Agricultural Products Covered in this Study (in Accordance with FAO Commodity Code, HS Code and ATPSM Code)	47

### Acronyms

AMS	Aggregate Measurement of Support
AoA	Agreement on Agriculture
ATPSM	Agricultural Trade Policy Simulation Model
CoA	Committee on Agriculture
COMTRADE	UN Commodity Trade Statistics Database
DDA	Doha Development Agenda
DDR	Doha Development Round
DRC	Domestic Resource Cost
DSE	Domestic Support Expenditure
EBA	Everything But Arms
EC	European Community
EU	European Union
FAO	Food and Agriculture Organization
FIPs	Five Interested Parties
GSP	Generalized System of Preferences
HS	Harmonized System
HYV	High Yielding Variety
LDCs	Least Developed Countries
NTB	Non-Tariff Barrier
R&D	Research and Development
RMG	Readymade Garment
S&D	Special and Differential
SPS	Sanitary and Phytosanitary
SPs	Special Products
SSM	Special Safeguard Mechanism
TBT	Technical Barriers to Trade
TNC	Trade Negotiations Committee
US	United States
USA	United States of America
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization

**Abstract**

This paper reviews the developments in WTO negotiation on agriculture in the light of the Hong Kong Ministerial Declaration. It has critically analysed the decisions and negotiating proposals adopted through the Declaration. The paper has also analysed possible impacts of the adopted decisions and proposals for Bangladesh's agriculture sector and its economy. Potential impacts are measured in terms of reduction in tariff, domestic support and export subsidy. More importantly, the paper has quantified potential impacts of agricultural trade liberalisation under Doha Round negotiations on prices and welfare gains, production, consumption and trade of agricultural commodities in Bangladesh. Based on the research findings, the paper has suggested some negotiating strategies for Bangladesh to be pursued in the on-going WTO negotiations on agriculture.

## **The Hong Kong Declaration and Agriculture: Implications for Bangladesh**

### **I. INTRODUCTION**

The Hong Kong Ministerial Conference of the World Trade Organization (WTO), held in Hong Kong, China during 13-18 December 2005, was concluded with a Ministerial Declaration (WTO, 2005). Through this Declaration, WTO members agreed on various negotiating issues including agriculture and this is going to guide the final set of discussions towards the successful conclusion of the Doha Round. member countries agreed to successfully conclude the negotiations lunched in Doha in 2001. It may be recalled that through the Uruguay Round Agreement on Agriculture (AoA) WTO members were able to set up a framework of rules and disciplines, and initiated a process of gradual reductions in protection and trade-distorting support in agriculture which was the first phase of the reform. As per the Article 20 of the AoA, members started negotiations for further reform in March 2000 which were incorporated in the Doha Development Round (DDR), also known as Doha Development Agenda (DDA). Negotiations on agriculture are related to the three pillars of the AoA: (i) market access; (ii) domestic support, and (iii) export competition. In addition to these three pillars, negotiations are also related to other rules, such as Special and Differential (S&D) Treatment. Therefore, decisions carried out on various negotiating issues would have obvious implications for successful conclusion of the Doha Round which will ultimately shape future performance of agriculture sector of different countries including Bangladesh.

Agriculture is still the largest contributor to the GDP of Bangladesh and employs more than 60 per cent of the labour force. Deb (2005a) has shown that Bangladesh agriculture has been liberalised to a large extent during the last two and a half decades (1980/81-2003/04). During this period, cropping patterns have been changed with the liberalisation of agricultural trade and farmers were responsive to the price and trade policies. The study added that as a consequence of liberalisation of agricultural trade area under wheat, sugarcane, pulses and oilseeds has declined, while area under maize, HYV rice, and different vegetables has increased. In other words, agriculture sector of Bangladesh is now linked with the global market. Therefore, it is pertinent to know the likely impacts of

trade liberalisation to be carried out globally as a follow up of Hong Kong Ministerial Declaration through successful completion of Doha Round Negotiations.

This paper reviews the developments in WTO negotiation on agriculture in the light of the Hong Kong Ministerial Declaration. It has critically analysed the decisions and negotiating proposals adopted through the Declaration. It has identified major agricultural export items (6-digit level) of Bangladesh and their export performance. The paper has also analysed potential impacts of the adopted decisions and proposals for Bangladesh's agriculture sector and its economy. Finally, the paper has suggested some negotiating strategies for Bangladesh to be pursued in the ongoing WTO negotiations on agriculture.

## **II. AGRICULTURE IN THE HONG KONG DECLARATION**

The Hong Kong Ministerial Declaration of the WTO, adopted on 18 December 2005 (WTO, 2005), has clearly mentioned all decisions and proposals related to agriculture. Annex A of the Declaration includes the Report by the Chairman of the Special Session of the Committee on Agriculture to the trade negotiations committee (TNC). Annex F of the Declaration, which deals with Special and Differential Treatments for least developed countries (LDCs), has also relevance for the agriculture sector of Bangladesh.

In Hong Kong, member countries reaffirmed their commitments to the mandate on agriculture as set out in paragraph 13 of the Doha Ministerial Declaration<sup>1</sup> and to the framework adopted by the general council on 1 August 2004.<sup>2</sup> They had taken some concrete decisions and took note of the progress on various contentious issues like domestic support, market access and export subsidy. Members also agreed to establish modalities by April 2006 and to submit draft schedules by the end of July 2006.

### **II.1 Domestic Support**

On the important issue of domestic support, WTO member countries agreed that there will be three bands for reductions in Final Bound Total AMS and in the overall cut in trade-distorting domestic support, with higher linear cuts in higher bands. In both cases: (1) member with permitted highest level of domestic support will be in the top bands; (2) member with second and third highest level of permitted level of domestic support will be

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<sup>1</sup> WTO (2001). Ministerial Declaration Adopted on 14 November 2001. WTO doc. WT/MIN (01)/Dec/1, Geneva, 10 p.

<sup>2</sup> WTO (2004). Doha Work Program Decision Adopted by the General Council on 1 August 2004. (WT/L/579); dated: 2 August 2004.

in the second band; and (3) all other countries including the developing countries will be the third band (bottom band). However, developed country members in the bottom band with relatively higher level of Final Bound Total AMS will take additional effort in AMS reduction. It is also noted that “the overall reduction in trade-distorting domestic support will still need to be made even if the sum of the reductions in Final Bound Total AMS, *de minimis* and Blue Box payments would otherwise be less than that overall reduction.” The Declaration added that developing country members with no AMS commitments will be exempted from reductions in *de minimis* and the overall cut in trade-distorting domestic support. On the other hand, Green Box criteria will be reviewed in line with paragraph 16 of the Framework, *inter alia*, to ensure that programmes of developing country members that cause not more than minimal trade-distortion are effectively covered.

It is pertinent to mention here that though the members agreed for three bands and higher linear cut for higher bands, they are yet to agree on thresholds and cuts for these three bands. Probable zone of thresholds for overall cuts may be within the range (as mentioned in the Chairman’s report as working hypothesis) reported in Table 1. Annex A mentions that there is a working hypothesis that the thresholds for the three bands be US\$ billion 0-10; 10-60; >60. On this basis, the European Communities would be in the top band, the United States and Japan in the second band, and all other developed countries at least in the third band. For developing countries, there is a view that either developing countries are assigned to the relevant integrated band (the bottom) or that there is a separate band for them. However, it may be recalled that this bands and cuts are still illustrative in nature rather than concrete zone of negotiation. It is because these are in many ways conditional figures. For example, the European Commission has indicated that it could be prepared to go as far as 70 per cent in the top tier, if the United States will go to 60 per cent in the second tier. On the other hand, the United States mentioned that they can go to 60 per cent reduction, if the European Commission is ready to reduce domestic support by 83 per cent (which is not indicated by the European Commission). Therefore, it would not be unlikely that real consensus may even be reached outside this zone (i.e. as mentioned in Table 1).

TABLE 1: DOMESTIC SUPPORT CUT POSSIBILITIES

Bands	Thresholds (US\$ billion)	Cuts
1	0-10	31%-70%
2	10-60	53%-75%
3	> 60	70%-80%

**Source:** Annex A (Paragraph 8) of the Hong Kong Declaration.

As regards AMS, the Chairman's report (Annex A of the Hong Kong Declaration) states that there is a working hypothesis of three bands for developed countries. There is close (but not full) convergence on the thresholds for those bands. There appears to be convergence that the top tier should be US\$25.00 billion and above (Table 2). There is some remaining divergence over the ceiling for the bottom band between US\$12.00 billion and US\$15.00 billion. The Report adds that there has been an undeniably significant convergence on the range of cuts though these are conditional.

TABLE 2: AMS REDUCTION POSSIBILITIES

Bands	Thresholds (US\$ billion)	Cuts
1	0-12/15	37-60%
2	12/15-25	60-70%
3	>25	70-83%

**Source:** Annex A (Paragraph 8) of the Hong Kong Declaration.

## II.2 Export Subsidy

Member countries agreed to eliminate all forms of export subsidy by 2013 and this will be achieved in a progressive and parallel manner. Modalities for reduction of export subsidy (to be decided by April 2006) would be decided in a manner so that a substantial part is realized by the end of the first half of the implementation period.

Members also agreed for disciplines on all export measures such as export credits, export credit guarantees or insurance programmes with repayment periods of 180 days and below. The Declaration added that such programmes should be self-financing, reflecting market consistency, and duration should be sufficiently short so that it cannot effectively circumvent real commercially-oriented discipline. It was agreed that "the disciplines on export credits, export credit guarantees or insurance programmes, exporting state trading enterprises and food aid will be completed by 30 April 2006, as part of the modalities,

including appropriate provision in favor of least-developed and net food-importing developing countries as provided for in paragraph 4 of the Marrakesh Decision.”

The Hong Kong Declaration also mentioned that developing country members will continue to benefit from the provision of Article 9.4 of the Agreement on Agriculture for five years after the end-date for elimination of all forms of export subsidies.

### **II.3 Market Access**

#### *Tariff Cuts*

Members agreed to reduce bound tariff rate on agriculture to successfully conclude the Doha agenda. It has been agreed that there will be four bands for structuring tariff cuts based on *ad valorem* equivalence. However, the relevant thresholds for tariff cuts were not established. Therefore, members have to agree on the thresholds level and tariff cuts to be applicable for developed and developing countries.

In this regard, one needs to take note of Annex A (Chairman’s report) of the Hong Kong Declaration and some relevant proposals submitted earlier by key players to the Chair of the Committee on Agriculture. Chairman’s report clearly indicates that there is divergence in proposals for tariff cuts (Table 3). Table 3 reveals that threshold levels as well as level of tariff cuts may vary. On the one extreme, highest tariff band (Band 4) may consist of tariff rates more than 90 per cent, followed by Band 3 having thresholds between 60-90 per cent, Band 2 with thresholds 30-60 per cent and lowest tariff bands consist of tariffs up to 30 per cent. On the other extreme, highest tariff band (Band 4) may consist of tariff rates more than 60 per cent, followed by Band 3 having thresholds between 40-60 per cent, Band 2 with thresholds 20-40 per cent and lowest tariff band consists of tariffs up to 20 per cent. As regards cuts in tariff, it may be between 42 per cent and 90 per cent for highest band (Band 4), 35-85 per cent for Band 3, 30-75 per cent for Band 2, and 20-65 per cent for the lowest band (Band 1).

TABLE 3: POSSIBILITY IN TARIFF CUTS

Tariff Bands	Thresholds	Range of cuts (%)
Band 1	0% - 20/30%	20-65
Band 2	20/30% - 40/60%	30-75
Band 3	40/60% - 60/90%	35-85
Band 4	>60/90%	42-90

**Source:** Endnote 9, Annex A of the Hong Kong Declaration (WT/MIN(05)/DEC).

Proposal put forward by the European Commission in October 2005 may also play an important role in this regard. The European Commission proposed different levels of thresholds and tariff cuts for developed and developing countries, as reported in Table 4. It has also requested for a tariff cap of 100 per cent for the developed countries and 150 per cent for developing countries. According to the EU proposal, LDCs are exempted from tariff reduction commitment.

TABLE 4: EU PROPOSAL ON TARIFF CUTS

Tariff Bands	Developed Countries		Developing Countries	
	Thresholds within AVEs	Linear Cuts	Thresholds within AVEs	Linear Cuts
Band 1	$0\% \leq 30\%$	35% (20%-45%)	$0\% \leq 30\%$	25% (10%-40%)
Band 2	$>30\% \leq 60\%$	45%	$>30\% \leq 80\%$	30%
Band 3	$> 60\% \leq 90\%$	50%	$> 60\% \leq 130\%$	35%
Band 4	$>90\%$	60%	$>130\%$	40%

**Source:** European Commission (2005).

#### *Sensitive Products, Special Products and Special Safeguard Mechanisms*

Members also agreed for provisions of special products, special safeguard mechanisms and sensitive products. Members agreed that the developing country members will have the flexibility to self-designate an appropriate number of tariff lines as special products guided by indicators based on the criteria of food security, livelihood security and rural development. Developing country members will also have the right to have recourse to a special safeguard mechanism based on import quantity and price triggers, with precise arrangements to be further defined. Special products and the special safeguard

mechanism shall be an integral part of the modalities and the outcome of negotiations in agriculture.

Annex A of the Hong Kong Declaration notes that members have been prepared to make concrete - albeit conditional - proposals on the number of sensitive products which vary from as little as 1 per cent to as much as 15 per cent of tariff lines. As regards special products, Annex A mentions that it has been proposed (but not yet discussed with members as a whole) that a developing country member should have the right to designate at least 20 per cent of its agricultural tariff lines as special products, and be further entitled to designate as special products where, for that product, an AMS has been notified and exports have taken place. This issue needs to be resolved as part of modalities so that there is assurance of the basis upon which members may designate special products.

#### **II.4 Cotton Issue**

In the case of cotton, concrete decision was made in the Hong Kong Ministerial Conference. Member countries agreed that developed countries shall eliminate all forms of export subsidies for cotton in 2006. Developed countries will also provide duty-free and quota-free market access for cotton exported by least-developed countries (LDCs) from the commencement of the implementation period. Although a time-bound decision was not made as regards reduction of trade distorting domestic subsidies for cotton production, it was decided that domestic subsidies will be reduced more ambitiously than under whatever general formula is agreed and that it should be implemented over a shorter period of time than generally applicable.

#### **II.5 Food Aid**

On the complex issue of food aid, the Hong Kong Declaration aims for bringing discipline in food aid but reconfirmed the commitment of the WTO members to maintain an adequate level and to take into account the interest of the food recipient countries. There will be a “safe box” for bona fide food aid so that WTO shall not stand in the way of the provision of genuine food aid but commercial displacement is to be eliminated. Member countries also agreed to work on regulations to stop misuse of food aid provisions, and at the same time, to ensure supply of emergency food aid. Here, a fundamental sticking point is whether, except in exceptional, genuine emergency situations, member countries should move towards untied, in-cash food aid only. It was

agreed that disciplines on in-kind food aid, monetization and re-exports would be made so that there are no loopholes for continuing export subsidization.

## **II.6 Special and Differential Treatment**

In the Hong Kong Ministerial conference member countries recognized the need for special and differential treatment for LDCs as regards duty-free and quota-free market access. The declaration states that “We agree that developed-country members shall, and developing-country members declaring themselves in a position to do so should provide duty-free and quota-free market access on a lasting basis, for all products originating from all LDCs by 2008 or no later than the start of the implementation period in a manner that ensures stability, security and predictability.”

“Member facing difficulties at this time to provide market access, as set out above shall provide duty-free and quota-free market access for at least 97 per cent of products originating from LDCs, defined at the tariff line level, by 2008 or no later than the start of the implementation period. In addition, these members shall take steps to progressively achieve compliance with the obligations set out above, taking into account the impact on other developing countries at similar levels of development, and, as appropriate, by incrementally building on the initial list of covered products.”

Thus, it appears that it is mandatory for the developed countries that they will provide duty-free and quota-free market access for 97 per cent of products originating from LDCs. However, it is not clear which products will be subject to duty-free and quota-free to the developed country markets. It is pertinent to note that fish and fish products account for more than 70 per cent of Bangladesh agricultural exports (HS1-24). On the other hand, RMG accounts for about three-fourth of total export earnings of Bangladesh. Thus, exclusion of 3 per cent products from duty-free and quota-free market access may have significant implication for Bangladesh. On the other hand, the declaration has not given any mandatory commitments to the developing country to give duty-free and quota-free market access for LDCs products. In addition, developing countries have the right to phase in their commitments and to enjoy appropriate flexibility in coverage.

### **III. IDENTIFICATION OF POTENTIAL AGRICULTURAL EXPORT ITEMS FROM BANGLADESH**

The Hong Kong Declaration, as regards duty-free and quota-free market access, indicates there is scope for limited market access for agricultural products in effective sense. Therefore, it is very important to identify agricultural products that have potential for exports so that a realistic negotiating strategy may be pursued to safeguard Bangladesh's interest in the Doha Round. To this end, an in-depth analysis of Bangladesh performance in agricultural trade at the aggregate and product levels is important.

A major limitation in analysing the performance of agricultural trade particularly in connection with the WTO is the definition of agriculture itself. The WTO definition of agriculture, as agreed in the WTO, Agreement on Agriculture (AoA), is different from conventionally understood agriculture. The WTO definition of agriculture, as reported in Annex 1 of the AoA, is reported in Table 5. Usually all crops, livestock and primary dairy processing and fisheries and forestry activities are included in agriculture. However, the WTO definition excludes fish and fish products and jute (among crops) but includes certain tree products, such as sorbitol, manitol, essential oils, glue and such other products. The WTO definition of agriculture also includes some industrial items such as cigarettes that are processed from agricultural products. Annex 1 of the AoA specifically mentions that the product coverage under the Agreement shall not limit the product coverage on the application of Sanitary and Phytosanitary (SPS) Measures. Another important fact is that LDCs including Bangladesh are negotiating for duty-free and quota-free market access for all products originating in LDCs rather than only agricultural products. In this context, agricultural items, which are excluded in the WTO definition, have significant importance to Bangladesh. Total export of fish and fish products (HS 03.03; 0306.13; 0304.90; 03.05; 0305.60) from Bangladesh in FY2002-03 was US\$330.14 million which accounted for 5.04 per cent of total export earnings of Bangladesh. Export earning from raw Jute (HS 5303.01) by Bangladesh in FY2002-03 was US\$82.46 million which accounted for 1.26 per cent of total export earnings of Bangladesh. Thus, an attempt has been made to include fish and fish products in the analysis of agricultural trade performance of Bangladesh.

TABLE 5: PRODUCT COVERAGE IN THE WTO AGREEMENT ON AGRICULTURE (AOA)

(i)	HS Chapters 1 to 24 less fish and fish products, plus*		
(ii)	HS Code	2905.43	(mannitol)
	HS Code	2905.44	(sorbitol)
	HS Heading	33.01	(essential oils)
	HS Headings	35.01 to 35.05	(albuminoidal substances, modified starches, glues)
	HS Code	3809.10	(finishing agents)
	HS Code	3823.60	(sorbitol n.e.p.)
	HS Headings	41.01 to 41.03	(hides and skins)
	HS Heading	43.01	(raw furskins)
	HS Headings	50.01 to 50.03	(raw silk and silk waste)
	HS Headings	51.01 to 51.03	(wool and animal hair)
	HS Headings	52.01 to 52.03	(raw cotton, waste and cotton carded or combed)
	HS Heading	53.01	(raw flax)
	HS Heading	53.02	(raw hemp)

\*The product descriptions in round brackets are not necessarily exhaustive.

Source: WTO Agreement on Agriculture.

Availability of trade data series which reflect all agricultural commodities of Bangladesh is another limitation for such analysis. For example, FAO data series on agricultural trade include primary and processed crops and livestock products but exclude fish and fish products. UN COMTRADE data do not have ready definition of agriculture (WTO defined or traditionally definition). Under these circumstances, summation of all export and import items included in Chapter 1-24 of the HS code system reported in UN COMTRADE is used. This has surely underestimated the total agricultural export and import level of Bangladesh. Readers are requested to keep this limitation of the study in mind and to be careful about the definition of agriculture used here while interpreting and citing the research findings of the study.

### III.1 Trends in Agricultural Trade

Value of all agricultural exports from Bangladesh has increased from US\$215.2 million in 1991 to US\$466.5 million in 2004 (Table 6). On the other hand, value of WTO defined agricultural exports has increased from US\$55.2 million in 1991 to US\$88.9 million in 2004. During this period, total export of goods from Bangladesh has increased from US\$1690.2 million in 1991 to US\$5796.9 million in 2004. Thus, share of WTO defined agriculture as per cent of total export has decreased from 3.26 per cent in 1991 to 1.53 per cent in 2004.

TABLE 6: TRENDS IN AGRICULTURAL EXPORTS OF BANGLADESH: 1991-2004  
(In Million US\$)

Year	Total Exports	All Agricultural Exports (HS code Chapters 1-24)	WTO Defined Agricultural Exports	Per cent Share of Agricultural Exports to Total Exports	
				All	WTO Defined
1991	1690.2	215.2	55.2	12.73	3.26
1992	1941.6	215.5	49.9	11.10	2.57
1993	2253.1	268.7	57.5	11.93	2.55
1994	2483.3	339.8	71.3	13.68	2.87
1995	3407.2	358.3	46.5	10.52	1.36
1996	3538.5	358.4	35.4	10.13	1.00
1997	4017.5	340.0	43.2	8.46	1.08
1998	5056.9	368.6	83.6	7.29	1.65
1999	4936.2	337.2	28.3	6.83	0.57
2000	5034.9	353.0	23.7	7.01	0.47
2001	5681.8	400.9	45.5	7.06	0.80
2002	5218.9	346.1	44.9	6.63	0.86
2003	5809.4	362.1	39.0	6.23	0.67
2004	5796.9	466.5	88.9	8.05	1.53

**Source:** Authors' calculation based on data collected from UN COMTRADE and Foreign Trade Statistics of Bangladesh, FAO, WTO; Agricultural exports of Bangladesh for 1999 collected from Foreign Trade Statistics of Bangladesh.

An analysis of trends in agricultural imports by Bangladesh revealed that Bangladesh's import of all agricultural products has increased from US\$547.65 million in 1991 to US\$1628.36 million in 2004 (Table 7). Import of WTO defined agricultural commodities has increased from US\$644.39 million in 1991 to US\$2215.67 million in 2004. Total import of all goods by Bangladesh has increased from US\$3136.68 million in 1991 to US\$8537.37 million in 2004. Thus, share of WTO defined agricultural imports to the total imports of Bangladesh has increased from 20.54 per cent in 1991 to 25.95 per cent in 2004. On the other hand, share of all agricultural imports to the total imports of Bangladesh has increased from 17.46 per cent in 1991 to 19.07 per cent in 2004.

TABLE 7: TRENDS IN AGRICULTURAL IMPORTS BY BANGLADESH: 1991-2004

*(In Million US\$)*

Year	Total Import of Goods	Import of All Agricultural Goods (HS code Chapters 1-24)	Import of WTO Defined Agricultural Goods	Per cent Share of Agricultural Imports to Total Imports	
				All	WTO Defined
1991	3136.68	547.65	644.39	17.46	20.54
1992	3467.05	637.19	735.53	18.38	21.21
1993	3525.71	566.39	667.49	16.06	18.93
1994	na	na	na	na	na
1995	5438.41	947.22	1058.18	17.42	19.46
1996	6225.30	1067.30	1255.67	17.14	20.17
1997	6784.46	1156.06	1407.15	17.04	20.74
1998	7017.97	1081.99	1384.03	15.42	19.72
1999	na	Na	Na	na	na
2000	7572.20	1514.12	1842.35	20.00	24.33
2001	8096.56	1346.88	1759.22	16.64	21.73
2002	8955.09	1280.46	1631.51	14.30	18.22
2003	8705.70	1534.61	1972.10	17.63	22.65
2004	8537.37	1628.36	2215.67	19.07	25.95

**Source:** Author's calculation based on data collected from UN COMTRADE.

It is pertinent to know the composition of agricultural exports from Bangladesh. Table 8 reports top 40 agricultural export items of Bangladesh which were identified by calculating average annual export of different agricultural commodities at 6 digit HS classification during 2002-04. The analysis revealed that annual average export of agricultural products from Bangladesh during this period was about US\$392.00 million (Table 8). Bangladesh's top most export item during 2002-04 was shrimps and prawns, frozen (HS 030613) which accounted for 77.57 per cent of the agricultural export from Bangladesh. Second most important agricultural export items of Bangladesh was tea, black (fermented or partly) in packages < 3 kg (HS 090230) which accounted for 3.43 per cent of total agricultural exports from Bangladesh. Fish not elsewhere specified, frozen, whole (HS 030379) was the third most important export item, accounting for 3.00 per cent of agricultural exports from Bangladesh. Other major agricultural export items which have more than 1 per cent share to total agricultural exports, are vegetables, fresh or chilled not elsewhere specified (HS 070990) and cigarettes containing tobacco (HS 240220).

TABLE 8: MAJOR AGRICULTURAL EXPORT ITEMS (6-DIGIT HS) OF BANGLADESH:  
2002-04

*(In '000' US\$)*

HS Code	Product Name	Value of Average Annual Export	Percentage Share of the Product	Rank among Agricultural Export Items
030613	Shrimps and prawns, frozen	303734.33	77.57	1
090230	Tea, black (fermented or partly) in packages < 3 kg	13422.84	3.43	2
030379	Fish nes, frozen, whole	11764.10	3.00	3
070990	Vegetables, fresh or chilled nes	11069.41	2.83	4
240220	Cigarettes containing tobacco	4706.65	1.20	5
240120	Tobacco, unmanufactured, stemmed or stripped	3712.53	0.95	6
030420	Fish fillets, frozen	2819.05	0.72	7
030549	Smoked fish & fillets other than herrings or salmon	2502.68	0.64	8
060499	Foliage, branches, for bouquets, etc. - except fresh	2191.71	0.56	9
070910	Globe artichokes, fresh or chilled	2105.68	0.54	10
030269	Fish nes, fresh or chilled, whole	2053.84	0.52	11
030329	Salmonidae, nes,frozen, whole	1961.02	0.50	12
170111	Raw sugar, cane	1735.57	0.44	13
030490	Fish meat & mince, except liver, roe & fillets, frozen	1447.52	0.37	14
090240	Tea, black (fermented or partly) in packages > 3 kg	1399.91	0.36	15
030559	Dried fish, other than cod, not smoked	1197.51	0.31	16
030614	Crabs, frozen	1184.38	0.30	17
030310	Salmon, Pacific, frozen, whole	1161.30	0.30	18
240130	Tobacco refuse	1136.58	0.29	19
030623	Shrimps and prawns, not frozen	1024.41	0.26	20
240290	Cigars, cheroots, cigarettes, with tobacco substitute	960.00	0.25	21
030339	Flatfish except halibut, plaice or sole, frozen, whole	885.03	0.23	22
240110	Tobacco, unmanufactured, not stemmed or stripped	807.87	0.21	23
030624	Crabs, not frozen	799.09	0.20	24
030551	Cod dried, whether or not salted but not smoked	728.46	0.19	25
030520	Livers and roes, dried, smoked, salted or in brine	724.16	0.18	26
210690	Food preparations nes	666.56	0.17	27
150790	Refined soybean oil, not chemically modified	650.50	0.17	28
050610	Ossein and bones treated with acid	625.53	0.16	29
030410	Fish fillet or meat, fresh or chilled, not liver, roe	581.98	0.15	30
030622	Lobsters (Homarus), not frozen	564.45	0.14	31
140110	Bamboos used primarily for plaiting	488.28	0.12	32
190410	Cereal foods obtained by swelling, roasting of cereal	454.52	0.12	33
030376	Eels, frozen, whole	406.39	0.10	34
070390	Leeks & other alliaceous vegetables, fresh or chilled	391.32	0.10	35
050510	Feathers and down used for stuffing	384.41	0.10	36
010600	Animals, live, except farm animals	357.73	0.09	37
200980	Single fruit, veg juice nes, not fermented or spirit	348.45	0.09	38
030619	Crustaceans nes, frozen	289.58	0.07	39
100630	Rice, husked (brown)	246.14	0.06	40
	Others	7879.20	2.01	
01 to 24	All agricultural products	391570.67	100.00	

**Source:** Authors' calculation based on data collected from UN COMTRADE.

Product specific export performance of various commodities in the short and long term may be understood by analysing the rates of growth in export of individual commodities. In this regard, estimation of rate of growth in value of exports and quantity of exported commodity is essential. An analysis of annual compound rates of growth of various agricultural commodities exported by Bangladesh for two periods, 1991-2003 and 2000-2003 is carried out. Estimated growth rates are reported in Table 9. It is evident from the table that long run growth (during 1991-2003) in export value of fish (not elsewhere specified), frozen, whole (HS 030379) was 0.14 per cent per year while exported quantity of the commodity experienced a decline at the rate of 1.09 per cent per year. During the same period long run growth in export value of shrimps and prawns, frozen (HS 030613) was 5.99 per cent while annual compound growth rate in export quantity of the commodity was 2.45 per cent. It may be recalled that shares of fish not elsewhere specified, frozen, whole (HS 030379) and shrimps and prawns, frozen (HS 030613) to total agricultural exports from Bangladesh during 2002-2004 were 3.00 per cent and 77.57 per cent, respectively. Two commodities vegetable materials, not elsewhere specified, for used primarily plaiting (HS 140190) and food preparations, not elsewhere specified (HS 210690) have experienced very high growth (more than 25 per cent per year) in export value and export volume during the period 1991-2001. Feathers and down used for stuffing (HS 050510) and cigarettes containing tobacco (HS 240220) had positive growth in export value and volume. On the other hand, dried fish, other than cod, not smoked (030559), tea, green (unfermented) in packages > 3 kg (HS 090220), tea, black (fermented or partly) in packages < 3 kg (HS 090230) had negative long term growth, both in export value and export volume.

Short term growth (during 2000-2003) in agricultural exports, both in value and volume of exports, was very high (more than 10 per cent) for commodities such as fish fillet or meat, fresh or chilled, not liver, roe (HS 030410), feathers and down used for stuffing (HS 050510), potatoes, frozen, uncooked steamed or boiled (HS 071010), rice, husked (brown) (HS 100630), food preparations not elsewhere specified (HS 210690), tobacco, unmanufactured, not stemmed or stripped (HS 240110), tobacco, unmanufactured, stemmed or stripped (HS 240120) and cigarettes containing tobacco (HS 240220). In the case of animals, live, except farm animals (HS 010600), eels, live (HS 030192), fish fillets, frozen (HS 030420), and fish meat & mince, except liver, roe & fillets, frozen (HS 030490), growth rates in quantity of exports were very high. Due to non-availability of value for these commodities, growth rate of exported value could not be estimated.

TABLE 9: ANNUAL COMPOUND RATE OF GROWTH (%) IN AGRICULTURAL EXPORTS (6-DIGIT HS) OF BANGLADESH: 1991-03

HS Code	Product Name	Quantity		Value	
		1991-03	2000-03	1991-03	2000-03
010600	Animals, live, except farm animals		57.44		
030110	Ornamental fish, live		-8.46		
030192	Eels, live		133.41		
030270	Fish livers and roes, fresh or chilled		-25.69		
030379	Fish nes, frozen, whole	-1.09	-9.15	0.14	-3.17
030410	Fish fillet or meat, fresh or chilled, not liver, roe		61.56		79.15
030420	Fish fillets, frozen		130.40		
030490	Fish meat & mince, except liver, roe & fillets, frozen		173.98		
030530	Fish fillets, dried, salted or in brine, not smoked		-4.56		
030549	Smoked fish & fillets other than herrings or salmon	-2.00	-31.04	2.17	-32.17
030559	Dried fish, other than cod, not smoked	-10.72	-29.18	-9.81	-35.99
030569	Fish nes, salted or in brine, not dried or smoked		-40.64		56.51
030613	Shrimps and prawns, frozen	2.45	-4.29	5.99	-2.80
030623	Shrimps and prawns, not frozen		14.58		-36.30
030710	Oysters		8.68		22.22
050510	Feathers and down used for stuffing	2.29	14.36	7.87	21.62
050610	Ossein and bones treated with acid		-45.83		-26.67
050690	Bones and horn-cores unworked or simply worked nes				-14.96
050790	Whalebone, horns, etc unworked or simply prepared nes	1.35	-7.27	-0.49	13.34
060499	Foliage, branches, for bouquets, etc. - except fresh		-34.02		
070190	Potatoes, fresh or chilled except seed		-0.78		-20.34
070990	Vegetables, fresh or chilled nes			6.64	149.33
071010	Potatoes, frozen, uncooked steamed or boiled		61.39		49.96
071080	Vegetables, frozen nes, uncooked steamed or boiled		-23.65		-9.80
090220	Tea, green (unfermented) in packages > 3 kg	-17.89	-89.96	-20.09	-98.34
090230	Tea, black (fermented or partly) in packages < 3 kg	-1.85	-16.97	-3.00	-3.69
100630	Rice, husked (brown)		35.76		19.17
140110	Bamboos used primarily for plaiting		9.76		11.68
140190	Vegetable materials nes, used primarily for plaiting	26.80	0.58	25.40	-7.20
151620	Veg fats, oils or fractions hydrogenated, esterified		-123.67		
190410	Cereal foods obtained by swelling, roasting of cereal		6.17		16.58
190490	Cereals, except maize grain, prepared nes		-14.01		-23.69
190590	Communion wafers, rice paper, bakers wares nes		-50.62		-24.94
210690	Food preparations nes	31.00	12.44	31.76	23.95
220300	Beer made from malt	21.49	-96.26	17.79	-94.21
220830	Whiskies	2.58	-102.24	-11.17	-103.50
240110	Tobacco, unmanufactured, not stemmed or stripped		31.05		104.26
240120	Tobacco, unmanufactured, stemmed or stripped	-3.68	90.36	0.02	39.30
240130	Tobacco refuse				0.41
240220	Cigarettes containing tobacco	11.38	129.60	22.17	69.14
240290	Cigars, cheroots, cigarettes, with tobacco substitute				-26.22
240399	Products of tobacco, substitute nes, extract, essences		27.64		-59.21

Source: Author's calculation based on data collected from UN COMTRADE.

Both value and quantity of export of fish not elsewhere specified, frozen, whole (HS 030379), smoked fish & fillets other than herrings or salmon (HS 030549), dried fish, other than cod, not smoked (HS 030559), shrimps and prawns, frozen (HS 030613), ossein and bones treated with acid (HS 050610), potatoes, fresh or chilled except seed (HS 070190), vegetables, frozen not elsewhere specified, uncooked steamed or boiled (HS 071080), tea, green (unfermented) in packages > 3 kg (HS 090220), tea, black (fermented or partly) in packages < 3 kg (HS 090230), cereals, except maize grain, prepared not elsewhere specified (HS 190490), communion wafers, rice paper, bakers wares not elsewhere specified (HS 190590), beer made from malt (HS 220300) and whiskies (HS 220830) have declined during 2000-2003. It may be noted that shrimps and prawns, frozen (HS 030613) contributes about 77.57 per cent of total agricultural exports from Bangladesh while tea, black (fermented or partly) in packages < 3 kg (HS 090230) contributes 3.43 per cent. Therefore, Bangladeshi policymakers must take note of their decline in export.

### **III.2 Agricultural Products with Export Potentials**

One way of identifying export potentials of various agricultural commodities is to calculate comparative advantage of the product at the export parity level which is an arduous task and often constrained by availability of necessary data. Another way of identifying export potential is to analyse the growth trends in export of the commodity in recent years. In this regard, estimated rates of growth in export of various agricultural commodities described earlier in Table 9 can shed some light. It is observed that two commodities, namely tobacco, unmanufactured, stemmed or stripped (HS 240120) and cigarettes containing tobacco (HS 240220) have experienced high growth in export value and export volume during 2000-03. These commodities have about one per cent share to the total agricultural export of Bangladesh. Therefore, high growth in export value and volume of these commodities indicates that possibly these will also be important export items of Bangladesh in the future too.

It was also observed that several commodities such as fish fillet or meat, fresh or chilled, not liver, roe (HS 030410), feathers and down used for stuffing (HS 050510), Potatoes, frozen, uncooked steamed or boiled (HS 071010), rice, husked (brown) (HS 100630), food preparations not elsewhere specified (HS 210690) and tobacco, unmanufactured, not stemmed or stripped (HS 240110) had relatively very low share (less than 0.22 per cent) to the total exports from Bangladesh, but had high growth (generally more than 10 per

cent per year) in value and volume of exports during 2000-2003. Therefore, these commodities may also play an important role in the future exports of agricultural commodities from Bangladesh. It is pertinent to mention here that two recent studies (Shahabuddin *et al.* 2002, Shahabuddin 2002) estimated comparative advantage in crop production (using domestic resource cost--DRC method on input-output prices, market distortions and production coefficients for the year 2000) found that Bangladesh has comparative advantage in production of Aman rice, jute and vegetables at export parity prices. In other words, Bangladesh can gain from the increase in production of these crops, provided that the surplus production could be exported in the world market.

### **III.3 Potential Agro-products for Export to the USA**

Bangladesh enjoys duty-free and quota-free market access to most of its products in EU under EBA (Everything but Arms), in Japan, Canada and Australia through special GSPs offered by respective countries. During the Hong Kong Ministerial conference these countries particularly EU, Canada and Australia were ready to provide duty-free and quota-free market access for all products originating in LDCs. USA, on the other hand, was not eager to provide duty-free and quota-free market access to all products of LDCs. Bangladesh enjoys limited GSP to the US market. Therefore, in effective sense duty-free and quota-free market access would give real market access in the US. So, it is important to identify agricultural products important to Bangladesh's as an export item to the USA. Table 10 reports the top 30 agricultural export items (HS 6-digit level) of Bangladesh to USA. As is revealed from the table, during the period 2002-04, Bangladesh's total value of yearly agricultural exports (HS 01-24) to the USA was US\$106.83 million which was 27.28 per cent of all agricultural exports of Bangladesh. Among these 30 items, only one item, shrimps and prawns, frozen (HS 030613), accounted for about 92.8 per cent of total agricultural export value to USA. Other major agricultural exports items to USA, each having more than one per cent share, were vegetables, fresh or chilled not elsewhere specified (HS 070990) and fish not elsewhere specified, frozen, whole (HS 030379). Therefore, while negotiating duty free and quota free access to USA, shrimps and prawns, frozen (HS 030613) must be included.

TABLE 10: BANGLADESH'S AGRICULTURAL EXPORTS TO USA: 2002-04

('000' US\$)

HS Code	Product Name	Value of Average Annual Export	Percentage Share of the Product	Rank among Agricultural Export Items
030613	Shrimps and prawns, frozen	99146.68	92.81	1
070990	Vegetables, fresh or chilled nes	2951.79	2.76	2
030379	Fish nes, frozen, whole	1102.76	1.03	3
030339	Flatfish except halibut, plaice or sole, frozen, whole	403.35	0.38	4
050510	Feathers and down used for stuffing	370.51	0.35	5
030329	Salmonidae, nes, frozen, whole	362.58	0.34	6
030623	Shrimps and prawns, not frozen	292.29	0.27	7
240120	Tobacco, unmanufactured, stemmed or stripped	262.41	0.25	8
060499	Foliage, branches, for bouquets, etc. - except fresh	220.55	0.21	9
030420	Fish fillets, frozen	208.18	0.19	10
240110	Tobacco, unmanufactured, not stemmed or stripped	179.52	0.17	11
210690	Food preparations nes	172.82	0.16	12
190410	Cereal foods obtained by swelling, roasting of cereal	126.10	0.12	13
030192	Eels, live	88.49	0.08	14
030310	Salmon, Pacific, frozen, whole	84.01	0.08	15
030490	Fish meat & mince, except liver, roe & fillets, frozen	80.80	0.08	16
190490	Cereals, except maize grain, prepared nes	69.39	0.06	17
190190	Malt extract & limited cocoa pastrycooks products nes	66.05	0.06	18
200490	Vegetables nes and mixtures, prepared, frozen	61.90	0.06	19
190590	Derivatives of wool grease (including lanolin)	56.73	0.05	20
030410	Fish fillet or meat, fresh or chilled, not liver, roe	55.34	0.05	21
030622	Lobsters (Homarus), not frozen	48.70	0.05	22
100630	Rice, husked (brown)	46.60	0.04	23
090230	Tea, black (fermented or partly) in packages < 3 kg	36.26	0.03	24
090620	Cinnamon and cinnamon-tree flowers crushed or ground	33.80	0.03	25
100110	Durum wheat	30.48	0.03	26
100620	Rice, husked (brown)	25.81	0.02	27
030619	Crustaceans nes, frozen	23.82	0.02	28
090240	Tea, black (fermented or partly) in packages > 3 kg	22.19	0.02	29
030559	Dried fish, other than cod, not smoked	18.87	0.02	30
	Others	178.57	0.17	
	All agricultural products	106827.34	100.00	

**Source:** Authors' calculation based on data collected from UN COMTRADE.

#### IV. POTENTIAL IMPACTS OF VARIOUS DECISIONS AND NEGOTIATING PROPOSALS

We have studied potential impacts of likely outcome of successful completion of Doha Round negotiations for Bangladesh agriculture for 35 agro-products (Table 11). As mentioned earlier, implementation of trade liberalisation commitments may be made at the 6-digit HS code level, but for general understanding it is easier to comprehend and report on a group of commodities. Considering the ease in estimation, interpretation and communication of research findings, the grouping available in ATPSM software was used. Thus, 35 agricultural commodities included in this study represent relevant agro-products under these categories. Detailed definition of the products included in this study in terms of HS Code, FAO Commodity Code and ATPSM code is mentioned in Appendix 1.

TABLE 11: AGRICULTURAL PRODUCTS CONSIDERED FOR THE PRESENT STUDY

Products studied	Comprised of
<b>Livestock</b>	Cattle; Buffaloes; Sheep; Goats
<b>Bovine meat</b>	Offals of Cattle, Edible; Meat of Cattle, Boneless; Meat of Beef (Dried, Salted, Smoked); Meat of Buffaloes; Offals of Buffaloes (Edible)
<b>Sheep meat</b>	Meat of Sheep; Offals of Sheep (Edible); Meat of Goats; Offals of Goats
<b>Pig meat</b>	Meat of Pigs; Offals of Pigs (Edible); Pork; Bacon and Ham
<b>Poultry</b>	Meat of Chickens; Offals Liver Chik; Meat of Ducks; Meat of Geese; Offals Liver G. Se; Offals Liver Duck; Meat of Turkeys; Offals Liver Turk; Pigeon Meat, other Birds
<b>Milk, Concentrate</b>	Milk Whole Condensed; Milk Whole Evaporated; Milk Skimmed Evaporated; Milk Skimmed Condensed; Milk Whole Dried; Milk Skimmed Dry
<b>Butter</b>	Butter Cow Milk; Ghee, Butter oil of Cow Milk; Butter of Buffalo milk; Ghee oil of Buffalo; Butter, Ghee of Sheep Milk; Butter of Goat Milk
<b>Cheese</b>	Cheese of Whole Cow Milk; Cheese of Skimmed Cow Milk; Whey Cheese; Processed Cheese; Cheese of Buffalo milk; Cheese of Sheep milk; Cheese of Goat Milk
<b>Wheat</b>	Wheat; Flour of Wheat
<b>Rice</b>	Rice Paddy; Rice Husked; Milled/Husked Rice; Rice Milled; Rice Broken; Rice Flour
<b>Barley</b>	Barley; Barley Flour and Grits
<b>Maize</b>	Maize; Flour of Maize
<b>Sorghum</b>	Sorghum; Flour of Sorghum
<b>Pulses</b>	Beans Dry; Broad Beans Dry; Peas Dry; Chick-Peas; Cow Peas Dry; Pigeon Peas; Lentils; Bambara Beans; Vetches; Lupins; Pulses Nes; Flour of Pulses
<b>Tomatoes</b>	Tomatoes Fresh; Tomato juice Concentrated; Juice Tomatoes; Paste Tomatoes; Tomato Peeled
<b>Roots &amp; Tubers</b>	Potatoes; Potatoes Flour; Frozen Potatoes; Tapioca of Potatoes; Sweet Potatoes; Cassava; Flour of Cassava; Tapioca of Cassava; Cassava Dried; Yautia (Cocoyam); Taro (Cocoyam); Yams; Roots and Tubers Nes; Flour of Roots and Tubers; Roots and Tubers Dried
<b>Apples &amp; Pears</b>	Apples; Apple juice Single Streng; Apple juice Concentrated; Pears; Quinces
<b>Citrus Fruits</b>	Oranges; Juice of Oranges; Orange juice Concentrated; Tang, Mand. Clement. Satsma; Tangerine Juice; Lemons and Limes; Lemon juice Single-Streng; Lemon

<b>Products studied</b>	<b>Comprised of</b>
	juice Conc.; Grapefruit & Pomelo; Juice of Grapefruit; Grape-fruit juice Concentrate; Citrus Fruit Nes; Juice of Citrus Fruit Nes; Citrus juice Conc.
<b>Bananas</b>	Bananas; Plantains
<b>Other Tropical Fruits</b>	Watermelons; Melons Incl. Cantaloupes; Figs; Figs Dried; Mangoes; Avocados; Pineapples; Pineapples Cand; Juice of Pineapples; Dates ; Pineapple Juice Conc ; Mango Juice ; Mango Pulp; Persimmons; Cashewapple; Kiwi Fruit; Papayas; Fruit Tropical Fresh Nes; Fruit Tropical Dried Nes
<b>Sugar, Raw</b>	Sugar Cane; Sugar Beet; Cane Sugar; Beet Sugar; Sugar Crops Nes; Sugar Raw Centrifugal; Sugar Non- Centrifugal
<b>Sugar, Refined</b>	Sugar Refined
<b>Coffee, Green</b>	Coffee Green
<b>Coffee, Proc.</b>	Coffee Roasted; Coffee Subst. Cont. Coffee; Coffee Extracts
<b>Cocoa Beans</b>	Cocoa Beans
<b>Cocoa, Processed</b>	Cocoa Paste; Cocoa Butter; Cocoa Powder & Cake; Chocolate Processed nes
<b>Tea</b>	Tea; Mate; Extracts Tea, Mate, Prep.; Tea Nes
<b>Tobacco Leaves</b>	Tobacco Unmanufactured
<b>Tobacco, Processed</b>	Cigarettes; Cigars Cheroots; Tobacco Processed Nes
<b>Oilseeds, Temperate</b>	Soybeans; Sunflower Seed; Rapeseed; Jojoba Seeds; Safflower Seed; Sesame Seed; Mustard Seed; Poppy Seed; Linseed; Hempseed
<b>Oilseeds, Tropical</b>	Groundnuts in Shell; Groundnut Shelled; Coconuts; Coconuts Desic; Copra; Oil Palm Fruit; Palm nuts Kernels; Karite Nuts (Sheanuts); Castor Beans; Tung Nuts; Melon seed; Tallow tree Seeds; Kapok Fruit; Kapok seed Shell; Kapok seed Shled; Seed Cotton; Cottonseed
<b>Vegetable Oils</b>	Oil of Soybeans; Oil Groundnuts; Oil of Coconuts; Oil of Palm; Oil Palm Kernel; Butter of Karite Nuts; Oil of Castor Beans; Oil of Sunflower Seed; Oil of Rapeseed; Oil of Tung Nuts; Jojoba Oil; Oil of Safflower Seed; Oil of Sesame Seed; Oil of Mustard Seed; Oil of Poppy seed; Vegetable Tallow; Stillingia Oil; Oil of Kapok; Oil of Ctnseed; Oil of Linseed; Oil of Hempseed
<b>Hides &amp; Skins</b>	Hides Fresh Cattle; Hides Wet Salted Cattle; Hides dry S. Cattle; Hides Nes Cattle; Skins Wet Salted Calves; Skins dry S. Calves; Skins Nes Calves; Hides Wet Salted Buffaloes; Hides Dry Salt Buf; Skins Fresh Sheep; Skinswet Salted Sheep; Skins dry Sltsheep; Skins Nes Sheep; Skins With Wool Sheep; Karakul Skins; Skins Wet Salted Goats; Skins Dry Slt Goat; Skins Nes Goats; Skins Fresh Pigs; Skinswet Sltdpigs; Skins dry Sltdpigs; Skins Nes Pigs; Hides Wet Salted Horses; Hides Dry Slt Horses; Hides Unsp Horse; Hides Wet Salted Camels; Hides Dry Slt Cam; Hides Unsp Camels; Skins of Rabbits; Hides Wet Salted Nes; Hides Dry Slt Nes; Hides Nes
<b>Cotton</b>	Cotton Lint; Cotton Carded, Combed; Cotton Waste; Cotton Linter
<b>Rubber</b>	Rubber Nat Latex; Rubber Nat Dry

Note: nes means not elsewhere specified.

Detailed discussion of Hong Kong Declaration related to agriculture in Section II of this paper has clearly shown that WTO members have agreed that:

- (i) There will be three bands for reductions in Final Bound Total AMS and in the overall cut in trade-distorting domestic support, with higher cuts in higher bands. However, threshold levels for these bands and the level of cut would be decided later on.
- (ii) Elimination of all forms of export subsidies and disciplines on all export measures with equivalent effect to be completed by the end of 2013. However, modalities for these would be decided later on.
- (iii) Tariff cuts would be on *ad valorem* equivalents and members will adopt four bands for structuring of tariff cuts. However, relevant threshold and extent of tariff cuts and flexibilities for developing countries to be decided later on.
- (iv) There is agreement for sensitive products. As regards special products and special safeguard mechanism for developing countries, there will be flexibility to self-designate an appropriate number of tariff lines as special products guided by indicators based on the criteria of food security, livelihood security and rural development. However, number of products to be covered as sensitive products, special products and precise arrangement for special safe guard mechanism will be decided later on.
- (v) LDCs would be exempted from any reduction commitment as regards tariff, domestic support and export subsidy for agricultural products.

Considering the abovementioned decisions and proposals, discussed earlier in Section II, impacts of Hong Kong Declaration under three scenarios - Optimistic (Scenario 1), Conservative (Scenario 2) and Pessimistic (Scenario 3) have been analysed. Table 12 documents the detailed assumptions made against these three scenarios. Each of the scenarios is based on some assumptions about the likely outcome of the Doha Round negotiations as regards market access (tariff cuts, sensitive and special products including treatments/ arrangements for these products), reduction in domestic support and export subsidy.

TABLE 12: BASIC ASSUMPTIONS OF THE PRESENT STUDY ABOUT THE LIKELY OUTCOMES OF THE WTO NEGOTIATION ON AGRICULTURE UNDER DOHA DEVELOPMENT ROUND

Assumptions	Market Access		Reduction in Export Subsidy	Reduction in Domestic Support	
	Tariff cuts	Special Products/ Sensitive Products			
<b>Scenario 1 (Optimistic)</b>					
Developed Countries	If tariff is > 90%, then reduce tariff by 60%		8% sensitive product with 10 per cent reduction in tariff (i.e. three sectors with highest tariff revenue under the present study)	100%	70% by EU, 60% by US and Japan, and 50% by Other Developed Countries
	If tariff is >60% and ≤ 90%, then reduce tariff by 50%				
	If tariff is >30% and ≤60%, then reduce tariff by 45%				
	If tariff is ≤30%, then reduce tariff by 35%				
Developing Countries	If tariff is >130%, then reduce tariff by 40%		20% special products with no reduction in tariff (i.e. for seven sectors with highest tariff revenue under the present study)	100%	50%
	If tariff is >80% and ≤130%, then reduce tariff by 35%				
	If tariff is >30% and ≤80%, then reduce tariff by 30%				
	If tariff is ≤30%, then reduce tariff by 25%				
LDCs	0%			0%	0%
<b>Scenario 2 (Conservative)</b>					
Developed Countries	If tariff is > 90%, then reduce tariff by 60%		1% sensitive product with 10 per cent reduction in tariff (i.e. one sector with highest tariff revenue under the present study)	100%	60%
	If tariff is >60% and ≤ 90%, then reduce tariff by 50%				
	If tariff is >30% and ≤60%, then reduce tariff by 45%				
	If tariff is ≤30%, then reduce tariff by 35%				
Developing Countries	If tariff is >130%, then reduce tariff by 40%		8% special products with no reduction in tariff (i.e. for three sectors with highest tariff revenue under the present study)	100%	40%
	If tariff is >80% and ≤130%, then reduce tariff by 35%				
	If tariff is >30% and ≤80%, then reduce tariff by 30%				
	If tariff is ≤30%, then reduce tariff by 25%				
LDCs	0%			0%	0%
<b>Scenario 3 (Pessimistic)</b>					
Developed Countries	If tariff is > 90%, then reduce tariff by 60%		No sensitive products	100%	70% by EU, 60% by US and Japan, and 50% by Other Developed Countries
	If tariff is >60% and ≤ 90%, then reduce tariff by 50%				
	If tariff is >30% and ≤60%, then reduce tariff by 45%				
	If tariff is ≤30%, then reduce tariff by 35%				
Developing Countries	If tariff is >130%, then reduce tariff by 40%		No special products	100%	50%
	If tariff is >80% and ≤130%, then reduce tariff by 35%				
	If tariff is >30% and ≤80%, then reduce tariff by 30%				
	If tariff is ≤30%, then reduce tariff by 25%				
LDCs	0%		No special products	0%	0%

**Source:** Authors' assumption about likely outcome of Doha Round Negotiation on Agriculture.

All these three scenarios expect that there would be substantial tariff cuts with greater flexibility for developing countries and LDCs will be exempted from any reduction commitments. Optimistic scenario (Scenario 1) assumes that there will be generous provision for sensitive (8% of tariff lines) and special products (20% tariff lines) and reduction in domestic support will be substantial. Pessimistic scenario (Scenario 3) assumes that reduction in domestic support will be substantial but there will not be any provision of sensitive and special products. Conservative scenario (Scenario 2) assumes that there will be provision for sensitive (1% of tariff lines) and special products (8% of tariff lines) for a limited number of products and reduction in domestic support will be less ambitious for developed and developing countries. During the Uruguay Round, commitment in reduction of domestic support was on the basis of country categories (developed, developing and LDCs) rather than level of support provided by individual countries. Conservative scenario attempted to incorporate that type of spirit for reduction in domestic support by assuming that developed countries will reduce their support by 60 per cent while developing countries will reduce by 40 per cent and no reduction commitment for LDCs.

A comparative assessment of the impacts of the abovementioned three scenarios on various indicators, such as bound and applied tariff, domestic support, welfare (producers surplus, consumers surplus, government revenue), prices (domestic consumer and producer price, world price), volume and costs of exports and imports, change in production and consumption of various agricultural commodities in Bangladesh, was conducted. For estimating potential impacts, the ATPSM (Agricultural Trade Policy Simulation Model) software version 3.0 developed by United Nations Conference on Trade and Development (UNCTAD) and Food and Agriculture Organization (FAO) was used, and released in January 2005. ATPSM is a deterministic, comparative advantage partial equilibrium model. The model contains a system of equation that represents supply, demand and trade flows for different agricultural goods (ATPSM, 2005). The model is static and deterministic, and there are no stochastic shocks or other uncertainties. There is an extensive coverage of agriculture commodities and the model considers interrelationships between the agricultural commodities in both supply and demand (for example, when competing for land or consumer preferences). The model is capable of accounting for three different economic agents within each economy: producers, consumers and government. Therefore, we were able to quantify the potential impacts of

Hong Kong Declaration under the abovementioned three scenarios about the successful completion of Doha Round talks on Agriculture on various indicators and on the economy of Bangladesh.

#### **IV.1 Potential Impact on Tariff Reduction**

This paper analysed the impacts of Doha Round negotiations on reduction in average applied and average bound tariff rates. The analysis indicates that under optimistic scenario (scenario 1) both average applied and average bound tariff rates for agricultural products are likely to decrease to 23.01 per cent in EU, 17.68 per cent in USA, 44.32 per cent in Japan, 0.94 per cent in Australia and 18.27 per cent in Canada (Table 13). In the developing countries, bound rate of tariffs will be decreased more than the applied tariff rates. It is because bound tariff rates are generally much higher than applied tariff rates in the developing countries. Under optimistic scenario, bound tariff rates in developing countries (Brazil, India, Korea, Malaysia, Pakistan, South Africa, Sri Lanka, Thailand and Russia) are likely to decrease between 0.62 percentage point (in Russia) and 25.05 percentage points (in Korea, Republic), while applied tariff rates in these countries are likely to decrease by 0.17 percentage point (in Brazil) to 9.79 percentage points (in Thailand).

Reduction in average bound tariff rate and average applied tariff rate for developed and developing countries under conservative (scenario 2) and pessimistic (scenario 3) will be higher than that of optimistic scenario (scenario 1) described above (Table 13).

TABLE 13: POTENTIAL IMPACT ON APPLIED AND BOUND TARIFF RATES IN DEVELOPED AND DEVELOPING COUNTRIES  
(Changes in Percentage Points)

Countries	Initial (%)		Scenario 1 (Optimistic)				Scenario 2 (Conservative)				Scenario 3 (Pessimistic)			
	Applied	Bound	Applied	Bound	Applied	Bound	Applied	Bound	Applied	Bound	Applied	Bound	Applied	Bound
	Initial (%)	Initial (%)	Final (%)	Final (%)	Change	Change	Final (%)	Final (%)	Change	Change	Final (%)	Final (%)	Change	Change
EU	42.71	42.71	23.01	23.01	-19.69	-19.69	21.36	21.36	-21.35	-21.35	20.63	20.63	-22.08	-22.08
United States	25.45	25.45	17.68	17.68	-7.77	-7.77	16.87	16.87	-8.58	-8.58	11.87	11.87	-13.58	-13.58
Japan	79.00	79.00	40.32	40.32	-38.68	-38.68	36.21	36.21	-42.80	-42.80	33.35	33.35	-45.65	-45.65
Australia	1.20	1.20	0.94	0.94	-0.26	-0.26	0.82	0.82	-0.38	-0.38	0.78	0.78	-0.42	-0.42
Brazil	9.90	33.26	9.73	25.54	-0.17	-7.71	9.69	24.56	-0.21	-8.69	9.69	23.37	-0.21	-9.88
Canada	25.94	25.94	18.27	18.27	-7.67	-7.67	13.94	13.94	-12.00	-12.00	11.07	11.07	-14.87	-14.87
India	19.19	80.21	17.99	59.84	-1.20	-20.37	17.64	56.36	-1.54	-23.86	17.64	51.90	-1.54	-28.32
Korea Rep.	40.24	94.84	38.30	69.79	-1.94	-25.05	37.23	67.51	-3.01	-27.33	37.03	59.64	-3.21	-35.20
Malaysia	13.26	44.75	12.76	40.85	-0.50	-3.90	12.56	40.58	-0.71	-4.17	12.34	28.19	-0.92	-16.56
Pakistan	29.52	83.71	29.34	61.11	-0.18	-22.61	29.31	57.36	-0.21	-26.36	29.31	53.64	-0.21	-30.07
South Africa	6.86	44.70	6.51	34.04	-0.34	-10.66	6.44	33.03	-0.41	-11.67	6.44	29.97	-0.41	-14.73
Sri Lanka	18.94	39.68	17.83	30.73	-1.11	-8.95	17.83	29.02	-1.11	-10.66	17.83	27.94	-1.11	-11.74
Thailand	41.25	56.96	31.46	42.23	-9.79	-14.73	31.46	39.84	-9.79	-17.12	31.38	38.22	-9.86	-18.74
Russia	4.23	4.23	3.61	3.61	-0.62	-0.62	3.33	3.33	-0.90	-0.90	3.17	3.17	-1.06	-1.06

Source: Calculated from ATPSM Database, UNCTAD, Version 3.

#### IV.2 Potential Impacts on Domestic Support

As per the Agreement on Agriculture (AoA), if a country's domestic support expenditure is below its *de minimis* level, then Total Aggregate Measure of Support (AMS) is considered as zero. *De minimis* level of AMS for developed and developing countries is respectively 5 per cent and 10 per cent of the total value of their agricultural production. Thus, domestic support provided by Australia, Bangladesh, Brazil, Canada, India, Malaysia, Pakistan, South Africa, Sri Lanka, Thailand and Russia are considered to be zero. In 1999-2001, average level of domestic support Expenditure (DSE) in EU, USA, and Japan was US\$31.38 billion, US\$5.86 billion and US\$4.45 billion respectively (Table 14). During the same period, DSE in Korea was US\$8.68 billion. If the commitments are made as per optimistic scenario (scenario 1), then total DSE is expected to decline by 70.28 per cent in EU, 56.39 per cent in USA, 62.94 per cent in Japan and 54.80 per cent in Korea. Level of reduction in DSE will be lower in all these countries under conservative and pessimistic scenarios.

TABLE 14: POTENTIAL IMPACT ON DOMESTIC SUPPORT EXPENDITURE IN SELECTED DEVELOPED AND DEVELOPING COUNTRIES

(In Million US\$)

Countries	Initial Level of Support (1999-2001)	Likely Level of Domestic Support			Percentage Change in Domestic Support		
		Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)	Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)
European Union	31377	9326	12477	9326	-70.28	-60.24	-70.28
United States	5863	2557	2557	2557	-56.39	-56.39	-56.39
Japan	4447	1648	1648	1648	-62.94	-62.94	-62.94
Australia	0	0	0	0			
Brazil	0	0	0	0			
Canada	0	0	0	0			
India	0	0	0	0			
Korea Rep.	8675	3921	4829	3921	-54.80	-44.34	-54.80
Malaysia	0	0	0	0			
Pakistan	0	0	0	0			
South Africa	0	0	0	0			
Sri Lanka	0	0	0	0			
Thailand	0	0	0	0			
Russia	0	0	0	0			

Source: Calculated from ATPSM Database, UNCTAD, Version 3

### **IV.3 Potential Impact on Prices and Welfare Gains**

An analysis of likely impact of the alternative outcomes on domestic producer, consumer and world prices was also carried out. The analysis revealed that international prices of all products except two products (Livestock and Sorghum) will increase (Table 15). Increase in price of other commodities is likely to be less than five per cent for all other commodities except five commodities (bovine meat, milk concentrate, butter, cheese and barley). Rise in price of two commodities (bovine meat and barley) is likely to be less than 10 per cent while price rise for three commodities (milk concentrate, butter, and cheese) would be more than 10 per cent. This rise in world prices would be mainly due to the reduction in domestic supports and export subsidies in the developed and developing countries. It is pertinent to note that estimated results under alternative scenarios indicated more or less the same situation for each of the 35 agricultural products studied.

If commitments are made in terms of tariff cuts, reduction in domestic support and elimination of export subsidy, then what would be the impact on economic welfare in Bangladesh? To answer this question, the welfare impacts of the alternative scenarios are analysed. Results of the analysis are reported in Table 16. Under optimistic scenario (scenario 1), producers' surplus in Bangladesh is expected to be increased by US\$180.88 million, while consumers' surplus and government revenue are likely to decrease by US\$180.99 million and US\$2.07 million respectively. Thus, total welfare is likely to decline by US\$2.18 million. Under conservative scenario (scenario 2), producers' surplus in Bangladesh is expected to increase by US\$204.20 million and consumers' surplus and government revenues are expected to decrease by US\$204.57 million and US\$2.54 million respectively. Thus, total welfare in conservative scenario is likely to decline by US\$2.92 million. Under pessimistic scenario (scenario 3), producers' surplus is likely to increase by US\$225.59 million while consumers' surplus and government revenue are likely to decrease by US\$225.82 million and US\$2.83 million respectively. Thus, total welfare is likely to decrease by US\$3.06 million under pessimistic scenario.

TABLE 15: POTENTIAL IMPACT OF NEGOTIATION OUTCOMES ON WORLD PRICES  
(In US\$/M.Ton)

Products	Initial World Price (1999-01)	Likely World Price			Percentage Change in World Price		
		Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)	Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)
Livestock	1265.67	1256.28	1260.01	1261.18	-0.74	-0.45	-0.35
Bovinemeat	1966.00	2086.85	2097.39	2103.28	6.15	6.68	6.98
Sheepmeat	2713.67	2807.90	2795.30	2793.37	3.47	3.01	2.94
Pigmeat	1213.33	1241.20	1254.38	1253.99	2.30	3.38	3.35
Poultry	1345.33	1370.34	1373.78	1384.60	1.86	2.11	2.92
Milk, conc.	1766.67	2166.09	2165.89	2170.97	22.61	22.60	22.88
Butter	1276.00	1455.78	1464.27	1465.46	14.09	14.76	14.85
Cheese	1902.00	2166.82	2161.64	2168.13	13.92	13.65	13.99
Wheat	121.33	124.96	128.60	128.74	2.99	5.99	6.10
Rice	208.67	212.72	213.23	213.42	1.94	2.19	2.28
Barley	82.33	88.69	88.56	88.81	7.72	7.57	7.87
Maize	111.33	112.67	113.00	113.20	1.20	1.50	1.68
Sorghum	89.00	87.36	87.89	87.91	-1.84	-1.25	-1.22
Pulses	529.33	531.38	531.64	535.48	0.39	0.44	1.16
Tomatoes	820.00	833.13	833.30	834.71	1.60	1.62	1.79
Roots & tubers	89.33	91.35	91.47	91.47	2.25	2.39	2.39
Apples	548.33	560.29	560.85	560.86	2.18	2.28	2.28
Citrus fruits	470.00	474.64	474.68	475.56	0.99	1.00	1.18
Bananas	477.00	481.73	482.93	492.03	0.99	1.24	3.15
Other tropical fruits	735.33	738.17	743.16	743.13	0.39	1.06	1.06
Sugar, raw	252.67	260.45	260.05	260.32	3.08	2.92	3.03
Sugar, refined	321.00	337.03	338.92	339.56	4.99	5.58	5.78
Coffee, green	1417.00	1419.08	1418.15	1418.73	0.15	0.08	0.12
Coffee, proc.	4763.87	4774.92	4776.43	4776.55	0.23	0.26	0.27
Cocoa beans	1039.00	1039.19	1039.59	1039.57	0.02	0.06	0.06
Cocoa, proc.	1676.00	1688.77	1691.32	1691.71	0.76	0.91	0.94
Tea	2262.00	2269.54	2272.01	2306.25	0.33	0.44	1.96
Tobacco leaves	3030.00	3058.81	3074.96	3082.76	0.95	1.48	1.74
Tobacco, proc.	16696.67	16696.68	16696.69	16696.67	0.00	0.00	0.00
Hides & skins	1453.33	1462.48	1460.79	1465.56	0.63	0.51	0.84
Oilseeds, temp.	219.67	220.88	220.67	227.81	0.55	0.46	3.71
Oilseeds, trop.	275.67	280.42	280.41	281.33	1.73	1.72	2.05
Rubber	621.43	621.43	621.43	621.43	0.00	0.00	0.00
Cotton	1178.33	1195.30	1195.70	1195.86	1.44	1.47	1.49
Vegetable oils	254.00	255.97	256.15	257.32	0.78	0.85	1.31

Source: Calculated from ATPSM Database, UNCTAD, Version 3.

TABLE 16: POTENTIAL IMPACT ON WELFARE GAINS BY BANGLADESH

*(In Million US\$)*

Welfare Type	Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)
Change in Producers Surplus	180.88	204.20	225.59
Change in Consumers Surplus	-180.99	-204.57	-225.82
Change in Government Revenue	-2.07	-2.54	-2.83
Change in Total Welfare	-2.18	-2.92	-3.06

**Source:** Calculated from ATPSM Database, UNCTAD, Version 3.

Welfare gains (losses) for different agricultural commodities are reported in Table 17. Product specific analysis indicates similar situation. That is, producers' surplus is likely to increase while consumers' surplus and government revenue are likely to decrease. Projected decrease in total welfare is likely to occur because Bangladesh is a net food importing country. Bangladesh imports a large amount of agricultural commodities. Earlier analysis showed that prices of most of the agricultural commodities at the international market are going to be increased as a result of decrease in domestic support, and complete elimination of export subsidy. Implication of this finding is that Bangladesh as a net food importing developing country must raise its voice for a mechanism which will take care of such consequences. Detailed study is required to come up with proposal by Bangladesh to offset these types of negative consequences. Bangladesh may think of measures like technical and financial support to increase its trade capacity so that Bangladesh can gain in the long run. Projected increase in producers' surplus implies that special provisions such as duty- and quota free-market access for agricultural commodities from LDCs somehow would be able to minimize the negative impacts. It is pertinent to note that Deb (2005a) has shown that Bangladesh agriculture was very much responsive to the prices and trade policy pursued during FY1981-2004 period. The study also added that as a result of liberalisation of agricultural trade area under wheat, sugarcane, pulses and oilseeds has declined while area under maize, HYV rice, and different vegetables has increased.

TABLE 17: PRODUCT SPECIFIC POTENTIAL IMPACT ON WELFARE GAINS IN BANGLADESH

(In Million US\$)

Products	Scenario 1 (Optimistic)				Scenario 2 (Conservative)				Scenario 3 (Pessimistic)			
	Change in Consumer Surplus	Change in Producer Surplus	Change in Govt. Revenue	Total	Change in Consumer Surplus	Change in Producer Surplus	Change in Govt. Revenue	Total	Change in Consumer Surplus	Change in Producer Surplus	Change in Govt. Revenue	Total
Livestock	5.70	-5.68	0.00	0.01	3.43	-3.43	0.00	0.01	2.72	-2.72	0.00	0.00
Bovine meat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheepmeat	-19.72	19.84	-0.04	0.08	-17.09	17.19	-0.04	0.05	-16.69	16.78	-0.04	0.04
Pigmeat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Poultry	-2.91	2.93	-0.03	-0.01	-3.31	3.34	-0.03	0.00	-4.56	4.62	-0.03	0.03
Milk, conc.	-0.73	0.00	0.13	-0.60	-0.73	0.00	0.13	-0.60	-0.74	0.00	0.14	-0.61
Butter	-3.03	3.08	-0.13	-0.08	-3.17	3.23	-0.13	-0.08	-3.19	3.25	-0.13	-0.07
Cheese	-0.26	0.29	0.00	0.02	-0.26	0.28	0.00	0.02	-0.27	0.29	0.00	0.02
Wheat	-7.49	6.97	-0.19	-0.71	-14.88	14.02	-0.50	-1.36	-15.15	14.28	-0.51	-1.37
Rice	-91.49	92.06	0.00	0.57	-102.94	103.67	0.00	0.73	-107.36	108.15	0.00	0.80
Barley	-0.03	0.03	0.00	0.00	-0.03	0.03	0.00	0.00	-0.03	0.03	0.00	0.00
Maize	-0.03	0.01	0.00	-0.02	-0.04	0.01	0.00	-0.03	-0.05	0.01	0.00	-0.03
Sorghum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pulses	-0.85	0.81	-0.03	-0.07	-0.96	0.92	-0.03	-0.07	-2.56	2.45	-0.08	-0.19
Tomatoes	-1.79	1.81	-0.03	0.00	-1.81	1.83	-0.03	0.00	-2.00	2.03	-0.03	0.00
Roots & tubers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apples	-0.02	0.00	0.00	-0.02	-0.02	0.00	0.00	-0.02	-0.02	0.00	0.00	-0.02
Citrus fruits	-0.26	0.26	-0.14	-0.15	-0.27	0.26	-0.14	-0.15	-0.31	0.31	-0.17	-0.18
Bananas	-3.12	3.14	-0.01	0.02	-3.91	3.95	-0.01	0.03	-9.84	10.05	-0.01	0.21
Other tropical fruits	-2.72	2.72	-0.45	-0.45	-7.47	7.51	-0.45	-0.41	-7.45	7.49	-0.45	-0.41
Sugar, raw	-44.11	44.94	0.00	0.83	-41.86	42.61	0.00	0.75	-43.39	44.19	0.00	0.80
Sugar, refined	-4.29	4.02	-0.84	-1.11	-4.79	4.50	-0.97	-1.25	-4.96	4.67	-1.00	-1.29
Coffee, green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coffee, proc.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cocoa beans	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cocoa, proc.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tea	-0.41	0.42	-0.07	-0.07	-0.55	0.55	-0.07	-0.06	-2.40	2.45	-0.07	-0.02
Tobacco leaves	-1.08	1.08	-0.10	-0.10	-1.68	1.68	-0.13	-0.13	-1.97	1.97	-0.13	-0.13
Tobacco, proc.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hides & skins	-0.48	0.47	0.00	-0.01	-0.39	0.38	0.00	-0.01	-0.64	0.63	0.00	-0.01
Oilseeds, temp.	-0.47	0.44	-0.03	-0.06	-0.38	0.36	-0.03	-0.05	-3.07	2.95	-0.19	-0.31
Oilseeds, trop.	-0.43	0.43	-0.04	-0.04	-0.43	0.43	-0.04	-0.04	-0.51	0.51	-0.04	-0.03
Rubber	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cotton	-0.31	0.24	0.00	-0.07	-0.32	0.25	0.00	-0.07	-0.32	0.25	0.00	-0.07
Vegetable oils	-0.64	0.57	-0.07	-0.15	-0.70	0.62	-0.09	-0.16	-1.07	0.95	-0.09	-0.21
Total	-180.99	180.88	-2.07	-2.18	-204.57	204.20	-2.54	-2.92	-225.82	225.59	-2.83	-3.06

Source: Calculated from ATPSM Database, UNCTAD, Version 3.

#### IV.4 Potential Impact on Production, Consumption and Trade

Table 18 reports likely impact of the alternative scenarios on production and consumption level and on import cost and export revenue of Bangladesh. It appears from Table 18 that if the optimistic scenario (scenario 1) is materialised, then production will increase by 0.77 per cent. Likely increase in export revenue would be from US\$2.58 million in 1999-01 to US\$136.61 million. On the other hand, import cost is likely to be decreased from US\$68.64 million in 1999-01 to US\$55.99 million (i.e. 18 per cent decrease in import cost).

If conservative scenario (scenario 2) is materialised, then agricultural production in Bangladesh may be increased by 0.85 per cent. Likely increase in export revenue would be from US\$2.58 million in 1999-01 to US\$147.69 million, while import cost is likely to decrease from US\$68.64 million in 1999-01 to US\$50.42 million (i.e. 27 per cent decrease in import cost).

If pessimistic scenario (scenario 3) is materialised, then agricultural production in Bangladesh may be increased by 0.91 per cent. Likely increase in export revenue would be from US\$2.58 million in 1999-01 to US\$165.39 million, while import cost is likely to decrease from US\$68.64 million in 1999-01 to US\$45.76 million (i.e. 33 per cent decrease in import cost).

TABLE 18: POTENTIAL IMPACT ON EXPORT, IMPORT, PRODUCTION AND CONSUMPTION OF BANGLADESH

Indicators	Initial Level (1999-2001)	Likely Situation under Alternate Scenario			Per cent Change under Alternate Scenario		
		Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)	Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)
Export Revenue (Million US\$)	2.58	136.61	147.69	165.39	5190.10	5619.07	6304.97
Import Cost (Million US\$)	68.64	55.99	50.42	45.76	-18.43	-26.55	-33.33
Production (000 MT)	33357.73	33615.87	33641.97	33662.84	0.77	0.85	0.91
Consumption (000 MT)	33650.73	33341.44	33295.34	33258.20	-0.92	-1.06	-1.17

Source: Calculated from ATPSM Database, UNCTAD, Version 3.

Product specific impacts on export, import, production and consumption under three scenarios are reported in Tables 19-24. Table 19 shows that Bangladesh's export revenue will increase substantially mainly due to increased export earning from livestock, sheep meat, poultry, banana, other tropical fruits, tomatoes, rice, raw sugar and tea.

Export level of all products except 14 products (pig meat, milk concentrate, barley, maize, sorghum, roots and tubers, apples, coffee green, coffee proc., cocoa beans, cocoa

processed, tobacco processed, hides and skins, and rubber) is likely to increase in three scenarios assumed in this study (Table 20). Export level of four products (barley, maize, sorghum, and hides and skins) is likely to decrease, while export level of four products (milk concentrate, cocoa processed, tobacco processed and rubber) is likely to remain constant.

Import costs for twelve products (bovine meat, pig meat, milk concentrate, barley, maize, sorghum, roots and tubers, apples, coffee green, cocoa processed, tobacco processed, and hides and skins) are likely to increase as a result of trade liberalisation under Doha Round talks (Table 21). Import costs of 21 products (livestock, sheep meat, poultry, butter, cheese, wheat, rice, pulses, tomatoes, citrus fruits, bananas, other tropical fruits, sugar raw, sugar refined, coffee proc., tea, tobacco leaves, oilseeds temperate, oilseeds tropical, cotton, and vegetable oils) are likely to decrease. Import cost of rubber is likely to remain constant. It may be noted that all the three scenarios depict similar types of impact on import costs for agricultural products by Bangladesh.

Import level of seven products (bovine meat, pig meat, barley, maize, sorghum, tobacco processed, and hides and skins) is likely to increase in three scenarios (Table 22). Import level of 26 products (livestock, sheep meat, poultry, milk concentrate, butter, cheese, wheat, rice, pulses, tomatoes, roots and tubers, apples, citrus fruits, bananas, other tropical fruits, sugar raw, sugar refined, coffee green, coffee proc., cocoa processed, tea, tobacco leaves, oilseeds temperate, oilseeds tropical, cotton and vegetable oils) is likely to decrease. Import level of rubber is likely to remain constant.

In the case of production of agricultural products, product specific analysis reveals that production of four products (barley, maize, sorghum, and hides and skins) is likely to decrease if commitments are made as per the three scenarios assumed in this study (Table 23). Production of livestock is likely to decrease only in optimistic scenario (scenario 1). Production of 21 products (bovine meat, sheep meat, poultry, butter, cheese, wheat, rice, pulses, tomatoes, citrus fruits, bananas, other tropical fruits, sugar raw, sugar refined, tea, tobacco leaves, tobacco proc, oilseeds temperate, oilseeds tropical, cotton, and vegetable oils) is likely to increase in three scenarios. Production of rubber is likely to remain constant.

Consumption of 26 products (livestock, sheep meat, poultry, milk concentrate, butter, cheese, wheat, rice, pulses, tomatoes, roots & tubers, apples, citrus fruits, bananas, other tropical fruits, sugar raw, sugar refined, coffee green, coffee proc., cocoa processed, tea, tobacco leaves, oilseeds temperate, oilseeds tropical, cotton, and vegetable oils) is likely

to decrease in three scenarios (Table 24). Consumption of five products (pig meat, barley, maize, sorghum, and tobacco processed) is likely to increase while consumption of two products (hides and skins, and rubber) is likely to remain constant.

TABLE 19: POTENTIAL IMPACT ON EXPORT OF AGRICULTURAL COMMODITIES BY BANGLADESH

*(In Thousand US\$)*

Products	Initial Export Revenue (1999-2001)	Likely Export Revenue			Per cent Change in Export Revenue		
		Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)	Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)
Livestock	0.00	1060.01	2211.62	2678.52			
Bovinemeat	3.93	4.46	4.40	4.46	13.42	11.80	13.38
Sheepmeat	2.71	7139.26	5929.16	5881.67	262985.44	218392.72	216642.68
Pigmeat	0.00	0.00	0.00	0.00			
Poultry	882.54	2697.00	3025.49	3985.98	205.60	242.82	351.65
Milk, conc.	15.90	19.49	19.49	19.54	22.61	22.60	22.88
Butter	1.28	344.76	411.15	412.68	26918.54	32121.92	32241.81
Cheese	68.47	358.99	352.31	360.68	424.28	414.53	426.76
Wheat	22.20	22.96	23.84	23.87	3.42	7.39	7.51
Rice	18.57	58045.28	63267.12	66225.33	312453.13	340570.88	356499.76
Barley	1.32	1.09	0.85	0.84	-17.57	-35.17	-36.06
Maize	16.70	12.74	10.04	9.88	-23.72	-39.90	-40.82
Sorghum	1.42	1.04	0.82	0.81	-26.89	-42.36	-43.39
Pulses	7.94	7.98	7.99	8.07	0.54	0.61	1.63
Tomatoes	0.00	2210.26	2239.82	2488.08			
Roots & tubers	15.81	16.17	16.19	16.19	2.25	2.39	2.39
Apples	0.00	0.00	0.00	0.00			
Citrus fruits	11.75	12.03	12.03	12.09	2.40	2.42	2.88
Bananas	26.71	3803.19	4779.75	12331.55	14137.77	17793.65	46064.84
Other tropical fruits	18.38	1746.44	7381.32	7349.28	9400.12	40052.23	39877.95
Sugar, raw	0.00	56695.04	55114.91	57188.00			
Sugar, refined	3.85	4.15	4.19	4.20	7.66	8.68	8.99
Coffee, green	0.00	0.00	0.00	0.00			
Coffee, proc.	0.00	0.00	0.00	0.00			
Cocoa beans	0.00	0.00	0.00	0.00			
Cocoa, proc.	6.70	6.76	6.77	6.77	0.76	0.91	0.94
Tea	719.32	1257.61	1494.97	4837.36	74.83	107.83	572.49
Tobacco leaves	315.12	318.72	526.01	714.92	1.14	66.92	126.87
Tobacco, proc.	183.66	183.66	183.66	183.66	0.00	0.00	0.00
Hides & skins	93.01	93.18	93.11	93.60	0.18	0.10	0.63
Oilseeds, temp.	1.76	1.77	1.77	1.84	0.78	0.67	4.86
Oilseeds, trop.	1.10	400.12	422.82	413.80	36186.75	38245.52	37427.64
Rubber	11.19	11.19	11.19	11.19	0.00	0.00	0.00
Cotton	98.98	101.03	101.08	101.09	2.07	2.12	2.14
Vegetable oils	32.00	32.29	32.32	32.47	0.90	0.99	1.46
Total	2582.34	136608.67	147686.21	165398.44	5190.10	5619.07	6304.97

Source: Calculated from ATPSM Database, UNCTAD, Version 3.

TABLE 20: POTENTIAL IMPACT ON BANGLADESH'S EXPORT LEVEL

*(In M. Ton)*

Products	Initial Export (1999-2001)	Likely Export Level			Per cent Change in Export		
		Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)	Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)
Livestock	0.00	843.77	1755.24	2123.82			
Bovine meat	2.00	2.14	2.10	2.12	6.85	4.80	5.98
Sheepmeat	1.00	2542.57	2121.12	2105.58	254156.64	212011.83	210458.36
Pigmeat	0.00	0.00	0.00	0.00			
Poultry	656.00	1968.13	2202.30	2878.80	200.02	235.72	338.84
Milk, conc.	9.00	9.00	9.00	9.00	0.00	0.00	0.00
Butter	1.00	236.82	280.79	281.60	23581.87	27978.86	28060.45
Cheese	36.00	165.67	162.98	166.36	360.21	352.72	362.10
Wheat	183.00	183.76	185.41	185.43	0.41	1.32	1.33
Rice	89.00	272873.41	296710.91	310298.34	306499.33	333283.05	348549.82
Barley	16.00	12.24	9.64	9.48	-23.47	-39.73	-40.72
Maize	150.00	113.07	88.82	87.31	-24.62	-40.79	-41.79
Sorghum	16.00	11.92	9.34	9.17	-25.52	-41.63	-42.68
Pulses	15.00	15.02	15.03	15.07	0.15	0.17	0.46
Tomatoes	0.00	2652.95	2687.89	2980.78			
Roots & tubers	177.00	177.00	177.00	177.00	0.00	0.00	0.00
Apples	0.00	0.00	0.00	0.00			
Citrus fruits	25.00	25.35	25.35	25.42	1.40	1.41	1.68
Bananas	56.00	7894.92	9897.42	25062.46	13998.06	17573.97	44654.39
Other tropical fruits	25.00	2365.90	9932.33	9889.59	9363.62	39629.31	39458.37
Sugar, raw	0.00	217682.76	211941.58	219684.72			
Sugar, refined	12.00	12.30	12.35	12.36	2.54	2.93	3.04
Coffee, green	0.00	0.00	0.00	0.00			
Coffee, proc.	0.00	0.00	0.00	0.00			
Cocoa beans	0.00	0.00	0.00	0.00			
Cocoa, proc.	4.00	4.00	4.00	4.00	0.00	0.00	0.00
Tea	318.00	554.13	657.99	2097.50	74.25	106.92	559.59
Tobacco leaves	104.00	104.20	171.06	231.91	0.19	64.48	122.99
Tobacco, proc.	11.00	11.00	11.00	11.00	0.00	0.00	0.00
Hides & skins	64.00	63.71	63.74	63.87	-0.45	-0.41	-0.21
Oilseeds, temp.	8.00	8.02	8.02	8.09	0.22	0.21	1.11
Oilseeds, trop.	4.00	1426.84	1507.90	1470.91	35571.11	37597.49	36672.78
Rubber	18.00	18.00	18.00	18.00	0.00	0.00	0.00
Cotton	84.00	84.52	84.53	84.54	0.62	0.63	0.64
Vegetable oils	126.00	126.16	126.18	126.19	0.13	0.15	0.15
Total	2210.00	512189.28	540879.04	580120.42	23075.99	24374.16	26149.79

Source: Calculated from ATPSM Database, UNCTAD, Version 3.

TABLE 21: POTENTIAL IMPACT ON BANGLADESH'S IMPORT COST

*(In Million US\$)*

Products	Initial Import Cost (1999-2001)	Likely Import Cost			Per cent Change in Import Cost		
		Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)	Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)
Livestock	0.06	0.00	0.00	0.00	-100.00	-100.00	-100.00
Bovine meat	0.00	0.00	0.00	0.00	9.78	9.24	10.18
Sheepmeat	0.18	0.00	0.00	0.00	-100.00	-100.00	-100.00
Pigmeat	0.05	0.06	0.06	0.06	28.64	28.47	32.23
Poultry	0.13	0.00	0.00	0.00	-100.00	-100.00	-100.00
Milk, conc.	2.46	2.81	2.81	2.82	14.52	14.53	14.69
Butter	0.35	0.00	0.00	0.00	-100.00	-100.00	-100.00
Cheese	0.02	0.00	0.00	0.00	-100.00	-100.00	-100.00
Wheat	19.20	15.82	10.47	10.35	-17.58	-45.49	-46.08
Rice	2.20	0.00	0.00	0.00	-100.00	-100.00	-100.00
Barley	0.00	0.20	0.34	0.35	7525.52	12765.15	13182.56
Maize	2.05	2.42	2.59	2.61	18.01	26.74	27.60
Sorghum	0.00	0.05	0.08	0.09	1770.47	2816.19	2910.11
Pulses	10.02	9.48	9.41	8.38	-5.40	-6.11	-16.37
Tomatoes	0.07	0.00	0.00	0.00	-100.00	-100.00	-100.00
Roots & tubers	0.09	0.09	0.09	0.09	1.31	1.39	1.39
Apples	0.74	0.74	0.74	0.74	0.29	0.30	0.30
Citrus fruits	0.57	0.20	0.19	0.12	-65.96	-66.59	-79.25
Bananas	0.02	0.00	0.00	0.00	-100.00	-100.00	-100.00
Other tropical fruits	1.44	0.00	0.00	0.00	-100.00	-100.00	-100.00
Sugar, raw	0.00	0.00	0.00	0.00	-100.00	-100.00	-100.00
Sugar, refined	6.30	2.95	2.44	2.29	-53.18	-61.30	-63.61
Coffee, green	0.03	0.03	0.03	0.03	0.09	0.05	0.07
Coffee, proc.	0.07	0.07	0.07	0.07	-0.03	-0.03	-0.03
Cocoa beans	0.00	0.00	0.00	0.00			
Cocoa, proc.	0.07	0.07	0.07	0.07	0.44	0.53	0.54
Tea	0.18	0.00	0.00	0.00	-100.00	-100.00	-100.00
Tobacco leaves	0.86	0.18	0.00	0.00	-78.94	-100.00	-100.00
Tobacco, proc.	1.09	1.50	1.73	1.87	38.57	59.75	71.92
Hides & skins	1.81	2.16	2.12	1.98	19.31	17.42	9.59
Oilseeds, temp.	4.91	4.32	4.40	1.13	-11.85	-10.22	-77.07
Oilseeds, trop.	0.23	0.00	0.00	0.00	-100.00	-100.00	-100.00
Rubber	0.29	0.29	0.29	0.29	0.00	0.00	0.00
Cotton	4.96	4.73	4.73	4.73	-4.53	-4.64	-4.69
Vegetable oils	8.19	7.79	7.73	7.69	-4.86	-5.65	-6.15
Total	68.64	55.99	50.42	45.76	-18.43	-26.55	-33.33

Source: Calculated from ATPSM Database, UNCTAD, Version 3.

TABLE 22: POTENTIAL IMPACT ON BANGLADESH'S IMPORT LEVEL

*(In M. Ton)*

Products	Initial Import Level (1999-2001)	Likely Import Level			Per cent Change Import Level		
		Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)	Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)
Livestock	46.00	0.00	0.00	0.00	-100.00	-100.00	-100.00
Bovine meat	2.00	2.07	2.05	2.06	3.43	2.40	2.99
Sheepmeat	66.00	0.00	0.00	0.00	-100.00	-100.00	-100.00
Pigmeat	38.00	47.79	47.22	48.62	25.75	24.26	27.94
Poultry	100.00	0.00	0.00	0.00	-100.00	-100.00	-100.00
Milk, conc.	1391.00	1299.28	1299.42	1298.24	-6.59	-6.58	-6.67
Butter	272.00	0.00	0.00	0.00	-100.00	-100.00	-100.00
Cheese	8.00	0.00	0.00	0.00	-100.00	-100.00	-100.00
Wheat	158235.00	126626.88	81377.26	80406.29	-19.98	-48.57	-49.19
Rice	10547.00	0.00	0.00	0.00	-100.00	-100.00	-100.00
Barley	32.00	2265.27	3827.18	3940.37	6978.98	11859.92	12213.66
Maize	18387.00	21442.61	22959.97	23075.22	16.62	24.87	25.50
Sorghum	32.00	609.76	944.99	975.18	1805.51	2853.11	2947.43
Pulses	18936.00	17843.61	17702.50	15653.77	-5.77	-6.51	-17.33
Tomatoes	84.00	0.00	0.00	0.00	-100.00	-100.00	-100.00
Roots & tubers	993.00	983.80	983.24	983.24	-0.93	-0.98	-0.98
Apples	1352.00	1326.94	1325.76	1325.75	-1.85	-1.94	-1.94
Citrus fruits	1223.00	412.23	404.61	250.80	-66.29	-66.92	-79.49
Bananas	35.00	0.00	0.00	0.00	-100.00	-100.00	-100.00
Other tropical fruits	1958.00	0.00	0.00	0.00	-100.00	-100.00	-100.00
Sugar, raw	2.00	0.00	0.00	0.00	-100.00	-100.00	-100.00
Sugar, refined	19621.00	8750.37	7192.33	6749.97	-55.40	-63.34	-65.60
Coffee, green	23.00	22.99	22.99	22.99	-0.06	-0.03	-0.05
Coffee, proc.	15.00	14.96	14.96	14.96	-0.26	-0.30	-0.30
Cocoa beans	0.00	0.00	0.00	0.00			
Cocoa, proc.	42.00	41.87	41.84	41.84	-0.32	-0.38	-0.39
Tea	81.00	0.00	0.00	0.00	-100.00	-100.00	-100.00
Tobacco leaves	284.00	59.25	0.00	0.00	-79.14	-100.00	-100.00
Tobacco, proc.	65.00	90.07	103.84	111.75	38.57	59.75	71.92
Hides & skins	1244.00	1474.96	1453.20	1351.98	18.57	16.82	8.68
Oilseeds, temp.	22333.00	19578.27	19960.06	4938.88	-12.33	-10.63	-77.89
Oilseeds, trop.	847.00	0.00	0.00	0.00	-100.00	-100.00	-100.00
Rubber	468.00	468.00	468.00	468.00	0.00	0.00	0.00
Cotton	4208.00	3960.20	3954.30	3951.99	-5.89	-6.03	-6.08
Vegetable oils	32242.00	30438.81	30165.70	29868.25	-5.59	-6.44	-7.36
Total	295212.00	237759.99	194251.42	175480.14	-19.46	-34.20	-40.56

Source: Calculated from ATPSM Database, UNCTAD, Version 3.

TABLE 23: POTENTIAL IMPACT ON AGRICULTURAL PRODUCTION IN BANGLADESH  
(In M. Ton)

Products	Initial Production (1999-2001)	Likely Production Level			Per cent Change in Production		
		Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)	Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)
Livestock	607086.00	606718.77	607420.45	607685.75	-0.06	0.06	0.10
Bovine meat	1.00	1.07	1.05	1.06	6.85	4.80	5.98
Sheepmeat	168575.00	169550.58	169401.58	169433.88	0.58	0.49	0.51
Pigmeat	0.00	0.00	0.00	0.00			
Poultry	113533.00	114250.40	114349.34	114659.62	0.63	0.72	0.99
Milk, conc.	0.00	0.00	0.00	0.00			
Butter	12410.00	12532.40	12538.18	12538.99	0.99	1.03	1.04
Cheese	1000.00	1083.54	1081.91	1083.95	8.35	8.19	8.40
Wheat	1807000.00	1814474.83	1830810.36	1830951.97	0.41	1.32	1.33
Rice	22655880.00	22774394.46	22783539.59	22789323.17	0.52	0.56	0.59
Barley	4667.00	3571.49	2812.71	2766.39	-23.47	-39.73	-40.72
Maize	8000.00	6030.65	4737.11	4656.40	-24.62	-40.79	-41.79
Sorghum	1000.00	744.81	583.72	573.15	-25.52	-41.63	-42.68
Pulses	378893.00	379478.37	379553.99	380651.82	0.15	0.17	0.46
Tomatoes	99333.00	101242.02	101266.39	101470.68	1.92	1.95	2.15
Roots & tubers	0.00	0.00	0.00	0.00			
Apples	0.00	0.00	0.00	0.00			
Citrus fruits	40333.00	40898.21	40903.52	41010.75	1.40	1.41	1.68
Bananas	580000.00	582758.81	583460.43	588773.85	0.48	0.60	1.51
Other tropical fruits	732000.00	733355.10	735740.19	735726.72	0.19	0.51	0.51
Sugar, raw	4974841.00	5094678.06	5092711.52	5097010.22	2.41	2.37	2.46
Sugar, refined	197751.00	202772.35	203548.91	203754.96	2.54	2.93	3.04
Coffee, green	0.00	0.00	0.00	0.00			
Coffee, proc.	0.00	0.00	0.00	0.00			
Cocoa beans	0.00	0.00	0.00	0.00			
Cocoa, proc.	0.00	0.00	0.00	0.00			
Tea	51333.00	51377.51	51392.08	51594.11	0.09	0.12	0.51
Tobacco leaves	33667.00	33731.03	33766.94	33784.24	0.19	0.30	0.35
Tobacco, proc.	158333.00	158333.53	158334.12	158333.13	0.00	0.00	0.00
Hides & skins	51499.00	51267.75	51289.54	51390.89	-0.45	-0.41	-0.21
Oilseeds, temp.	343667.00	344433.05	344403.18	347489.40	0.22	0.21	1.11
Oilseeds, trop.	78174.00	79045.30	79120.45	78958.55	1.11	1.21	1.00
Rubber	3067.00	3067.00	3067.00	3067.00	0.00	0.00	0.00
Cotton	14167.00	14254.70	14256.78	14257.60	0.62	0.63	0.64
Vegetable oils	241524.00	241827.44	241877.85	241896.14	0.13	0.15	0.15
Total	33357734.00	33615873.21	33641968.90	33662844.39	0.77	0.85	0.91

Source: Calculated from ATPSM Database, UNCTAD, Version 3.

TABLE 24: POTENTIAL IMPACT ON CONSUMPTION LEVEL IN BANGLADESH

*(In M. Ton)*

Products	Initial Consumption (1999-2001)	Likely Consumption Level			Per cent Change in Consumption		
		Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)	Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)
Livestock	607132.00	605875.01	605665.21	605561.93	-0.21	-0.24	-0.26
Bovine meat	0.00	0.00	0.00	0.00			
Sheepmeat	168640.00	167008.02	167280.46	167328.29	-0.97	-0.81	-0.78
Pigmeat	38.00	47.79	47.22	48.62	25.75	24.26	27.94
Poultry	112978.00	112283.27	112148.04	111781.82	-0.61	-0.73	-1.06
Milk, conc.	1381.00	1289.28	1289.42	1288.24	-6.64	-6.63	-6.72
Butter	12681.00	12295.58	12257.39	12257.38	-3.04	-3.34	-3.34
Cheese	972.00	917.87	918.93	917.60	-5.57	-5.46	-5.60
Wheat	1965051.00	1940916.95	1912001.21	1911171.84	-1.23	-2.70	-2.74
Rice	22666338.00	22501521.05	22486828.68	22479024.83	-0.73	-0.79	-0.83
Barley	4683.00	5824.52	6630.24	6697.28	24.38	41.58	43.01
Maize	26237.00	27360.19	27608.26	27644.32	4.28	5.23	5.36
Sorghum	1016.00	1342.65	1519.38	1539.16	32.15	49.55	51.49
Pulses	397814.00	397306.96	397241.46	396290.52	-0.13	-0.14	-0.38
Tomatoes	99416.00	98588.07	98577.50	98488.90	-0.83	-0.84	-0.93
Roots & tubers	816.00	806.80	806.24	806.24	-1.13	-1.20	-1.20
Apples	1352.00	1326.94	1325.76	1325.75	-1.85	-1.94	-1.94
Citrus fruits	41531.00	41285.09	41282.77	41236.12	-0.59	-0.60	-0.71
Bananas	579980.00	574864.89	573564.01	563712.39	-0.88	-1.11	-2.80
Other tropical fruits	733932.00	730988.20	725806.86	725836.13	-0.40	-1.11	-1.10
Sugar, raw	4974843.00	4876995.30	4880769.95	4877325.50	-1.97	-1.89	-1.96
Sugar, refined	217360.00	211510.41	210728.88	210492.56	-2.69	-3.05	-3.16
Coffee, green	23.00	22.99	22.99	22.99	-0.06	-0.03	-0.05
Coffee, proc.	14.00	13.96	13.96	13.96	-0.28	-0.32	-0.32
Cocoa beans	0.00	0.00	0.00	0.00			
Cocoa, proc.	38.00	37.87	37.84	37.84	-0.35	-0.42	-0.43
Tea	51096.00	50823.38	50734.09	49496.61	-0.53	-0.71	-3.13
Tobacco leaves	33847.00	33686.09	33595.88	33552.33	-0.48	-0.74	-0.87
Tobacco, proc.	158387.00	158412.60	158426.95	158433.88	0.02	0.03	0.03
Hides & skins	52679.00	52679.00	52679.00	52679.00	0.00	0.00	0.00
Oilseeds, temp.	365992.00	364003.31	364355.23	352420.20	-0.54	-0.45	-3.71
Oilseeds, trop.	79017.00	77618.46	77612.55	77487.64	-1.77	-1.78	-1.94
Rubber	3517.00	3517.00	3517.00	3517.00	0.00	0.00	0.00
Cotton	18291.00	18130.38	18126.56	18125.06	-0.88	-0.90	-0.91
Vegetable oils	273640.00	272140.09	271917.37	271638.20	-0.55	-0.63	-0.73
Total	33650732.00	33341439.93	33295337.28	33258200.11	-0.92	-1.06	-1.17

Source: Calculated from ATPSM Database, UNCTAD, Version 3.

#### **IV.5 Potential Impact on Bangladesh's Balance of Trade**

What would be the likely situation in the case of balance of trade for agricultural commodities? During 1999-2001, Bangladesh had a deficit trade balance in its agricultural trade amounting to US\$66.05 million (Table 25). Bangladesh's agricultural trade balance situation is likely to change enormously if the negotiation on agriculture concludes under any of the three scenarios described earlier. Bangladesh will experience positive trade balance in agriculture under any of the three scenarios but the extent of net balance would be different. Net value of trade balance is likely to be US\$80.62 million under optimistic scenario (scenario 1), US\$97.27 million under conservative scenario (scenario 2) and US\$119.64 million under pessimistic scenario (scenario 3). Bangladesh will have positive trade balance in livestock, sheep meat, poultry, butter, cheese, rice, tomatoes, bananas, other tropical fruits, raw sugar, tea, tobacco leaves and tropical oilseeds in all these three scenarios. Exports of these commodities from Bangladesh are likely to be increased substantially. On the other hand, trade deficit for pig meat, milk concentrate, barley, maize, sorghum, tobacco processed and hides and skins will increase further as a result of increased import. Bangladesh must plan accordingly and take appropriate policies to materialise the likely gains in trade by increasing its trade capacity.

TABLE 25: POTENTIAL IMPACT ON BANGLADESH'S TRADE BALANCE  
(In Million USD)

Products	Initial Situation (1999-2001)	Likely Balance Situation Under Alternative Scenarios		
		Scenario 1 (Optimistic)	Scenario 2 (Conservative)	Scenario 3 (Pessimistic)
Livestock	-0.06	1.06	2.21	2.68
Bovine meat	0.00	0.00	0.00	0.00
Sheepmeat	-0.18	7.14	5.93	5.88
Pigmeat	-0.05	-0.06	-0.06	-0.06
Poultry	0.75	2.70	3.03	3.99
Milk, conc.	-2.44	-2.79	-2.79	-2.80
Butter	-0.35	0.34	0.41	0.41
Cheese	0.05	0.36	0.35	0.36
Wheat	-19.18	-15.80	-10.44	-10.33
Rice	-2.18	58.05	63.27	66.23
Barley	0.00	-0.20	-0.34	-0.35
Maize	-2.03	-2.40	-2.58	-2.60
Sorghum	0.00	-0.05	-0.08	-0.08
Pulses	-10.02	-9.47	-9.40	-8.37
Tomatoes	-0.07	2.21	2.24	2.49
Roots & tubers	-0.07	-0.07	-0.07	-0.07
Apples	-0.74	-0.74	-0.74	-0.74
Citrus fruits	-0.56	-0.18	-0.18	-0.11
Bananas	0.01	3.80	4.78	12.33
Other tropical fruits	-1.42	1.75	7.38	7.35
Sugar, raw	0.00	56.70	55.11	57.19
Sugar, refined	-6.29	-2.95	-2.43	-2.29
Coffee, green	-0.03	-0.03	-0.03	-0.03
Coffee, proc.	-0.07	-0.07	-0.07	-0.07
Cocoa beans	0.00	0.00	0.00	0.00
Cocoa, proc.	-0.06	-0.06	-0.06	-0.06
Tea	0.54	1.26	1.49	4.84
Tobacco leaves	-0.55	0.14	0.53	0.71
Tobacco, proc.	-0.90	-1.32	-1.55	-1.68
Hides & skins	-1.71	-2.06	-2.03	-1.89
Oilseeds, temp.	-4.90	-4.32	-4.40	-1.12
Oilseeds, trop.	-0.23	0.40	0.42	0.41
Rubber	-0.28	-0.28	-0.28	-0.28
Cotton	-4.86	-4.63	-4.63	-4.62
Vegetable oils	-8.16	-7.76	-7.69	-7.65
Total	-66.05	80.62	97.27	119.64

Source: Calculated from ATPSM Database, UNCTAD, Version 3.

#### **IV.6 Potential Impact of Duty and Quota Free Market Access**

As mentioned earlier, the Hong Kong Ministerial declaration implies that at least 97 per cent of LDCs products will enjoy duty-free and quota-free market access to developed country markets. However, criteria for identification of products to enjoy duty-free and quota-free market access are not yet agreed. In this connection, it is important to know the implication of duty-free and quota-free market access for all agricultural products to the important markets. Deb (2005b) estimated amount of duty paid for different agricultural commodities exported by Bangladesh to the selected developed and developing country markets. During 1999-2001, duties imposed on agricultural commodities imported from Bangladesh by five developed countries (EU, USA, Australia, Japan and Canada) were about US\$1.23 million (Table 26). Bangladesh has paid approximately US\$0.56 million for export of poultry products and approximately US\$0.64 million for export of tobacco leaves to these five developed countries. Duty imposed on agricultural commodities imported from Bangladesh during 1999-2001 was US\$1.2 million in EU, US\$2.27 thousand in USA, and US\$1.2 thousand in Japan. EU through its Everything But Arms (EBA) has given duty free access for products from LDCs in 2001. Japan is also providing now duty-free market access for LDC products under GSP. USA is yet to approve such schemes. It appears from the analysis that duty-free access for LDC commodities to the US market would be beneficial for Bangladesh to increase its exports.

Amount of duty paid for different agricultural commodities exported by Bangladesh to six developing countries (Brazil, India, Korea Republic, Malaysia, Russia and Thailand), as estimated by Deb (2005b), was US\$69.4 thousand in 1999-2001 (Table 27). During this period, India imposed US\$29.59 thousand as import duty for agricultural products from Bangladesh while Russia imposed US\$28.80 thousand as import duty on agricultural exports by Bangladesh. On the other hand, Korea imposed import duty amounting to US\$10.19 thousand. Implication of this research finding is that Bangladesh will also benefit substantially if it gets duty-free market access for its agro-commodities to the advanced developing country markets. Thus, it appears from the analysis that if Bangladesh gets duty-and quota-free market access in the developed and advanced developing country markets, then it will substantially benefit.

TABLE 26: TARIFF REVENUE EARNINGS FROM BANGLADESH'S AGRICULTURAL EXPORTS  
IN SELECTED DEVELOPED COUNTRIES, 1999-2001

(In US\$)

Products	EU	USA	Japan	Australia	Canada	Total
Livestock	0	0	0	0	0	0
Bovine meat	355	0	0	0	0	355
Sheep meat	0	0	0	0	0	0
Pig meat	0	0	0	0	0	0
Poultry	562695	0	0	0	4	562699
Milk, conc.	783	6	2	0	0	791
Butter	217	519	0	0	0	736
Cheese	1901	259	0	0	1	2161
Wheat	0	0	24	0	0	24
Rice	631	1263	0	23	0	1917
Barley	0	0	0	0	0	0
Maize	260	0	0	0	0	260
Sorghum	0	0	0	0	0	0
Pulses	13	0	0	1	0	13
Tomatoes	0	0	0	0	0	0
Roots & tubers	0	0	0	0	0	0
Apples	0	0	0	0	0	0
Citrus fruits	0	0	0	0	0	0
Bananas	1124	0	0	0	0	1124
Other tropical fruits	1143	225	0	0	0	1368
Sugar, raw	0	0	0	0	0	0
Sugar, refined	102	0	0	0	0	102
Coffee, green	0	0	0	0	0	0
Coffee, proc.	0	0	0	0	0	0
Cocoa beans	0	0	0	0	0	0
Cocoa, proc.	0	0	1239	0	0	1239
Tea	15923	0	0	0	0	15923
Tobacco leaves	637220	0	0	0	0	637220
Tobacco, proc.	0	0	0	0	0	0
Hides & skins	0	0	0	0	0	0
Oilseeds, temp.	0	0	0	0	0	0
Oilseeds, trop.	0	0	0	0	0	0
Rubber	0	0	0	0	0	0
Cotton	0	0	0	0	0	0
Vegetable oils	0	0	0	0	0	0
<b>Total</b>	<b>1222367</b>	<b>2272</b>	<b>1266</b>	<b>24</b>	<b>5</b>	<b>1225933</b>

Source: Deb (2005b).

TABLE 27: TARIFF REVENUE EARNINGS OF SELECTED ADVANCED DEVELOPING COUNTRIES FROM BANGLADESH'S AGRICULTURAL EXPORTS

*(In US\$)*

Product	Brazil	India	Korea Rep.	Malaysia	Russia	Thailand	Total
Livestock	0	0	0	0	0	0	0
Bovine meat	0	0	0	0	0	0	0
Sheep meat	0	0	0	0	0	0	0
Pig meat	0	0	0	0	0	0	0
Poultry	0	0	0	0	0	0	0
Milk, conc.	0	4333	0	0	0	8	4341
Butter	0	0	0	0	0	0	0
Cheese	0	3138	0	0	0	0	3138
Wheat	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0
Barley	0	0	0	1	0	0	1
Maize	0	0	0	0	0	0	0
Sorghum	0	0	0	0	0	0	0
Pulses	0	0	0	0	0	8	8
Tomatoes	0	0	0	0	0	0	0
Roots & tubers	0	1342	0	200	0	0	1542
Apples	0	0	0	0	0	0	0
Citrus fruits	0	1974	0	0	0	0	1974
Bananas	0	0	0	0	0	0	0
Other tropical fruits	0	9130	0	0	0	2	9132
Sugar, raw	0	0	0	0	0	0	0
Sugar, refined	0	0	0	0	0	0	0
Coffee, green	0	0	0	0	0	0	0
Coffee, proc.	0	0	0	0	0	0	0
Cocoa beans	0	0	0	0	0	0	0
Cocoa, proc.	0	0	0	0	0	0	0
Tea	0	6127	27	34	28806	0	34994
Tobacco leaves	0	0	0	1	0	0	1
Tobacco, proc.	0	0	0	0	0	0	0
Hides & skins	0	0	0	0	0	0	0
Oilseeds, temp.	0	0	0	0	0	0	0
Oilseeds, trop.	0	0	0	4	0	0	4
Rubber	0	0	0	0	0	0	0
Cotton	0	3547	10165	542	0	0	14253
Vegetable oils	0	0	0	0	0	1	1
<b>Total</b>	<b>0</b>	<b>29590</b>	<b>10192</b>	<b>782</b>	<b>28806</b>	<b>19</b>	<b>69390</b>

Source: Deb (2005b).

## **V. CONCLUSIONS**

Our quantitative estimates clearly indicate that Bangladesh would have substantially been benefited from duty-free and quota-free market access for its agricultural products. Agricultural export items from Bangladesh are limited in number and there is lack of diversity in the export basket. So, there is scope for blocking effective market access for agricultural commodities with high export potentials—particularly in the US market, even after providing duty-free and quota-free market access for 97 per cent of products from LDCs. Trade negotiators of Bangladesh must keep this reality in mind and highlight this in the upcoming negotiation. Bangladesh must negotiate for assured market access for products with high export potentials.

Our simulation results have indicated: (i) an increase in international prices of all agricultural products except two products (livestock and sorghum), (ii) increase in Bangladesh's agricultural export revenue, (iii) decrease in import cost for agricultural products—as a result of multilateral trade liberalisation likely to be carried out under Doha Round Negotiations at the WTO as a follow up of the Hong Kong Declaration. Increase in export value of agricultural commodities from Bangladesh and decrease in import costs for agricultural products are likely to result a surplus in agricultural trade of Bangladesh ranges between US\$80.62 million and US\$119.64 million. It may be noted that Bangladesh had an average annual deficit trade balance in its agricultural trade amounting to US\$66.05 million during 1999-2001. The study also revealed that though total value of agricultural exports is likely to be increased, but there is possibility of decrease in export of some agricultural products. Positive trade balance in livestock, sheep meat, poultry, butter, cheese, rice, tomatoes, bananas, other tropical fruits, raw sugar, tea, tobacco leaves and tropical oilseeds are expected. Exports of these commodities from Bangladesh are likely to be increased substantially. On the other hand, trade deficit for milk concentrate, barley, maize, sorghum, tobacco processed and hides and skins will increase further as a result of increased import. Bangladesh must plan accordingly and take appropriate policies to materialise the likely gains in trade by increasing its trade capacity. To exploit the export opportunities, Bangladesh will need to enhance its supply-side capacity and pursue a broad based diversified agricultural production and export strategy. More importantly, Bangladesh must take part in WTO negotiations on agriculture.

Earlier research (Deb, 2005a) indicated that Bangladesh agriculture is responsive to prices and trade policies and cropping pattern in Bangladesh has changed as a result of liberalisation of agricultural trade. However, Rules of Origin (RoO) and Non-tariff Barriers (NTBs) act as barriers to agricultural exports from Bangladesh (Deb, 2006). Considering the Hong Kong decisions, Bangladesh may demand for: (i) harmonized RoO applicable in all developed countries; (ii) simpler RoO; and (iii) a system which requires less documentation and certification system. Under the Aid for Trade package, LDCs may also negotiate for allocation of funds for technical assistance for improvement of their facilities and capacities for compliance with certification system and related requirements.

In brief, interests of Bangladesh as regards the ongoing negotiation on agriculture are threefold. Firstly, Bangladesh as an LDC would benefit if LDCs get duty-free and quota-free access to the developed country markets for their agricultural products. Therefore, Bangladesh must ensure that agricultural products with export potentials in USA and other markets, as identified in this study, are included among the 97 per cent products with duty-free and quota-free market access. Secondly, it will be in Bangladesh's advantage if the ongoing negotiations do result in substantial de-subsidisation in developed countries. One would need to keep in mind here that in a way continuing high tariff rate will provide relatively higher preferential margin to LDCs such as Bangladesh, particularly in the situation when Bangladesh as an LDC would be eligible for duty-free and quota-free market access. So, Bangladesh's interest will lie more in an outcome that ensures market based domestic prices for farm products in the developed countries. Thirdly, Bangladesh will need to take a more proactive interest in other ongoing negotiations which will have important implications in terms of trade capacity building in agriculture. This relates to the positive agenda, S&D provisions, transfer of technology, enabling clause, and assistance under integrated framework initiative.

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**APPENDIX 1:**  
**DEFINITION OF AGRICULTURAL PRODUCTS COVERED IN THIS STUDY**  
(in accordance with FAO Commodity code, HS Code and ATPSM code)

Name	FAO Code	HS Code	ATPSM Code
<b>Livestock</b>			
Cattle	866	0102ex	00100
Buffaloes	946	0102ex	00100
Sheep	976	0104.10	00100
Goats	1016	0104.20	00100
<b>Bovine meat</b>			
Meat of Cattle	867	0201.10ex,20ex; 0202.10ex,20ex	01100
Offals of Cattle, Edible	868	0206.10ex,21ex,22ex,29ex	01100
Meat of Cattle, Boneless	870	0201.30ex; 0202.30ex	01100
Meat of Beef, Drd, Slted, Smkd	872	0210.20	01100
Meat of Buffaloes	947	0201ex; 0202ex	01100
Offals of Buffaloes, Edible	948	0206.10ex,21ex, 22ex,29ex	01100
<b>Sheep meat</b>			
Meat of Sheep	977	0204.10, 21,22,	01210
Offals of Sheep, Edible	978	0206.80ex,90ex	01210
Meat of Goats	1017	0204.50	01210
Offals of Goats	1018	0206.80ex,90ex	01210
<b>Pig meat</b>			
Meat of Pigs	1035	0203.11,12,21,22	01220
Offals of Pigs, Edible	1036	0206.30,41,49	01220
Pork	1038	0203.19,29	01220
Bacon and Ham	1039	0210.11,12,19	01220
<b>Poultry</b>			
Meat of Chickens	1058	0207.10ex,21, 39ex,41	01230
Offals Liver Chik	1059	0207.50ex,39ex; 0210.90ex	01230
Meat of Ducks	1069	0207.10ex,23ex,39ex,43ex	01230
Meat of Geese	1073	0207.10ex,23ex,39ex,43ex	01230
Offals Liver G. Se	1074	0207.31ex,50ex;	01230
Offals Liver Duck	1075	0207.31ex,50ex; 0210.90ex	01230
Meat of Turkeys	1080	0207.10ex,22, 39ex,42	01230
Offals Liver Turk	1081	0207.50ex,39ex;	01230
Pigeon Meat, other Birds	1089	0208.90ex	01230
<b>Milk, Concentrate</b>			
Milk Whole Cond	889	0402.99ex	02222
Milk Whole Evp	894	0402.91ex	02222
Milk Skimmed Evp	895	0402.91ex	02222
Milk Skimmed Cond	896	0402.99ex	02222
Milk Whole Dried	897	0402.21,29	02222
Milk Skimmed Dry	898	0402.10	02222
<b>Butter</b>			
Butter Cow Milk	886	0405ex	02300
Ghee, Butter oil of Cow Milk	887	0405ex	02300
Butter of Bufmilk	952	0405ex	02300
Ghee oil of Buf	953	0405ex	02300
Butter, Ghee of Sheep Milk	983	0405ex	02300
Butter of Goat Mlk	1022	0405ex	02300
<b>Cheese</b>			
Cheese of Whole Cow Milk	901	0406ex	02400
Cheese of Skimmed Cow Milk	904	0406ex	02400
Whey Cheese	905	0406.10ex	02400
Processed Cheese	907	0406.30	02400
Cheese of Bufmilk	955	0406ex	02400

Name	FAO Code	HS Code	ATPSM Code
Cheese of Shmilk	984	0406ex	02400
Cheese of Goat Milk	1021	0406ex	02400
<b>Wheat</b>			
Wheat	15	1001	04100
Flour of Wheat	16	1101;1103.11,21	04100
<b>Rice</b>			
Rice Paddy	27	1006.10	04200
Rice Husked	28	1006.20	04200
Milled/Husked Rice	29	1006.30ex	04200
Rice Milled	31	1006.30ex	04200
Rice Broken	32	1006.40	04200
Rice Flour	38	1102.30; 1103.14, 29ex	04200
<b>Barley</b>			
Barley	44	1003	04300
Barley Flour and Grits	48	1102.90ex; 1103.19ex,29ex	04300
<b>Maize</b>			
Maize	56	1005	04400
Flour of Maize	58	1102.20; 1103.13,29ex	04400
<b>Sorghum</b>			
Sorghum	83	1007	04530
Flour of Sorghum	84	1102.90ex; 1103.19ex,29ex	04530
<b>Pulses</b>			
Beans Dry	176	0713.31,32,	05420
Broad Beans Dry	181	0713.50	05420
Peas Dry	187	0713.10	05420
Chick-Peas	191	0713.20	05420
Cow Peas Dry	195	0713.39ex	05420
Pigeon Peas	197	0713.90ex	05420
Lentils	201	0713.40	05420
Bambara Beans	203	0713.90ex	05420
Vetches	205	1214.90ex	05420
Lupins	210	1214.90ex	05420
Pulses Nes	211	0713.90ex	05420
Flour of Pulses	212	1106.10	05420
<b>Tomatoes</b>			
Tomatoes Fresh	388	0702	05440
Tomatojuice Concentrated	389	2009.50ex	05440
Juice Tomatoes	390	009.50ex	05440
Paste Tomatoes	391	2002.90	05440
Tomato Peeled	392	2002.10	05440
<b>Roots &amp; Tubers</b>			
Potatoes	116	0701	05480
Potatoes Flour	117	1105	05480
Frozen Potatoes	118	0710.10; 2004.10	05480
Tapioca of Potatoes	121	1903ex	05480
Sweet Potatoes	122	0714.20	05480
Cassava	125	1106.20ex	05480
Flour of Cassava	126	1106.20ex	05480
Tapioca of Cassava	127	1903ex	05480
Cassava Dried	128	0714.10	05480
Yautia (Cocoyam)	135	0714.90ex	05480
Taro (Cocoyam)	136	0714.90ex	05480
Yams	137	0714.90ex	05480
Roots and Tubers Nes	149	0714.90ex	05480
Flour of Roots and Tubers	150	1106.20ex	05480

Name	FAO Code	HS Code	ATPSM Code
Roots and Tubers Dried	151	0714.90ex	05480
<b>Apples &amp; Pears</b>			
Apples	515	0808.10	05700
Applejuice Single Streng	518	2009.70ex	05700
Applejuice Concentrated	519	2009.70ex	05700
Pears	521	0808.20ex	05700
Quinces	523	0808.20ex	05700
<b>Citrus Fruits</b>			
Oranges	490	0805.10	05710
Juice of Oranges	491	2009.11ex,19ex	05710
Oranjuice Concentrated	492	2009.11ex,19ex	05710
Tang. Mand. Clement.Satsma	495	0805.20	05710
Tangerine Juice	496	2009.30ex	05710
Lemons and Limes	497	0805.30	05710
Lemonjuice Single-Streng	498	2009.30ex	05710
Lemonjuice Conc.	499	2009.30ex	05710
Grapefruit & Pomelo	507	0805.40	05710
Juice of Grapefruit	509	2009.20ex	05710
Grapefruitjuice Cocentr	510	2009.20ex	05710
Citrus Fruit Nes	512	0805.90	05710
Juice of Citrus Fruit Nes	513	2009.30ex	05710
Citrusjuice Conc.	514	2009.30ex	05710
<b>Bananas</b>			
Bananas	486	0803ex	05710
Plantains	489	0803ex	05710
<b>Other Tropical Fruits</b>			
Watermelons	567	0807.10ex	05790
Melons Incl. Cantaloupes	568	0807.10ex	05790
Figs	569	0804.20ex	05790
Figs Dried	570	0804.20ex	05790
Mangoes	571	0804.50ex	05790
Avocados	572	0804.40	05790
Pineapples	574	0804.30ex	05790
Pineapples Cand	575	2008.20	05790
Juice of Pineapples	576	2009.40ex	05790
Dates	577	0804.10	05790
Pineapple Juice Conc	580	2009.40ex	05790
Mango Juice	583	2009.80ex	05790
Mango Pulp	584	2008.99ex	05790
Persimmons	587	0810.90ex	05790
Cashewapple	591	0810.90ex	05790
Kiwi Fruit	592	0810.90ex	05790
Papayas	600	0807.20	05790
Fruit Tropical Fresh Nes	603	0804.50ex	05790
Fruit Tropical Dried Nes	604	0803ex; 0804.30ex,50ex	05790
<b>Sugar, Raw</b>			
Sugar Cane	156	1212.92	06110
Sugar Beet	157	1212.91	06110
Cane Sugar	158		06110
Beet Sugar	159		06110
Sugar Crops Nes	161	1212.99ex	06110
Sugar Raw Centrifugal	162	1701.11ex,12ex	06110
Sugar Non- Centrifugal	163	1701.11ex,12ex	06110
<b>Sugar, Refined</b>			
Sugar Refined	164	1701.91,99	06120
<b>Coffee, Green</b>			

Name	FAO Code	HS Code	ATPSM Code
Coffee Green	656	0901.11,12	07110
<b>Coffee, Proc.</b>			
Coffee Roasted	657	0901.21,22	07120
Coffee Subst. Cont. Coffee	658	0901.40	07120
Coffee Extracts	659	2101.10,30	07120
<b>Cocoa Beans</b>			
Cocoa Beans	661	1801	07210
<b>Cocoa, Processed</b>			
Cocoa Paste	662	1803.10	07220
Cocoa Butter	664	1804	07220
Cocoa Powder & Cake	665	1805	07220
Chocolate Prsnes	666	1806	07220
<b>Tea</b>			
Tea	667	0902	07410
Mate	671	0903	07410
Extracts Tea, Mate, Prep.	672	2101.20	07410
Tea Nes	674	2106ex	07410
<b>Tobacco Leaves</b>			
Tobacco Unmanfcted	826	121 2401	12100
<b>Tobacco, Processed.</b>			
Cigarettes	828	2402.20,90ex	12200
Cigars Cheroots	829	2402.10,90ex	12200
Tobacco Prs Nes	831	2403	12200
<b>Oilseeds, Temperate</b>			
Soybeans	236	1201	22200
Sunflower Seed	267	1206	22200
Rapeseed	270	1205	22200
Jobba Seeds	277	1207.99ex	22200
Safflower Seed	280	1207.60	22200
Sesame Seed	289	1207.40	22200
Mustard Seed	292	1207.50	22200
Poppy Seed	296	1207.91	22200
Linseed	333	1204	22200
Hempseed	336	1207.99ex	22200
<b>Oilseeds, Tropical</b>			
Groundnuts In Shell	242	1202.10	22300
Groundnut Shelled	243	1202.20	22300
Coconuts	249	0801.10ex	22300
Coconuts Desic	250	0801.10ex	22300
Copra	251	1203	22300
Oil Palm Fruit	254		22300
Palmnuts Kernels	256	1207.10	22300
Karite Nuts (Sheanuts)	263	223.8ex	22300
Castor Beans	265	1207.30	22300
Tung Nuts	275	1207.99ex	22300
Melonseed	299	1212.99ex	22300
Tallowtree Seeds	305	1207.99ex	22300
Kapok Fruit	310		22300
Kapokseed Shell	311	1207.99ex	22300
Kapokseed Shled	312	1207.99ex	22300
Seed Cotton	328		22300
Cottonseed	329	1207.20	22300
<b>Vegetable Oils</b>			
Oil of Soybeans	237	1507	42000
Oil Groundnuts	244	1508	42000
Oil of Coconuts	252	1513.11,19	42000

Name	FAO Code	HS Code	ATPSM Code
Oil of Palm	257	1511	42000
Oil Palm Kernel	258	1513.21,29	42000
Butter of Karite Nuts	264	1515.90ex	42000
Oil of Castor Beans	266	1515.30	42000
Oil of Sunflower Seed	268	1512.11ex,19ex	42000
Oil of Rapeseed	271	1514ex	42000
Oil of Tung Nuts	276	1515.40	42000
Jobba Oil	278	1515.60	42000
Oil of Safflower Seed	281	1512.11ex,19ex	42000
Oil of Sesame Seed	290	1515.50	42000
Oil of Mustard Seed	293	1514ex	42000
Oil of Poppyseed	297	1515.90ex	42000
Vegetable Tallow	306	1515.90ex	42000
Stillingia Oil	307	1515.90ex	42000
Oil of Kapok	313	1515.90ex	42000
Oil of Ctnseed	331	1512.21,29	42000
Oil of Linseed	334	1515.11,19	42000
Oil of Hempseed	337	1515.90ex	42000
<b>Hides &amp; Skins</b>			
Hides Fresh Cattle	919		21100
Hides Wet Salted Cattle	920	4101.21ex,22ex,	21100
Hidesdry S. Cattle	921	4101.30ex	21100
Hides Nes Cattle	922	4101.30ex	21100
Skins Wet Salted Calves	928	4101.10ex	21100
Skinsdry S. Calves	929	4101.10ex	21100
Skins Nes Calves	930	4101.10ex	21100
Hides Wet Salted Buffaloes	958	4101.21ex, 22ex,29ex	21100
Hides Drysalt Buf	959	4101.30ex	21100
Skins Fresh Sheep	995		21100
Skinswet Salted Sheep	996	4102.21ex,29ex	21100
Skinsdry Sltsheep	997	4102.21ex,29ex	21100
Skins Nes Sheep	998	4102.21ex,29ex	21100
Skins With Wool Sheep	999	4102.10	21100
Karakul Skins	1002	4301.30	21100
Skins Wet Salted Goats	1026	4103.10ex	21100
Skinsdry Slt Goat	1027	4103.10ex	21100
Skins Nes Goats	1028	4103.10ex	21100
Skins Fresh Pigs	1044		21100
Skinswet Slt dpigs	1045	4103.90ex	21100
Skinsdry Slt dpigs	1046	4103.90ex	21100
Skins Nes Pigs	1047	4103.90ex	21100
Hides Wet Salted Horses	1103	4101.40ex	21100
Hides Dry Slt Horses	1104	4101.40ex	21100
Hides Unsp Horse	1105	4101.40ex	21100
Hides Wet Salted Camels	1134	4103.90ex	21100
Hidesdry Slt Cam	1135	4103.90ex	21100
Hides Unsp Camels	1136	4103.90ex	21100
Skins of Rabbits	1146	4301.20ex	21100
Hides Wet Salted Nes	1214	4103.20,90ex	21100
Hides Dry Slt Nes	1215	4103.20,90ex	21100
Hides Nes	1216	4103.20,90ex	21100
<b>Cotton</b>			
Cotton Lint	767	5201	26300
Cotton Carded, Combed	768	5203	26300
Cotton Waste	769	5202	26300
Cotton Linter	770	1404.20	26300

Name	FAO Code	HS Code	ATPSM Code
<b>Rubber</b>			
Rubber Nat Latex	836	4001.10	23200
Rubber Nat Dry	837	4001.21,22,29	23200

**Note:** *nes* means not elsewhere specified; *spp.* means species; *o/t* means other than; *syn* means synonymous and *ex* means part of.

**Source:** FAO and Handbook of ATPSM, UNCTAD, Version 3.