

**THE IMPLICATIONS OF THE
AGREEMENT ON AGRICULTURE
FOR WORLD AGRICULTURAL TRADE**

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Certificate

This is to certify that the dissertation entitled “**The Implication of the Agreement on Agriculture for World Agricultural Trade**” submitted by me in partial fulfillment of the requirement for the award of **Master of Philosophy** has not been previously submitted for any other degree of this or any other University.

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Dedicated to..
baba & ma

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Introduction

The Agreement on Agriculture (AoA) was one of the major treaties negotiated in the Uruguay Round of GATT (General Agreement on Tariffs and Trade) negotiations. The agreement, which brought agriculture under the discipline of the GATT system for the first time, had three basic tenets:

1. **Market Access:** This entailed conversion of all non-tariff barriers into equivalent tariff barriers, also referred to as tariffication, in order to enhance the entry of imported goods into different national markets and tariff reduction.
2. **Domestic Support:** Member countries agreed upon a reduction in domestic support to farmers in the form of direct or indirect subsidies and quantified through the aggregate measure of support (AMS).
3. **Export competition:** In the area of export competition, the AoA was unequivocally committed to the de-escalation of export subsidies, either in the form of budgetary outlay reduction or in the form of export quantity reduction.

It was expected that the implementation of the AOA by member countries would facilitate higher prices for agricultural goods, larger volume of exports and greater participation of developing countries in world markets. (Gulati & Sharma, 1994 and Hathaway & Ingco, 1995). However, post-WTO, world agricultural trade continues to reproduce the same asymmetries and inequalities that the AOA was expected to overhaul. In fact, developed countries have exploited certain clauses in the agreement – for example, the Green Box item – to restrict exports from developing countries.

This thesis looks into trends in world agricultural trade under GATT-WTO discipline – specifically, the behavior of agricultural prices – and tries to identify the possible causes for the failure of the AOA to promote competition in world markets and rein in the trade-distorting practices of developed countries, in particular.

The rest of the thesis is arranged as follows: Chapter 1 tries to locate the key structural maladies in pre-UR agricultural trade, namely, voluminous subsidy-support for farmers in developed countries and the enhanced participation of multi-national corporations (MNCs). Chapter 2 discusses the main rules that were framed under the AoA. Chapter 3 analyzes the post-WTO trends in world production, trade and prices of key crops that constitute nearly 80 % of world agricultural trade. Chapter 4 tries to identify the probable causes that may have been instrumental in the failure of the AOA to generate market practices. Incidentally, a key provision in the agreement was that it be taken up for detailed review before the end of the millennium to identify further areas for improvement. Subsequently, a Ministerial Conference was held at Seattle from November 30 to December 3, 1999, to review post-UR developments in world agricultural trade. The conference was not successful, however, primarily as the representatives of multinational firms, governments of developed countries and non-government organizations (NGOs) were intent on pursuing their own agendas, which eventually led to the breakdown of the meeting. Thereafter, the fourth Ministerial Conference was convened at Doha in 2001 to resuscitate dialogues, though agriculture negotiations continued all through this period. Chapter 5 discusses the latter rounds of negotiations and their implications for world agricultural trade. Finally, Chapter 6 concludes with a summary of the main arguments presented in the text and their policy implications, specifically for developing countries.

Chapter 1

World Trade in the Pre-WTO Era

The multilateral trading system, embodied in the General Agreements of Tariff and Trade (GATT), in principle, was applicable to international trade in all goods, but, in practice, it differentiated between manufactured goods and agricultural commodities. From the '50s till the mid-90s, trade in agriculture was, de facto, excluded from the GATT system. Until the Uruguay Round (UR) of trade negotiations, the contracting parties to GATT were reconciled to a waiver on agricultural trade, first obtained by the US and later availed by all other countries. Thus it is important to see where the agricultural trading system was at the start of the Uruguay round.

From the beginning agriculture was treated differently from other sectors under GATT rules. Concomitantly there was virtually no discipline on domestic support. Quantitative restrictions were permitted under certain circumstances. Over time these circumstances broadened so that agricultural imports were limited by a variety of quotas, variable levies, voluntary export restraints, minimum import prices and other protective measures in almost every country in the world. Many agricultural products were protected by ordinary tariffs, 55 percent of the items in industrial countries and 18 percent of the tariffs on agricultural products were bound in developing countries.

In the sphere of export subsidies, there was a “virtual” waiver or exception for agriculture specified in Article XVI on subsidies. They were allowed as long as the country using them did not gain more than an equitable share of the world market.

Finally, in the realm of agricultural imports, there was a departure from the commitment to eliminate quantitative restrictions set out in Article XI, for foodstuffs, critical raw materials and, in general, for stabilization measures in the agricultural

sector. Taken together, this meant that trade in agriculture was simply not subject to the regime of international discipline embodied in the GATT.

An important factor, which reasonably explains the exclusion of agricultural commodities from the purview of GATT discipline, is the deteriorating terms of trade of agricultural commodities vis-à-vis manufacturing products in the world economy – a trend that began in the '50s and continued well into the '80s. In such a scenario, developed countries - who were net-exporters of agricultural commodities vis-a-vis developing countries - used their political domination of world governing bodies in keeping agricultural trade beyond any form of international regulation.

Incidentally, in the period under consideration, the important commodities that entered the world agricultural market were divided into two categories:

- **Temperate zone products:** wheat, coarse grains¹, rice, meat, sugar², soyabean, soyabean oil, dairy products etc.
- **Tropical products:** coffee, cocoa, tea, tobacco, cotton, groundnuts, groundnut oil, plants and flowers, spices etc.

As the table below indicates, world price indices for agricultural commodities, in dollar terms, show that prices of agricultural commodities, including both tropical and temperate crops, fell by around 30 percent between the mid-80s and the early '90s. In the early half of the '80s, however, prices were quite high – a fact, which could be easily argued away as an 'outlier', reflecting the commodity price boom of 1975-80.

¹ Some categories of coarse grains fall under tropical crops.

² Cane sugar falls under tropical crop category.

Table 1: World Commodity Prices in Current Dollars (US)

Commodity	Units	1970	1980	1985	1988	1989	1990	1991
Bananas	\$/MT	165	379	378	478	547	541	560
Beef	\$/MT	130	276	215	252	257	256	266
Cocoa	C/KG	68	270	225	159	124	127	120
Coconut Oil	\$/MT	397	674	590	565	517	337	433
Coffee	C/KG	115	344	321	303	239	197	187
Copra	\$/MT	225	453	386	398	348	231	286
Cotton	C/KG	63	205	132	140	167	182	168
Grain Sorghum	\$/MT	52	129	103	99	106	104	105
Groundnut Meal	\$/MT	102	240	143	210	200	185	150
Groundnut Oil	\$/MT	379	859	905	590	775	964	894
Jute	\$/MT	274	308	583	370	373	408	378
Maize	\$/MT	58	125	112	107	112	109	107
Oranges	\$/MT	168	391	398	453	445	531	521
Palm Kernels	\$/MT	168	345	291	267	251	185	220
Palm Oil	\$/MT	260	584	501	437	350	290	339
Rice	\$/MT	144	434	216	301	320	287	314
	\$/MT	117	296	224	304	275	247	240
Meal	\$/MT	103	262	157	268	246	209	199
Oil	\$/MT	307	597	572	463	432	447	454
Sugar	\$/MT	81	632	90	225	282	277	198
Tea	C/KG	110	223	198	179	202	203	184
Wheat	\$/MT	63	191	173	180	201	156	143

Source: The World bank, Price Prospects for Major Primary Commodities 1990-2005

A critical reason for the fall in prices of agricultural commodities was the 'structural adjustment, which was forced upon a number of developing countries by multilateral lending agencies during the '80s, for allegedly reigning in their high fiscal-deficits. This led to a sharp decline in dollar prices because these countries had to export more (or import less) of agricultural commodities usually by squeezing consumption through devaluation-led domestic price increases. Another key reason for the sharp fall in prices from 1980-85 was the weak demand in industrial countries.

Essentially, however, the deteriorating terms of trade for agriculture were symptomatic of the highly distorted structure of world agricultural trade. The adverse world prices, in turn, resulted in a situation of deceptive comparative advantage that stimulated inefficient use of world resources, ultimately leading to huge welfare losses. A key factor responsible for the structural asymmetries, were the direct and indirect subsidies that were pumped into agrarian economies in various countries of the world. Though subsidies are not entirely harmful, the way these have been employed, especially by developed countries, has led to the highly uneven growth of agriculture worldwide. Basically, the governments of these countries gave subsidy-protection to powerful transnational corporations based within their territories which, controlled – and still control – the agricultural trade globally.

It follows that it is important to look into the degree of ‘subsidies’ in the agricultural sectors of several countries, as existed before the establishment of the WTO and the role of MNCs in world agricultural trade.

Agricultural Subsidies

The disruption of cross-border food supplies during the major war periods and the consequent hardship faced by the affected people, appear to be the root causes of the structural imbalances in the world agricultural trade. The Second World War created such an environment of suspicion throughout the world, that no nation was willing to risk interference in the regular supplies of farm produce. This resulted in nations espousing self-sufficiency and following policies of food security. Consequently, country after country provided extra incentives to their agricultural sectors by either announcing much higher support prices of outputs or subsidizing inputs heavily or a combination of the two. To protect domestic cultivators from foreign competition, imports were either government-controlled or heavy duties were imposed on them. This was true more so for European countries and Japan than for the US. Such policies attracted more resources to the agricultural sectors of these countries than

would have been the case under a free trade scenario. Production increased, stocks started building up and finally piled up to such an extent that it became prohibitively costly to maintain them. To get rid of these stocks, instruments were devised such as the PL 480 in the US and export subsidies in the EC through the Common Agriculture Policy (CAP). These surpluses then entered the world markets at prices much below their cost of production either through bilateral agreements or through the open trade route. Subsequently, the artificially depressed prices reduced the production incentives of cultivators in most developing countries, which were largely net importers of agricultural commodities. Private investment in these countries remained more or less shy of the agricultural sector except, where it was complementary to public investment. Incidentally, much of public investment in these countries was facilitated by loans from multilateral financial institutions such as the IMF and the World Bank, which were tied to the construction of large irrigation schemes.

Broadly, the different ways in which cultivators in developed countries were subsidized through government intervention are as follows. Primarily, there was a set of domestic and external policies that allowed domestic cultivators to receive much higher prices for their outputs. This set included domestic support price policies, tariffs, quotas, export enhancement programmes, price stabilization measures and import licensing as well as canalizing or policies related to external trade. Usually these policies pushed domestic prices higher than the corresponding border reference prices. Often cultivators were also subsidized by providing them inputs at prices below their cost of supply or at prices that were lower than those being charged from other consumers of the same product. Examples are subsidies in electricity, credit, fertilizer, transport and irrigation farm fuel, livestock feed and crop insurance. However, since powerful transnational corporations dominated the input markets in these countries, it was the latter that were effectively subsidized as is discussed in detail in the next section.

In effect, it was the developed countries that were responsible for the structural asymmetries in the world agricultural trade (see tables 2 and 3 below). This point is buttressed further by the fact that it was the US, which was the first to seek the exclusion of agriculture from GATT and the CAP, formulated by the EC, created surpluses that were dumped in the world market. Developing countries had little say in these policy decisions.

Table 2: Level of protection in developed and developing countries, 1985-87
(Percent of total value of agricultural output)

Commodity	US	Japan	EU	Asia Low Income ^a	Middle Income	North Africa	Latin America ^b	Eastern Europe
Beef	38	110	112	2	168	0	0	84
Dairy	130	367	196	12	107	50	0	6
Wheat	51	538	72	-6	264	24	-3	27
Rice	49	368	122	19	119	0	162	0
Coarse Grains	24	416	95	0	320	23	8	38
Sugar	70	121	115	14	142	14	32	97
Oils	7	16	67	0	363	45	-29	20

Notes: a Asian low-income countries exclude India and China

b Exclude Brazil and Mexico

Source: Antonio Brandao and Will Martin (1993), "Implications of Agricultural Trade Liberalisation for Developing Countries', Agricultural Economics

Table 3: Net Producer Subsidy in Agriculture of Developed Countries
(Percent of total value of production)

Country	Average 1979-81	1986	1990
European Union (12 countries)	37	50	48
Japan	57	75	68
United States	16	42	30

Source: IMF (1992), Issues and Developments in Trade Policy, Washington, DC

The main instruments of the US government have been direct payments, market price support programmes and input subsidies. The EC intervened mainly through its CAP and used border measures (minimum import prices), market support prices and export- subsidy mechanisms for helping farmers. The price support element of the CAP accounted for about two-thirds of the entire EC budget or nearly 0.7 percent of their GDP. Japan's agricultural policy concentrated on enhancing food security, narrowing the gap between farm and non-farm incomes and in improving productivity. They used price support programmes and border measures for carrying out their policies.

The Role of MNCs in World Agricultural Trade in the Pre-WTO Period

An important feature of world agricultural trade has been the growing, largely unchecked, presence of multinational corporations. Surprisingly, even in an environment of free market thinking, as embodied in the GATT agreements, which led to the establishment of the WTO, there is not a single word written on developing and enforcing a code of conduct for MNCs or monopoly companies involved in world trading.

The corporate growth of food processing MNCs can be traced to the late 19th century. Several of the leading food processing companies of that period had grown to behemoth proportions both in the US and globally. More specifically, since the late 1950, the bulk of these manufacturing and processing firms have acquired dominant rankings in several food sectors.

MNCs are traditionally involved in mining and plantation of primary products and also in their export from developing countries. Several factors have contributed to their significant growth. They are:

- 1) Complexity of processing technology and the direct cost of capital, skilled labor, energy and other inputs used in processing;
- 2) Monopoly and oligopoly in processing;
- 3) Advantages of foreign processing such as economies of scale, availability of infrastructure and need to blend raw materials from different sources;
- 4) Use of trade barriers by the developed countries for discouraging imports of processed products from the developing countries;
- 5) Strategic decision of MNCs to process commodities at home or in third countries and,
- 6) Vertical integration from collection of basic produce to retail marketing.

R C Lewontin³ gives a fascinating account of features of the capitalist development of agriculture in industrialized countries such as the US and the transformation of independent farmers into proletarians. Although there are still a large number of 'independent' petty producers, their powers of decision-making have been weakened to the point where they resemble workers. According to Lewontin, "farmers could make choices about the physical process of farm production, including what was grown and how much and what inputs were to be used." Also, "farmers were themselves traditionally potential competitors with the commercial providers of inputs because they could choose to produce seed, traction power and fertilizers themselves." He then goes on to argue that the agri-food business industry has taken away these choices from the farmers. Although, they are still technically the owners of the means of production such as land, they have "lost control over the labor process" and they are also separated from the product, as they are not free to sell it as

³ Clairmont, Fredrick F.
US Food Complexes and MNCs: Reflections on Economic Predictions
Economic and Political Weekly; October 1980

they wish. To put it differently, the farmer is in effect similar to a “putting-out worker characteristic of the first stage of capitalist production.”

The experience of contract farming in the production of broiler chickens in the US is a glaring example in this context. Many small farmers produce chickens under a four-year contract for Tyson Farms. The company provides the chicks, the feed and veterinary services. Tyson takes all decisions about inputs and farming practices and the farmer guarantees that he will not use any “feed, medication, herbicides, pesticides,...or any other items except as supplied or approved in writing by the Company.” Such a chicken farmer has little control over buying, selling or the process of transformation.

William Heffernan⁴ has also pointed to the spread of monopoly capital in agriculture. He argues that the outcome of horizontal integration at different stages of processing and distribution is the tremendous concentration of ownership control in the production, processing and distribution of major food commodities. For example, the four largest commodity-processing firms control 55 per cent of soyabean processing in the US. There is also a high degree of vertical integration. Cargill, for example, “is one of the three major global traders of grain, the second largest animal feed producer and one of the largest processors of hog and beef in the world.” ConAgra is a major food firm with large interests in different stages of the food chain ranging from seed and fertilizer production to feed production, broiler and meat production and ‘TV dinners and pot pies.’”

In their relentless pursuit of global profit maximization, MNCs have transcended national frontiers. However, it is quite doubtful as to how far these companies are interested in sustainable agriculture or in the livelihoods of farming communities across the globe. The industrial and food complexes of the MNCs are involved in

4. Clairmont, Fredrick F.
US Food Complexes and MNCs: Reflections on Economic Predictions
Economic and Political Weekly; October 1980

farming, agrochemicals, farm-machinery, food processing, wholesaling and retailing and two peripheral but strident activities, multinational banking and food trade. The food complexes are thus part of a wider social and economic system geared not much to the satisfaction of the needs of consumers, but mostly to the exploitation of consumers for the enhancement of corporate capital.

By the nature of their production and marketing circuits, MNC practices are largely beyond the knowledge of public accountability. They essentially employ cross-subsidization techniques, transfer pricing, reciprocity agreements, manipulations of the futures markets, product differentiation spawned by a multi-billion dollar avalanche of consumer deception and co-option of the state machinery. Corporate power has, thereby, helped in widening their profit spreads and eliminating competitors to the detriment of both farmer and consumer.

Not surprisingly, US conglomerate mergers swelled from 64 percent in 1948-65 to 88 percent in 1975 and 76 percent in 1976. Whereas there were only two or three giant (production- specialized) corporations with assets of dollar 500 million in 1906, in the ensuing decades, size and diversification multiplied. These have tripled since 1967. Whereas there were more than 5 million farms in 1950, by 1979 their numbers had shrunk to 2.3 million. A few very large firms have successfully dominated agricultural trade and have made entry into agriculture for others, by and large, prohibitive.

The dynamics of oligopolistic accumulation select the small and medium farmer as victims of highly discriminatory differential pricing policies. By means of vertical integration, oligopolistic and differential pricing policies, forward - contracting, specific production, hedging, speculation and a panoply of other marketing stratagems, corporate power has reshaped and blunted the competitive edges of agricultural commodity markets - broiler production is entirely vertically integrated and no price exists at intermediate stages of output; pork production has followed in

the make of broilers; fruit and vegetable production and distribution are increasingly integrated and grain markets are subject to the dictates of the large grain dealers.

Input market structures have also been affected by these convulsive forces - four firms have staked out 80 percent of all farm tractor sales, two firms control 80-85 percent of cotton pesticide sales and two over 60 percent of corn herbicide sales. Such production concentration has been matched by a no less intense concentration in the marketing and distribution networks.

Oligopolistic capital has made yet another dramatic inroad into agriculture. The seed industry is one of the fastest growing segments of the US and world food chain. Due to the global interdependence of several seed species, the major petroleum, petrochemical, food and pharmaceutical MNCs have embarked on the appropriation of seed firms. An important measure of market concentration in this area is the existence of multiplant ownership, which is markedly more conspicuous in the food and tobacco industries than in the rest of the manufacturing industries. Over the last two decades, concentration in food distribution has also gathered momentum.

Besides MNCs, giant trading companies have arrived on the scene. Though they existed earlier, they have experienced a vast transformation in the post-second world war period. Their number has drastically shrunk, the size of their assets has increased and they have diversified their activities into multi-commodity trading. Consequently, there is fast upsurge in the concentration of their trading power. Less than six multi-commodity traders handle the bulk of most of the commodities marketed in world trade. These traders belong to Western Europe, the US and Japan. The scale of their operation is so large that they completely dominate world trade to the extent of 85-90 percent.

Table 4: Corporate Control of Global Commodity Trade, 1983

Commodity	World Exports (\$ Million)	Percentage Marketed by 3-6 largest Transnational Traders
Food		
Wheat	17851	85-90
Sugar	10636	60
Corn	9833	85-90
Coffee	9636	85-90
Rice	3613	70
Cocoa beans	2051	85
Tea	1844	80
Bananas	1324	70-75
Pineapples fresh	74	90
Agricultural raw materials		
Forest products	47255	90
Cotton	6567	85-90
Tobacco	4239	85-90
Hides and skins	4047	25
Natural rubber	3321	70-75
Jute	135	85-90

Source: Frederic F Clairmont and John H Cavanagh, 'World Commodities Trade: Changing Role of Giant Trading Companies', Economic and Political Weekly, October 15, 1988

Out of the 15 commodities reported in the table above, 3-6 big companies controlled more than 80 percent of the world trade of 10 commodities. Only in case of hides and skins, their share was 25 percent and in the remaining 4 commodities, the share of these companies exceeded 50 percent of the world trade. Given the large-scale conglomeration of world agricultural trade, the pressing need for developing countries to retain their market share and earn scarce foreign exchange, often forces them to enter into deals with these trading companies. It is pertinent to mention here that the entry of Pepsi in India was argued for and justified on the grounds that this MNC was capable of marketing a large quantity of its processed vegetables and fruits from Punjab due to its links with chains of stores and hotels.

These trading companies possess two other advantages in dealing with the developing countries. Firstly, they possess highly developed economic intelligence networks. Secondly, they are able to sustain large inventories.

Their well-organized economic intelligence networks include computerized centres that monitor everything related to commodity output, trade, meteorological conditions, prices and future markets, through satellites. This is supplemented with information related to political conditions, domestic collaborators and social forces hostile to these companies. This information is used for building the bargaining power of the companies.

The capacity of these companies to build and sustain large inventories of the traded commodities helps them in planning their marketing strategies. The small and poor producers of the developing countries are compelled to sell their output immediately after harvest, which is purchased by these companies to build their inventories to be unloaded when profit conditions are most favorable. With centralized private command, the big trading companies have the advantage of first strike capability which is used to destroy the bargaining power not only of small producers but also the collective strength of developing countries harnessed, either through state trading or through international commodity agreements, which are damaged by these mega traders through inventory manipulations. Also, in the presence of such huge trading companies, private trading companies from developed countries pose very little threat. There is a history of takeovers by the mega trading companies such as Cargill, of the relatively weaker companies from advanced countries. They can indulge in collusion with other such companies and influence futures markets operations.

It follows that the near monopoly or oligopoly positions of these mega traders constitute a key asymmetry in the world agricultural commodity markets. This asymmetry tends to deepen with the increase of the concentration of market power of the mega traders. Clearly, developing countries have to confront this asymmetry. Large investments by these companies in advertisements leading to the creation of

brand names, recognition and loyalty and control over distribution networks, are big hurdles, which cannot be crossed without equally large investments by competitors backed by high quality products at competitive prices. The very high costs involved in the processes between the farm gate and the final consumers, such as processing, packaging, advertising, and marketing and distribution, makes the share of the primary commodity in the final product negligible. For raw cotton growers their price represents 4-8 percent of the final product; 6 percent for tobacco, 14 percent for bananas, 11-24 percent for jute goods, 12-25 percent for coffee and for tea, 15 percent of the US retail price of tea bags. This means that if any developing or less developed country decides to specialize in production and export of primary products, particularly that of agriculture, it opts for the lesser share of the price paid by the final consumers. The giant trading and processing companies take the major share of this price away.

Chapter 2

Introduction to Agreement on Agriculture

Agriculture did appear on the GATT agenda thrice before the Uruguay Round, but the focus was very narrow. Trade in agriculture, unlike other sectors, was mostly excluded from coverage in the general rules. In fact, The GATT permitted greater protection against agricultural imports. Wide-ranging subsidies for agricultural exports were also allowed. There were few market-opening commitments and hence the degree of trade liberalization achieved was far less than for industrial products. QRs were widely applied as well. Not surprisingly, the ambiguity of the rules affecting agricultural trade often led to disputes.

It follows that the inclusion of agriculture in the UR marked a turning point in the history of world trade. Once agriculture was subjected to WTO discipline, with the objective of making agricultural trade fairer and more market-oriented, the last bastion of protectionism had been supposedly broken. The professed aim was to reduce subsidies and open markets by removing QRs and tariffs.

The Agreement on Agriculture signed at the end of the UR of negotiations mainly dealt with three areas of policy:

- I. Better market access or easier entry of imported goods into different national markets;
- II. Reduced domestic support or lower direct or indirect support provided to domestic farmers by national governments and
- III. Lower export subsidies or lower budgetary support for exporters of agricultural products.

These three were listed as the main areas where specific binding commitments were to be undertaken. The developed country members were to provide improved market

access for products of special interest to developing country members. At the same time, liberalization of trade in tropical products and those measures essential to the diversification of production from the growing of illicit narcotic crops were to be carried to the extreme. However, the agreement also incorporated the critical limitation that reforms should be made in an equitable way among all members having regard to non-trade concerns such as food security for least-developed and net food-importing countries and environmental protection.

I. Market Access in AoA

The key elements of the market access commitments for agricultural products – as specified in the AoA - were tariffication, tariff reduction and the binding of all agricultural tariffs.

Tariffication

The AoA made tariffication mandatory. Countries had to dismantle, in a phased manner, any non-tariff barrier - such as a ban on imports of particular agricultural products or ceilings set on the quantities of individual products that could be imported (QRs) or variable levies - and only use import tariffs or duties as means of protection. The tariffs computed had to be expressed in percentage terms (“*ad valorem*”) or as a fixed sum per unit or amount (a “specific duty”).

The underlying objective of tariffication was to impart transparency to the protection levels granted in various countries and prepare the ground for progressive liberalization of world agricultural trade.

Tariff Reductions

The process of ‘tariff reduction’ implies the de-escalation of applied tariffs to reasonable levels. Developed countries were to slash agricultural tariffs by an average

of 36 percent over six years while developing countries were committed to a reduction in the same by 24 percent in 10 years (see table 5 below). The least-developed countries (LDCs) were not bound to affect any tariff cut under the agreement. The rules also required that tariff on a particular product be slashed at least 15 percent by developed countries and 10% by developing countries.

Developed Country Imports and Tariff Reductions on Agricultural Products
(Millions of US dollar and percentage)

Product categories	Value of imports		Percentage reduction in tariffs
	All sources	From Developing economies	
All agricultural products	84,240	38,030	37
Coffee, tea, cocoa, mate	9,136	8,116	36
Fruits and vegetables	14,575	8,887	36
Oilseeds, fats and oils	12,584	6,833	40
Other agricultural products	15,585	4,233	48
Animals and products	9,596	2,690	32
Beverages and spirits	6,608	2,012	38
Flowers, plants, vegetable materials	1,945	1,187	48
Tobacco	3,086	1,135	36
Spices and cereal preparations	2,767	1,134	35
Sugar	1,730	1,030	30
Grains	5,310	725	39
Dairy products	1,317	48	26
Tropical products	24,022	18,744	43
Tropical beverages	8,655	8,041	46
Tropical nuts and fruits	4,340	3,672	37
Certain oilseeds, oils	3,433	2,546	40
Roots, rice, tobacco	4,591	2,491	40
Spices, flowers and plants	2,992	1,987	52

Source: Guide to Uruguay Round Agreements, 1999

Tariff reduction and Binding

All countries had to specify ceilings at which their tariffs were bound or the maximum level to which tariffs would be raised under any circumstances.

Other critical components of market access were current and minimum access commitments, special treatment to primary products and protection for staple food items.

Current and Minimum Access Commitments

Countries were required to give minimum access opportunity commitments to those products whose trade was extremely restricted earlier because of impenetrable national barriers. This was set at 3 percent of average domestic consumption during the 1986-88 reference years, to be achieved by 1995. Further, they had to raise access to 5 percent, by 2001 for developed countries and 2005 for developing countries. If countries did not reflect this minimum access, they were expected to use the mechanism of “tariff-rate quotas” or lower tariffs for imports of a magnitude required to ensure the realization of minimum access requirements. Lower rates, generally upto 32 percent of the tariffed rates, were applicable to imports upto quota limits. The higher rates from tariffication were to apply to imports over quota limits.

Special Treatment for Primary Products

Under this set of provisions, an importing member was entitled to give special treatment to any of its primary agricultural products and processed products - based on the product -provided certain conditions were met. For example, such action was not permissible in the case of a product, which was getting export subsidy. Under the *de minimis* criteria, imports of the product had to account for less than 3% of domestic consumption. At the same time, the domestic production of that product had to be under effective restriction. If such conditions were met, the production could be

listed in the national schedule as subject to “special treatment”, reflecting factors of non-trade concerns such as security and environmental protection.

Protection to Staple Food Items

A second type of protection was to be available for “a primary agricultural product, which is the predominant staple in the traditional diet of a developing country member”. Here also, retention of non-tariff restrictions was subject to similar conditions, but with minimum access set initially at only 1 percent of domestic consumption, rising gradually to 4 percent over 10 years and with the further condition that “appropriate market access opportunities” should be provided for other agricultural products.

Despite these detailed specifications, the AoA provided countries with an “escape clause” in the event of a large and disruptive inflow of imports. Under the Special Safeguards provisions, if countries that had tariffied their QRs were faced, in the case of tariffied products, with an import surge or by a fall in import prices to levels, which were low relative to those that prevailed during the 1986-88-reference period, they were allowed to impose higher tariffs and other restrictions to restrain imports.

II. Trade- Distorting Subsidies

The central thrust of the domestic support provisions of the AoA was to encourage a further shift away from trade-distorting measures and policies. Support in the form of explicit or implicit subsidies usually comes in two forms:

- Price support or measures such as government procurement backed by export or import controls using tariffs and QRs that result in market prices that are different from those that would have prevailed in the absence of these interventionist measures and

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- Budgetary support, in the form of explicit budgetary outlays on subsidies on farm inputs and credit, on agricultural research and extension, on deficiency payments, on insurance and disaster payments, on diversion payments for temporary retirement of resources and on compensation in lieu of reductions in market price support or implicit budgetary outlay in the form of revenues foregone, as a measure of support to agriculture.

Aggregate Measure of Support (AMS)

The AMS is the sum total of AoA-violative product-specific and non-product-specific support provided by national and sub-national or federal governments in individual countries. The original Dunkel Draft of the UR agreement provided for commitments to reduce domestic support on a product-by-product basis. The agreement between the G-2, the US and EC at meetings that took place at Blair house in Washington in November, 1992, which paved the way for the successful conclusion of the negotiations on the UR, however, replaced these product-wise commitments to a commitment to reduce overall support to agriculture. Developed countries were required to reduce their Aggregate Measure of Support (AMS) by 20 percent over six years from 1995 onwards. For developing countries, the lowering target was stipulated at 13.3 percent over 10 years. LDCs were not required to make any reduction.

The AoA categorized the different possible measures of support into three categories:

- “Amber Box” measures were seen as “those policies, which have a substantial impact on the patterns and flow of trade.” Countries had to commit themselves to reduce all such domestic support measures in the aftermath of the agreement.
- “Green Box” measures were those that were seen as having no major effect on production and trade and were considered completely non-violative of the

AoA and not subject to any reduction commitments. They included a variety of “direct payments” to farmers, which were seen as augmenting their incomes without influencing production decisions, namely,

- Producer retirement programmes;
 - Resource (e.g. Land) retirement programmes;
 - Environmental protection programmes;
 - Regional assistance programmes;
 - Public stockholding for food security reasons;
 - Agricultural input subsidies for low-income, resource- poor families;
 - Domestic food aid;
 - Certain types of investment aid and
 - General services that provide among other things:
 - ✓ Research, training and extension;
 - ✓ Marketing information and
 - ✓ Certain types of rural infrastructure.
-
- “Blue Box” measures were additional exemptions arrived at through the Blair House accord and were introduced to allow the US and the EC to continue to support agriculture while meeting AMS provisions. They were exempt from inclusion in the AMS subject to reduction commitments, but were conditionally accountable. These included, notably, compensatory payments and land set-aside programmes of the EU’s Common Agricultural Policy, aimed at compensating producers for limiting production and the US government’s deficiency payments scheme, aimed at compensating producers facing market prices that were below some targeted level. Blue Box provisions were considered to be “non-trade- distorting”. Such payments were exempt if they

- were based on fixed area and yields;
- made on 85% or less of the base level of production and
- made on fixed number of head of livestock.

Exclusions in AMS Calculations

Green Box subsidies were excluded from AMS calculations. Apart from that, direct payments to farmers were exempt, in case certain conditions were met. Also, where support granted to a particular product was less than 5 percent, expenditure on subsidy was not counted. Likewise, a non-product- specific subsidy was to be excluded from the calculations if it did not exceed 5 percent of the value of production.

The three types of Amber Box measures exempted from reduction were:

- “de minimis” support; the de minimis levels are supports, defined for developed countries as support not exceeding 5 percent of the value of the production of individual products and of the value of total agricultural production. For developing countries the de minimis level was set at 10 percent
- Certain measures to encourage agricultural and rural development in developing countries including generally available investment subsidies, subsidies to low-income producers and support for diversification away from the production of illegal narcotic crops and
- Certain direct payments under production- limiting programmes.

III. *Export Subsidy in AoA*

In its bid to make agricultural trade freer, the AoA required nations to reduce the subsidies they offered to exporters of agricultural products as this were considered as

unfair practice. The export subsidies that were entitled to reduction commitments were:

- ❖ Direct subsidies contingent on export performance;
- ❖ Government export sales or stock disposals where prices were below domestic market prices;
- ❖ Other payments on the export of an agricultural product that were financed by virtue of government action (including levies);
- ❖ Subsidies on agricultural products contingent on their incorporation in exported products and
- ❖ Subsidies affecting marketing and transport costs of exports.

Signatories to the AoA committed themselves to reduce the expenditure they incurred on such subsidies to levels that were 36 percent lower than their 1986-90 average values in the case of the developed countries and 24 percent lower relative to the same figure in the case of developing countries. Further, countries agreed to reduce the volume of agricultural exports that were subsidized exports, by 24 percent relative to the 1986-88 base period in the case of developed countries and 14 percent in the case of developing countries (see table 6 below). Also, it was mandated that commodities, which were not subsidized at the time of the agreement, would not be supported with subsidies in the future as well.

Table 6: Export subsidy reduction commitments by product*(\$ mn)*

Product	Base 1986-90	1991-92 (if above base)	Final
Wheat	3483	5069	2235
Beet	2802	2978	1796
Coarse grains	2258	2579	1445
Butter and butter oil	1996	2023	1278
Other milk products	1877	1895	1201
Cheese	819	997	524
Fruits and vegetables	800	804	519
Skim milk powder	746	750	477
Pigmeat	505	544	323
Poultry meat	323	327	207
Rice	230	244	165
Vegetable oils	199	238	130
Eggs	125	131	80
Tobacco	96	150	66

Source: WTO in the new millennium, 4th ed.

It is always difficult to contemplate the future in a world where uncertainty is high and all developments are interconnected. However, the signing of the AoA ushered in a lot of expectations in world agricultural trade. In fact, the conclusion of the UR of multilateral trade negotiations, largely in accordance with the Dunkel Text, was thought to have inevitably changed the structure of relative prices for agricultural commodities in the world economy. The progressive withdrawal of agricultural subsidies in the industrialized countries, particularly in the EC would raise the world prices of such subsidized commodities. Subsidy withdrawal would reduce output, raising domestic prices in the major markets and thereby also international prices. Some empirical modeling exercises even showed that international prices would rise and so would trade volumes (Goldin and Van der Mensbrugge, 1995).

However, it was also felt that the price responsiveness of supply and demand would moderate the increase in prices. The benefits would then accrue to countries that

export these commodities while the costs would be borne by countries that import these commodities. Further, it was argued that the cuts in agricultural subsidies mandated by the UR would, by and large, raise the prices of temperate crops and that the prices of most tropical products would not be influenced by the outcome of the UR and insofar as developed countries produced crops similar to or the same as temperate crops, they would benefit from higher prices for such exports.

Thus, it could be reasonably expected that the withdrawal of subsidies in Europe would raise the world prices of temperate crops such as wheat, oil seeds (hence edible oils) and sugar-beet (hence sugar), just as it would raise the world prices of dairy products or of temperate fruits and vegetables. Similarly, the withdrawal of subsidies in Japan would raise the world price of rice.

It was therefore argued that the prevailing world prices were not good signals for the situation, which would emerge, in the medium term, say six years from then. In consequence, insofar as adjusting the prevailing pattern of production to that dictated by the then world prices involved costs, those costs might, to a large extent, turn out to have been incurred needlessly if world prices altered subsequently. Therefore it was advised that any unilateral trade liberalization should be sequenced properly with the phased multilateral trade liberalization on the anvil, keeping in view the possible impact of the latter on the evolution of future world prices.

Further, it was also predicted that the pattern of world prices would be strongly influenced by commodity-specific lobbies in developed countries. On theoretical grounds, one would expect that reduced support levels and rationalization of trade barriers would increase production and export of various commodities in those countries, which had comparative advantage in the production of agricultural commodities. Similarly, the reduction in import barriers would reduce consumer price in those countries where the tariff barriers were very high, which would generate strong demand and push up imports.

However, there were also predictions that the gains from the new trade agreement for the developing countries would be mainly in agriculture and that too, in employment only. As for the welfare implications of the new agreement for these countries, in terms of generation of income and output, it was, in fact, predicted to be negative in agriculture. On the whole, the developing world, implying countries from Asia, Africa and Latin America were expected to benefit the least from the agreement. The major beneficiaries would be the EEC, the US, Canada, Japan and the Western European economies and the four Asian tigers (Nguyen 1993). Besides, the share of agricultural commodities in total world exports had also been declining in relative terms. This coupled with the fact that the terms of trade in agricultural commodities were not favorable in the past meant that pinning hopes on agro -exports might not have been an objective judgment.

Incidentally, there was great euphoria at the time of the signing of the agreement and most of the developing countries hoped that the agreement would open up export markets in developed countries. This was expected to be achieved by removing the trade-distortions already created by the advanced countries. Also, in anticipation of the conversion of non-tariff barriers into tariff barriers, differential reduction in the levels of custom duties, export subsidies and AMS, there were expectations that increased market access of agricultural products would benefit the developing countries. It was expected that prices of these products would rise more in the markets of advanced countries such as the US, EU and Japan where agriculture was highly subsidized and protected. This would make supply of agricultural products from the developing countries more competitive and these exports from the developing countries would perform better. On this basis, agencies like the World Bank felt that agricultural trade liberalization would benefit the developing countries through changes and improvements in terms of trade, increased trade efficiency and welfare effects of induced changes in tariff revenues.

The maximum rise in prices was expected for temperate zone crops such as rice, meat, sugar and dairy products but tropical products were expected to experience a

minimum rise. According to one projection, wheat was expected to gain in its prices between 5 percent and 7.5 percent, rice between 1.9 percent and 18.3 percent, meat between 0.5 percent and 13 percent, sugar between 5 percent and 10.6 percent and dairy products between 7.2 percent and 6.9 percent (see table 7 below).

Table 7: World Commodity Price Projections in Current Dollars (US)

Commodity	Units	1992	1993	1994	1995	2000	2005
Coffee	C/KG	139	187	185	225	310	340
Cocoa	C/KG	113	119	125	131	170	215
Tea	C/KG	206	208	205	220	272	322
Sugar	\$/MT	200	205	220	254	350	441
Beef	\$/MT	244	252	256	264	376	399
Bananas	\$/MT	502	490	494	502	579	652
Oranges	\$/MT	520	523	530	543	622	687
Rice	\$/MT	290	288	290	300	336	374
Wheat	\$/MT	172	162	164	171	218	204
Maize	\$/MT	105	104	107	110	139	130
Grain Sorghum	\$/MT	103	102	103	105	134	125
Palm Oil	\$/MT	395	420	397	396	416	420
Coconut Oli	\$/MT	590	550	573	618	774	721
Groundnut Oil	\$/MT	605	645	656	713	760	664
Soyabean Oil	\$/MT	430	460	499	500	562	590
Soyabean	\$/MT	235	248	263	270	300	368
Copra	\$/MT	380	360	377	404	544	508
Palm Kernels	\$/MT	230	237	246	270	334	358
Groundnut Meal	\$/MT	157	165	184	199	216	276
Soyabean Meal	\$/MT	208	220	230	241	254	331
Cotton	C/KG	130	129	153	162	206	229
Jute	\$/MT	320	340	350	356	441	493

Source: The World Bank, Price Prospects for Major Primary Commodities 1990-2005

Chapter 3

World Production and Trade in Agricultural Products and the Trends in Prices

As mentioned in the previous chapters, until the UR was completed in 1994, GATT rules were largely ineffective in disciplining agricultural trade. This was primarily due to the indiscriminate use of subsidies by developed countries and the domination of oligopolies over many aspects of world agricultural trade. The UR agreement made the first significant attempt to extend GATT rules to encompass agriculture as well. It was expected that once member countries implemented the AOA, they would have greater access to their respective markets and subsidies would be slashed, thereby, raising world prices. There would also be an expansion in the volume of agricultural trade with enhanced participation from developing countries.

It is very important, therefore, to look into the price trends throughout the period after the formation of the WTO, to determine whether the desired outcomes were actually generated. This chapter looks into world agricultural production and trade throughout the '90s. This would enable me to compare the pre and post - WTO period, to have a better understanding of its consequences. Further, the production and distribution of major crops that cover nearly 80 percent of world agricultural trade have also been analyzed.

World trade in agriculture, in the post-WTO period, shows marked fluctuations. Immediately after the implementation of the AoA, with the establishment of the WTO in 1995, 1996 showed an upsurge in the aggregate level of world agricultural trade. But starting from 1997, there were three consecutive years of noticeable slowdown. Share of agriculture in world merchandise trade declined from 10.5 percent in 1998 to 9 percent in 1999 and 9 percent in 2000. This also, in turn, reflected slowdown in world agricultural production. In fact, 1997 witnessed the lowest recorded rate of growth in agricultural production in the developing countries since 1972.

World Agricultural Production

World agricultural production exhibited anything but a secular growth in the '90s. In fact, world crop and livestock production recorded a marginal rate of expansion of 1.1percent only in the second half of the '90s - the lowest since 1993. The performance of both developing countries and developed countries was rather disappointing in this later half. There was a slight improvement in 2000, but it was short-lived. Production in developing countries increased by 2.6 percent in 1998 - lower than the already relatively modest rate of 2.9 percent in 1997. On the contrary, production growth rates were quite high from 1993 to 1996 - in the range of 4 to 5 percent.

In the post-WTO period production growth in the Far East and the Pacific developing region, however, was as low as 1.8 percent. In China, after six consecutive years of output growth at more than 5percent, agricultural output growth fell to a more modest 3.3 percent. Countries like Indonesia, the Philippines, the Republic of Korea, Thailand, Malaysia, Bangladesh and Cambodia also experienced similar slowdowns in output growth. Production estimates point only to Vietnam as the most consistently positive agricultural performer in the region, with years of production growth near and above 5 percent for the past 8 years.

Latin America and the Caribbean, with the exception of Argentina, also experienced slower growth at an estimated rate of 1.9 percent. In the Near East and North Africa Region, however, production grew at an estimated rate of more than 8percent. With the exception of Egypt and a few other countries, there was a strong expansion of production, notably, in the Islamic Republic of Iran, the Syrian Arab Republic and Turkey.

Keeping with the trend in most regions, transition countries, taken together, experienced a nearly 6percent decline. Production fell significantly in the Russian

Federation, Ukraine and Kazakhstan. Romania experienced a steeper decline. Poland, however, recorded strong output growth.

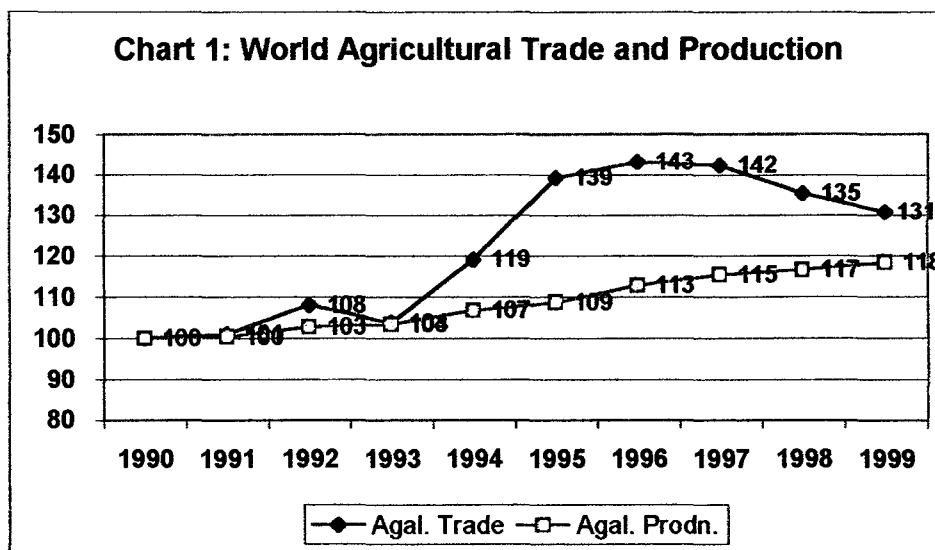
World agricultural trade

Although, it was expected that the GATT Agreement would make major differences in the volume, value and pattern of international agricultural trade, the nature of the changes have been very different from those that were widely predicted. Developed countries continue to dominate the world trade in agricultural commodities. Among the ten largest exporters of agricultural commodities, Brazil is the only developing country. The other nine are developed countries, of which, six are EU members. Similarly, the ten main importers of agricultural commodities are all developed countries.

Not surprisingly, most of the trade in agricultural products occurs among developed countries, a major portion being intra-EU trade (around one-fifth of world agricultural trade). In 1997, intra-EU agricultural exports had a value of US\$178 billion. At the same time, intra-Asia agricultural trade had a value of US\$74 billion only, while, intra-North America trade was worth a mere US\$30 billion. In fact, trade within Western Europe (\$179.7 billion) and within North America (\$31.8 billion) accounted for nearly 39 per cent of the annual global trade.

However, inspite of the First World's continuing domination over world agricultural trade, agricultural exports have become a critical source of revenue for many developing countries. In 1999-2000, agricultural products accounted for approximately 20 per cent of total merchandise exports from Latin America and Africa, 10 per cent from Eastern and Central Europe, 4 per cent from the Middle East and 7 per cent from Asia.

A striking fact about world markets throughout the '90s was that the rate of growth of agricultural trade had been much lower (3 percent) than that of world trade as a whole (5 percent). As the Chart below shows, after rising sharply between 1993 and 1995, world agricultural trade, in value terms, reached a plateau and then declined subsequently. In terms of volume also there was no significant rise in the world market. **In particular, growth was negative during the years 1997, 1998 and 1999, when the effects of the implementation of the UR AoA, should have been realized.**



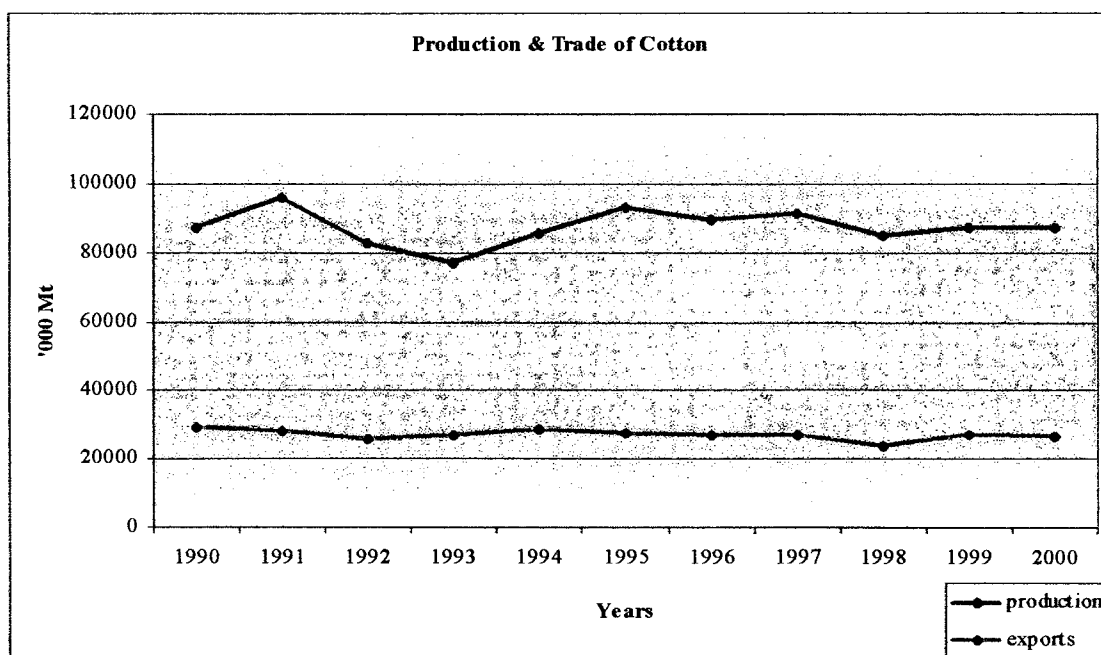
World Prices of Agricultural Goods

Cropwise Analysis of Traded Agricultural Goods

Figures on international prices across markets, for the crops analyzed, capture the downward trend in prices for most of the crops throughout the '90s.

Cotton

Cotton is a significant crop in world agricultural trade. Its share is about 4percent of the global trade in agricultural commodities. Production of cotton was more or less stagnant throughout the '90s. The first and the second half of the decade showed negative rates of growth of production. In the first half, i.e. from 1990 to 1994, it was -0.1 percent, whereas, after the formation of WTO, from 1995 to 2000, it fell to -0.4 percent. The proportion of exports to total production also declined after 1995. While in the first half of the '90s, it was around 32.38 percent, the corresponding figure in the post -WTO period was 29.75 percent. Further, the growth of exports and imports was negligible. In fact, the rate of growth of exports declined to -0.4 percent in 95-99 from -0.3 percent in 1990-94 (Table 1 & 3).



Source: Production and trade data from USDA

An important factor responsible for the shrinkage of world cotton trade in the '90s, was the collapse of Russia's textile industry - one of the world's largest. In fact, world cotton consumption stagnated primarily because lower consumption by Russia

offset increased consumption by India, Turkey, Mexico, Pakistan, and the United States. In 1999/2000, however, consumption rose sharply, by around 7 percent, but world trade remained close to the average level for the decade since consumption increases occurred largely in countries producing much of their own cotton.

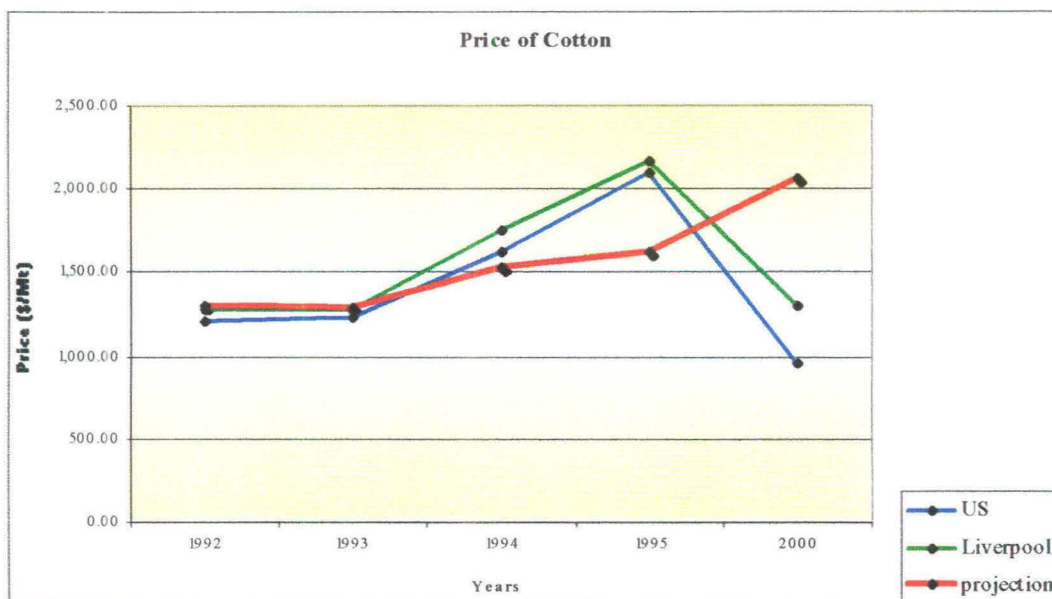
Incidentally, the US ranks second in world cotton production and third in world cotton consumption. US imports have amounted to less than one percent of the world's total, on average, in recent years, but have grown from virtually zero during the two decades before 1994. Uzbekistan, the world's largest exporter of cotton after the United States, supplies about 16 percent of the cotton traded internationally.

China is also a leading producer and consumer of cotton. China's cotton production fluctuated substantially during the '90s as the adjustment of government-set purchasing prices lagged behind changes in agriculture and the economy, as a whole. China's imports, ending stocks and exports ebbed and flowed as China's policymakers lowered and raised procurement prices, opened and closed import quotas and offered and withdrew export subsidies. China was at times the world's largest importer (1994/95-1996/97), but in 1998/99, it was also the world's fourth largest exporter.

India is the third largest producer of cotton and the second largest consumer. During the '90s, India reoriented its economic development strategy towards greater foreign trade and investment. As economic growth accelerated and textile exports rose, India's cotton consumption grew at a rate well above the world average. Its share of world cotton consumption rose from 10 percent in 1990/91 to 15 percent in 1999/2000. Production rose substantially as well. Quite significantly, import-orientation has begun to replace export-orientation as the defining worldview for India's cotton trade outlook. Net imports in 1999/2000 were estimated at 1.2 million bales. Although small on a global basis, these imports were the largest since India last steadily imported hundreds of thousands of bales during the 1960s and were probably the largest in India's long history of producing and consuming cotton. The figure is

also not altogether insignificant if one considers that throughout the first half of the '90s, till 1997, India was among the largest exporters of cotton.

The world's leading exporters of cotton are Uzbekistan, Turkmenistan, Australia and United States, whereas, Russia, South Korea, Thailand, Italy and Indonesia are the leading importers. India was also among the major importers in 1994, 1998 and 1999.



Source: Production data from USDA and the projection data from the World Bank, *Price Prospects for Major Primary Commodities, 1990-2005*

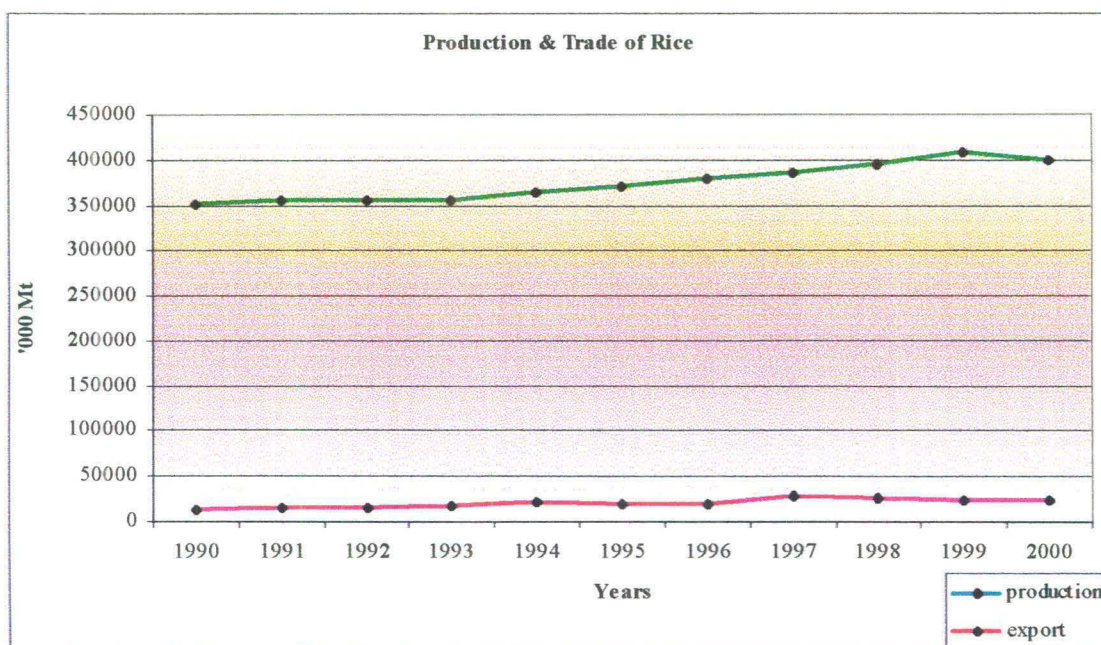
Cotton prices show a significant decline in the post-WTO period, contrary to projections (see Graph). Interestingly, prices had risen sharply in the earlier part of the '90s. In fact, the maximum prices for cotton were witnessed in the world market in 1995. Thereafter, a steep decline ensued and the average price fell to US\$ 885.97 per Mt in December 1999, the lowest for the decade (Table 2). In 2001, however, prices had recovered slightly. The excess of supply over demand and the slowdown of growth in the global economy were largely responsible for the low prices. There was also significant extension of the area under cotton in Brazil and Turkey after 1995.

Rice

Rice is produced worldwide and is the primary staple for more than half the world's population. Asia accounts for about 90 percent of world production and consumption of rice. The crop's share in world trade is small, however, mainly because the largest producers (China and India) are also its largest consumers.

Although, rice is produced over vast areas of the world, the physical requirements for growing rice (available water, soil types etc;) are limited to certain areas. Economically sound production typically requires high average temperatures during the growing season, plentiful supply of water applied in a timely fashion, a smooth land surface to facilitate uniform flooding and drainage and a subsoil hardpan that inhibits the percolation of water. The four major types of rice produced worldwide are as follows:

- Indica, accounting for more than 75 percent of global trade, which is grown mostly in tropical and subtropical regions. Indica rice cooks dry and separate.
- Japonica rice, typically grown in regions with cooler climates, which accounts for around 12 percent of the global rice trade.
- Aromatic rice, primarily jasmine from Thailand and basmati from India and Pakistan, accounting for around 10 percent of global trade and typically selling at a premium in world markets.
- Glutinous rice, grown mostly in Southeast Asia and used in desserts and ceremonial dishes, which accounts for most of the remainder.



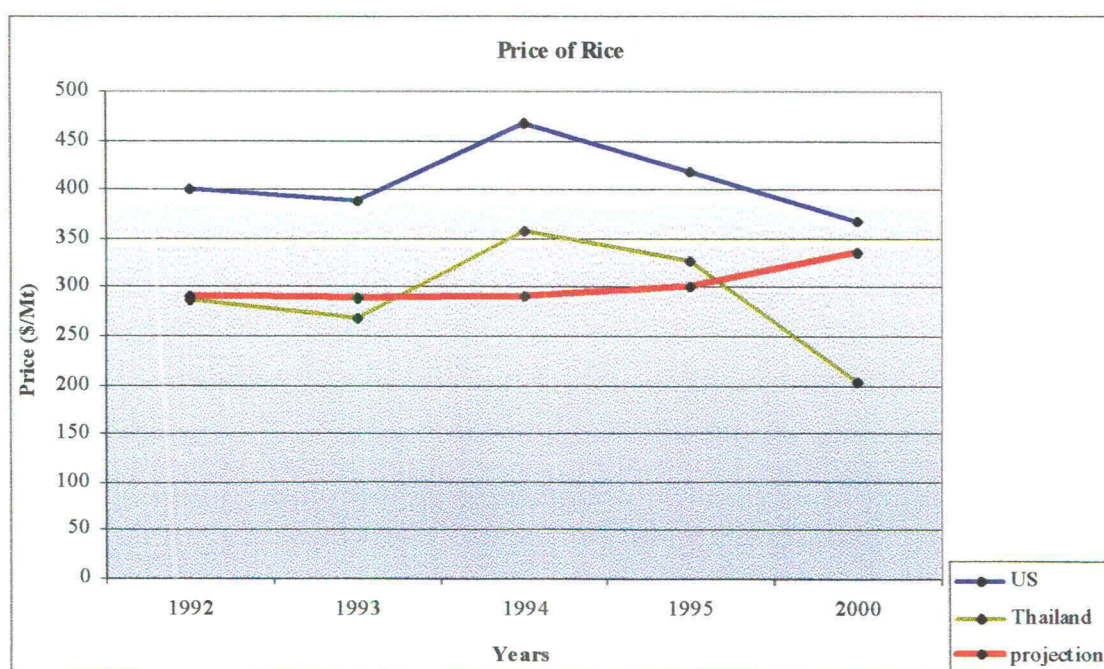
Source: Production and trade data from USDA

Unlike cotton, world rice production has undergone uniform expansion in the '90s. The rate of growth of production increased from 0.3 percent in the first half to 0.5 percent in the second half of the decade. It reached a peak in 1999, but fell thereafter, in 2000. Not surprisingly, Asian farmers produced 92 percent of the world total - with two countries, China and India, producing 57 percent of the total crop – given the large population and the wide spread of subsistence production and consumption in the continent. For example, in Bangladesh, Cambodia, Indonesia, Laos, Myanmar, Thailand and Vietnam, rice provided nearly 55-80 percent of the total calories consumed in those countries.

Interestingly, on an average, only around 4percent of world rice production is traded internationally. In the post- WTO period, the volume of trade shrank even further. The rate of growth of exports fell from 4.8 percent in the pre-WTO period to 1.1 percent, whereas, the rate of growth of imports fell from 5.2 percent to 1.4 percent (Table 4).

Incidentally, Thailand, Vietnam, United States, India, Pakistan, Italy and Uruguay are the major rice- exporters, whereas, Iran, Saudi Arabia, Brazil, Senegal, Indonesia, Malaysia and Iraq are the major importers.

It is not easy to see how the GATT may have affected global rice trade favorably. The preceding year of its commencement, i.e. 1994, witnessed the maximum trade for the first half of the '90s, whereas, the immediate years after the agreement saw a secular downtrend. Moreover, inspite of some growth in 1998 following another poor season in 1997, the downward trend persisted from 1999 onwards.



Source: Production data from USDA and the projection data from the World Bank, *Price Prospects for Major Primary Commodities, 1990-2005*

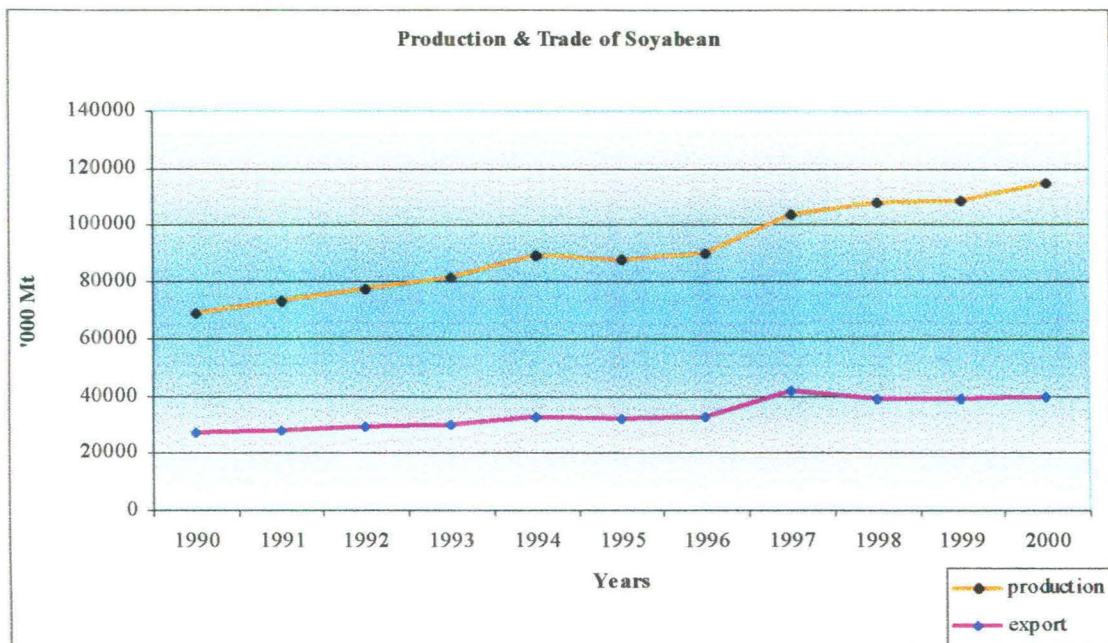
World rice prices were more or less stable in the second half of the '90s, but at levels significantly below the pre-WTO trend. With the arrival of new supplies, prices have

been weakened further in the last two years. This is primarily due the tightening of global demand/supply conditions. However, prices have recovered to some extent in the recent past.

Incidentally, rice from Thailand has benefited immensely from the launching of a new round of government domestic purchases recently and from strong import demand in other rice importing countries, due, in part, to a temporary export ban imposed by Vietnam, thereby, relaxing the global demand/supply imbalances somewhat. However, large domestic supplies from the US continue to exert strong downward pressures on the quotas binding rice trade globally. Among the tropical exporters, prices of Indian parboiled rice have been particularly competitive, but low supplies from Vietnam and Pakistan and the termination of the rice-subsidy programme in Egypt, have pushed world prices up.

Soyabean

Soyabean ranks among the premier crops that are traded in agricultural markets worldwide. Its share in the global agricultural trade is more than 6 percent. Interestingly, unlike with a wide range of agricultural commodities, soyabean trade is not dominated by developed countries; instead, developing countries are primarily the major exporters. Brazil is the world's largest exporter of soyabean meal. It is among the top four countries in soyabean oil exports and second in exports of whole soyabeans. India also holds a critical position vis-a-vis the soyabean trade. It has been one of the top exporters throughout the '90s.



Source: Production and trade data from USDA

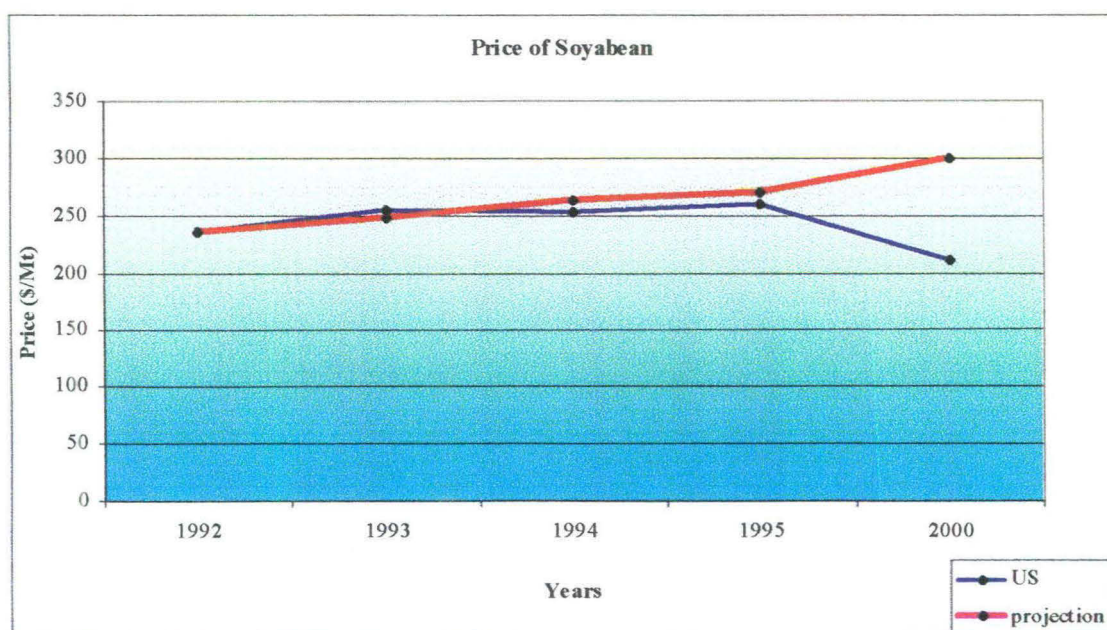
The total world production of soyabean increased gradually throughout the '90s, but it was markedly higher at the end of the decade than at the beginning. However, the growth rates of production in the two halves of the decade were roughly the same.

Similarly, trade in soyabean grew uniformly throughout the decade. Exports grew at 1.6 percent, whereas, imports grew at 1.4 percent. Trade was maximum in 1997. Thereafter, it fell off somewhat, but remained slightly above the levels of the previous years. The share of exports to production, on average, was also more or less similar in the first and the second half - 37.54 percent in 1990-94 and 36.52 percent in 1995-2000 (Table 7 & 9).

Brazil, Argentina, India, United States, Belgium Luxembourg and Paraguay are among the largest exporters of soyabean, whereas, France, Spain, Italy, Denmark and United Kingdom are among the largest importers. Incidentally, Germany and

Netherlands are both major exporters as well as importers of soyabeans in the world market.

The impact of the AoA is indeterminable in case of the global soyabean trade. There has not been any significant change in the structure of trade in this product, in the post-GATT period, although, there was a temporary upsurge in the volume of trade in the years immediately following the implementation of the AoA.

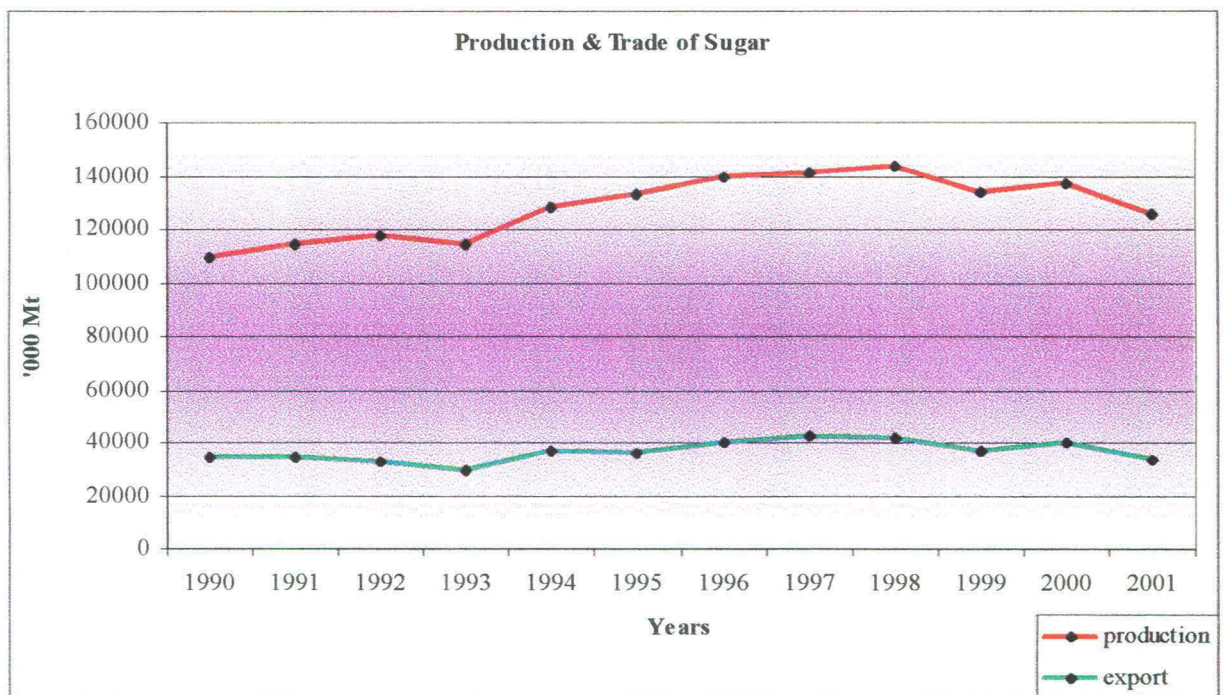


Source: Production data from USDA and the projection data from the World Bank, *Price Prospects for Major Primary Commodities, 1990-2005*

Soyabean prices were more or less stable in the first half of the '90s. However, after a small increase in 1996, prices have tapered off sharply thereafter, recovering only marginally in 2000. The trend stood in sharp contrast to WTO projections (Table 8).

Sugar

Sugar, like soyabean, ranks among the top ten crops transacted in the world market. Its share in the overall international traffic in agricultural commodities is more than 6percent.

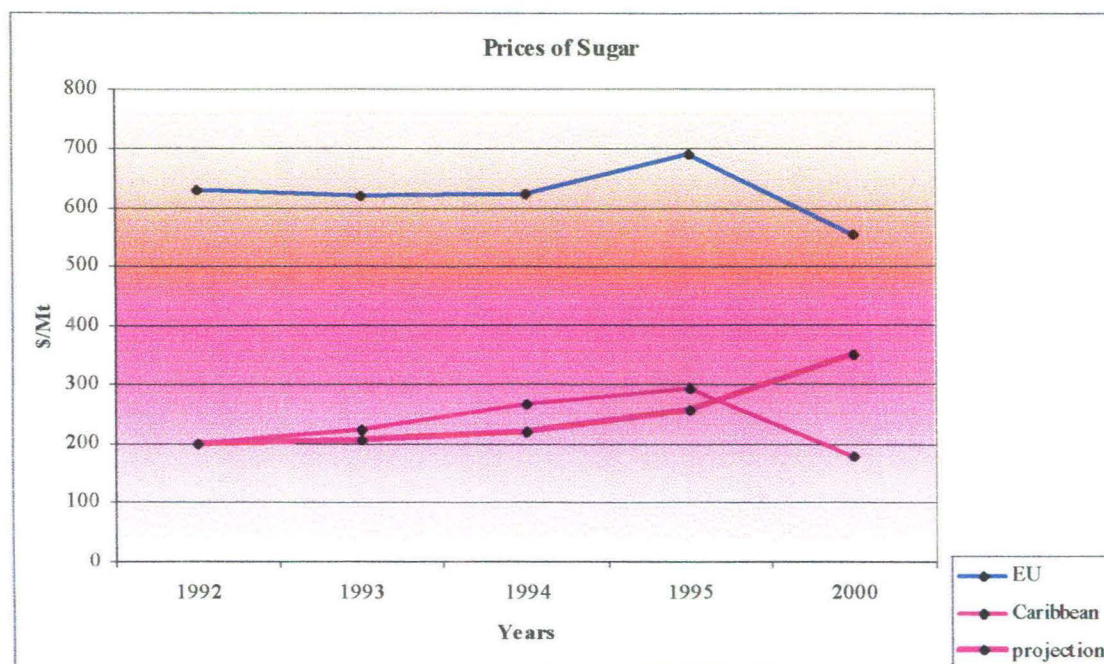


Source: Production and trade data from USDA

World sugar production was generally perched on a modest growth track throughout the '90's, although it tapered off twice - once in 1993 and then again in 1999. The year 2001 also witnessed low production levels. The rate of growth of production, however, declined in the post-WTO period. While it was 1.4 percent during 1990-94, it fell to 0.2 percent during 1995-2000.

World trade in sugar was more or less stagnant in the first half of the '90s till 1994. Thereafter, it expanded in 1995 and remained stable at that level till 1996. Then began a period of gradual expansion till 1999, which was superseded again by a contraction in 2000. 2001, of course, again witnessed expansion in trade levels. Overall, the share of exports to total production was stable at roughly 28 percent, but the rate of growth of exports increased from 0.6 percent in the first half of the decade to 0.7 percent in the second half of the decade. On the other hand, the rate of growth of imports declined from 0.5 percent in the first half of the decade to 0.4 percent in the second half of the decade (Table 10 & 12).

Incidentally, Cuba was the largest exporter of sugar from 1990 till 1993. Since then, although it continues to rank among the top ten exporters of sugar in the world, its exports have tapered off drastically and it is yet to recover the 1990-93 levels. On the contrary, Brazil, whose export levels were way below Cuba's in the first half of the '90s, became the largest exporter in 1996 and continues to hold that position till date. India ranked among the major exporters of sugar in 1992, 1993 and again in 1996 and 1997. Thailand and Australia are also major exporters, whereas, Russia, USA, Japan and Korea are the major importers. Interestingly, India ranked among the top importers in the second half of the '90s.



Source: Production data from USDA and the projection data from the World Bank, *Price Prospects for Major Primary Commodities, 1990-2005*

Sugar prices have shown anything but a uniform trend in world markets in the '90s. Only the US markets consistently fetched reasonable prices for the crop, whereas, prices fell in all other markets post-1995, relative to what was projected. In fact, prices in these markets have persisted well below the US levels (Table 11).

However, sugar prices worldwide fell drastically in 1999 and 2000. Price-recovery was constrained by several factors. A key factor was the huge stocks carried over by many consuming countries, including India, where nearly 20 percent of world stocks was located. Another very important reason was a larger than expected beet sugar output by the EU, which dampened the recovery of white sugar prices, in particular. Further, there was also a cutback in import demand, particularly in the Russian federation, owing to high stock levels and spiralling tariff rates. Post-September 11 market uncertainties also affected prices adversely.

Tea

Tea is the most popular non-intoxicating beverage in the world. Tea drinking was common in China as early as the sixth century B.C. Western nations only started importing tea from China as late as the seventeenth century. Subsequently, the British developed India as a source in the nineteenth century to reduce their dependence on China. During the late nineteenth and early twentieth century, however, tea cultivation also became popular in other colonies like Sri Lanka, Tanzania, Malawi and Kenya. From the 1950s onwards till the present day, world tea production, on average, has grown at a steady rate of nearly 3 percent per annum, although, the figure dipped to 1.5 percent per annum in the '90s.

A unanimously accepted belief among market participants is that demand for tea is relatively insensitive to its price. This implies that the preference for tea-consumption is not affected significantly by price fluctuations. However, being an agricultural commodity, its supply is highly sensitive to weather conditions and social contexts. Tea plantations are highly labor-intensive enterprises. Labor costs account for nearly 60percent of the total cost of production. Also, tea bushes begin to yield leaves only after five to seven years and have a life span of almost 150 years. This implies that returns on new investments are low and staggered over long periods. Not surprisingly, world production is concentrated in a few countries like India, Thailand, China, Kenya, Sri Lanka and Indonesia, primarily on account of climatic conditions and the appropriate social conditions for the application of labor and capital on tea-plantations. Although, developed countries, as a historical norm, constitute the largest tea-importers, many developing countries have also become attractive destinations for tea-imports.

As per a report prepared by the FAO on the world tea market, tea production increased by 1.8 percent in 1999 and consumption increased by 2.05 percent in the same year. Total world production for that year was set at 3mn tonnes. Interestingly, India and China, the largest producers and consumers of tea, produce nearly 50 percent of world output. Surprisingly, Kenya has emerged as a leading exporter of tea in the world over the past two years. Also, while countries like Sri Lanka, Indonesia and Malawi have stepped up their production, countries like Pakistan have increased their imports. Consumption in other developing countries is on the upswing as well.

India and China rank as the largest and second largest, respectively, in tea production as well as consumption. They export about a quarter of their production. In global trade, India's contribution is 17 percent while that of China is 17.6 percent, whereas, their production shares are 30 percent and 23 percent respectively. This is primarily owing to the high domestic consumption of tea in both these countries. Countries like Kenya, Sri Lanka and Indonesia, on the other hand, produce only 25 percent of world tea, but control nearly 50 percent of the global trade. They export almost 90percent of their total production.

Incidentally, over the preceding four decades, Kenya has increased its tea production phenomenally. Area under cultivation has gone up by 33percent in India, whereas, in Kenya, it multiplied nearly ten times! Chinese tea production increased by 4.6 percent per annum over the same period, whereas, India and Sri Lanka recorded production growth rates of 2.3 percent per annum and 0.9 percent per annum respectively.

Trade in tea has undergone a significant expansion in the post-WTO period. Tea, as a beverage, is now consumed by more than half of the world's population. Historically, tea consumption has been very high in UK and Ireland. However, of late, consumption has been dwindling in those countries. In 1955, they accounted for

nearly one- third of world tea consumption. Their share is currently around 5percent only. In sharp contrast, tea consumption has grown rapidly in developing countries like India, China, Pakistan and the Middle Eastern countries. Tea consumption also grew rapidly in the erstwhile USSR of the eighties, but tapered off sharply after its disintegration. Incidentally, keeping with the trend in UK and Ireland, consumption has more or less stagnated in other developed countries like USA, Canada and Japan, as well. The US ranks among the major consumers of instant tea in the world, the market for which is negligible at 3.7mn kg only. India and Kenya are the major exporters of instant tea.



Source: Production data from USDA and the projection data from the World Bank, *Price Prospects for Major Primary Commodities, 1990-2005*

The price of tea has risen significantly in the post-WTO period. In the early '90s, they were perched on a fairly uniform trend, but with the opening up of world markets in the wake of the WTO, they have spiralled upwards, exceeding the pre-WTO levels (Table 14). Tea prices have been held up by several years of poor harvests in some

exporting countries, combined with strong demand in the Middle East and the Russian Federation, following high export earnings from crude oil.

Tobacco

Tobacco, one of the most widely cultivated non-food crops, has a share of more than 7 percent in world agricultural trade. Developing countries have been gradually increasing their share of global tobacco production. Thirty years ago, they accounted for 53 percent of world production, whereas, currently, they account for more than 80 percent. In fact, tobacco growing, both for export and import replacement, plays a key role in the economies of these countries.

Incidentally, only around 25 percent of total global production is traded internationally; the remainder feeds domestic demand in the exporting countries. Although, tobacco production is on the upswing globally owing mainly to the enhanced market participation of developing countries, the total area of land under tobacco has tapered off sharply since better cultivation methods have resulted in higher factor- productivity and less land-use. Currently, there are approximately 4.3 million hectares of land under tobacco, but that accounts for a mere 0.3 percent of the world's arable and permanently- cropped areas – it is less than half the area (0.7 percent) devoted to coffee, for example.

Trade in tobacco has undergone a marked expansion in the post-WTO period. China tops the list of more than 100 countries in which it is grown, followed by the United States, Brazil, India and Turkey. Brazilian tobacco is considered to be one of the best in the world in terms of both price and quality. Since 1993, the country has been the world's largest exporter of tobacco leaves, in addition to being among the top four producers along with China, the United States and India. It is worthwhile to note that

the 1998/1999 world production figure was the third highest in history, surpassed only by the 1992 and 1997 production figures.

As for tobacco prices, no uniform trend is discernible in the '90s, although, these have definitely run into rough weather in the last four years or so. (Table 16)

Vegetable Oils

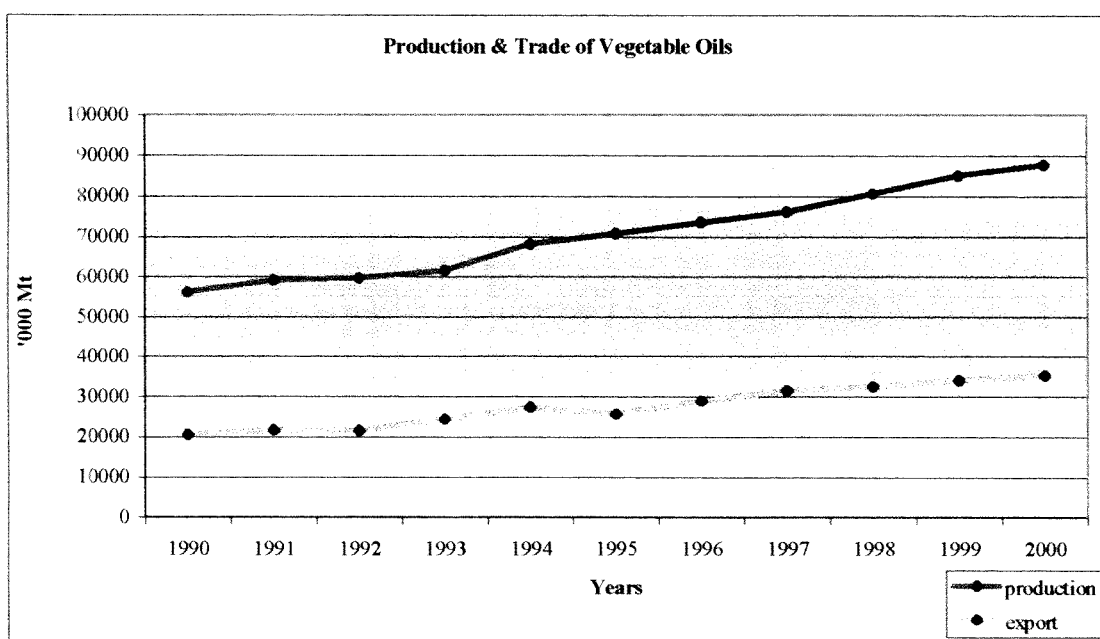
Vegetable oils are a broad category constituted by sunflower oil, groundnut oil, rapeseed oil, rye seed oil, coconut oil, safflower oil and palm oil. Taken together their share of world agricultural trade is nearly 6 percent.

Global edible oil production increased from 56 million tons in 1990 to 88 million tons in 2000. This expansion was more or less uniformly distributed among the various oils. At the same time, global consumption rose from 56 million tons to 86 million tons, thereby, affecting world stocks adversely. Although, production grew substantially, the rate of growth of production was pushed back marginally after 1994 - while it was 1.7 percent in the pre-WTO years, it fell to 1.6 percent in the post-WTO period.

Leading the gains in vegetable oil production was a recovery in world palm oil output in the post-WTO period. Larger cropped area and enhanced tree-maturity were mainly responsible for the expansion. Incidentally, Malaysian palm oil production in 1998/99 jumped to 9.8 million tonnes from 8.5 million tonnes in the previous year, whereas, Indonesian palm oil production increased from 5.0 million tonnes to 5.8 million tonnes, over the same period.

Post-WTO, world consumption of palm oil rose by nearly 6 percent. In the initial years, immediately after the implementation of the AoA, unusually wide premiums

for palm oil continued to moderate consumption for major importers like as China and India, shifting proportionately more food demand toward substitute oils in those countries, but in the late 90s, a robust upswing in production, especially in Malaysia, signaled an end to the tight supply situation. This implied that inspite of the high level of palm oil exports from Malaysia to the tune of 8.1 million tonnes, Malaysian stocks swelled from a tight 0.7 million tonnes in the mid -90s to a reasonably safe 1.2 million tonnes in the late-90s.



Source: Production and trade data from USDA

Malaysia, Argentina, Indonesia, Philippines, and Brazil are the major exporters of vegetable oils, whereas, China, Pakistan, Italy and the United Kingdom are the major importers. Few countries such as Netherlands, Germany, United States and Singapore are both large exporters as well as importers of vegetable oils.

Incidentally, world palm oil trade surged to as high as 35 million tonnes in the latter half of the '90s. This is partly as a stable political environment and stronger currency

pushed Indonesian palm oil exports to 2.9 million tonnes in the same year, nearly one-fourth higher than in the previous years. At the same time, however, price premiums deterred palm oil imports to regions where soyabean and sunflower oil were competitive like the Middle East, North Africa and South Asia.

Interestingly, relative oil prices were a major impetus for high crushing rates in Argentina, Brazil and the United States. Consequently, global production of soyabean oil jumped by 6 percent to 24.1 million tonnes in the late-90s, led by Argentine crushing plants, which raised their soyabean oil output by nearly 42 percent, thereby, pushing exports up to an average of 3.1 million. At the same time, Brazil's soyabean oil production increased by a more modest 3 percent with exports up to an average of 1.4 million tonnes. These supplies, in fact, supplemented a smaller, but relatively strong U.S. crush. Overall, the global soyabean oil trade increased by 11 percent. Similarly, brisk crushing increased world production of rapeseed oil by 8 percent and sunflower seed oil by nearly 10 percent.

Global vegetable oil exports show a modest expansion in the post-WTO period. Most of the additional exports were shipped to India, where even marginal price shifts can trigger off substantial changes in consumption patterns. In fact, India displaced China, at least temporarily, as the world's largest vegetable oil importer. Lower world prices, smaller domestic rapeseed oil and peanut oil supplies and a reduction in oil import tariffs in August 1998, favored Indian vegetable oil imports. Also, national elections were held in 1999 and government officials appeased consumer interests by resisting appeals from farm and processor groups to restrict vegetable oil imports by imposing higher tariffs. Only a minor expansion in import duty (from 15 percent to 16.5 percent) was accorded. Consequently, Indian consumption of all vegetable oils increased by nearly 26 percent over the average recorded in the mid-90s. Not surprisingly, with domestic supplies lagging behind demand, Indian imports of soybean, sunflower seed and rapeseed oil in late-90s, stood at 0.9 million tonnes, 0.6

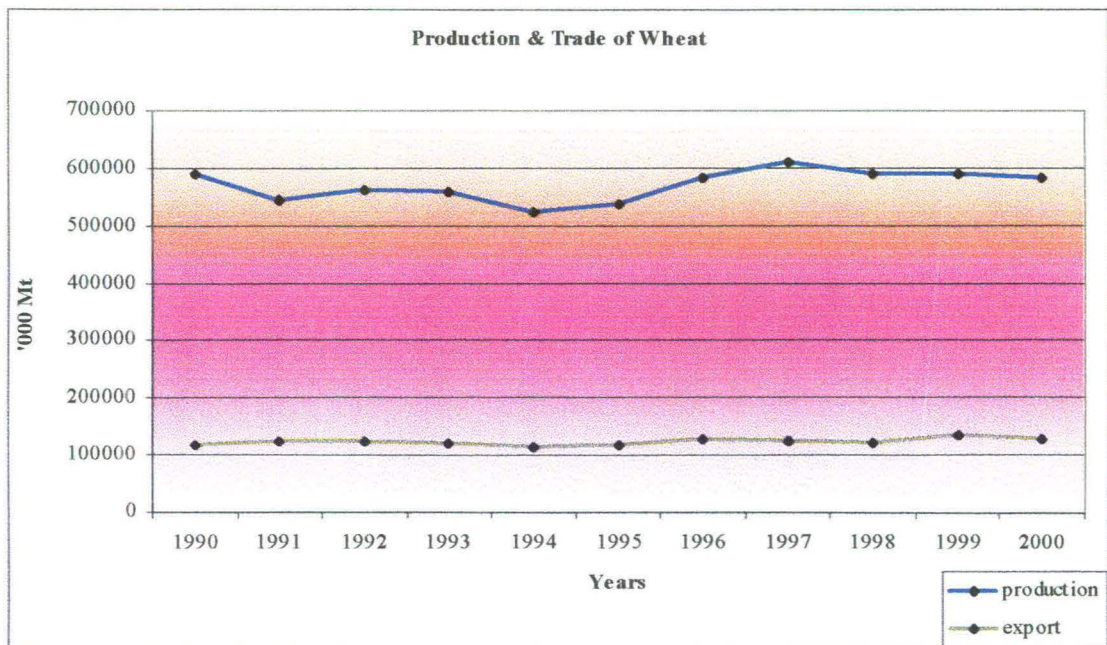
million tonnes and 0.2 million tonnes, respectively and Indian palm oil imports climbed to a record 2.5 million tonnes.

Similarly, Pakistan, Iran, Egypt and Bangladesh also registered sharp increases in their vegetable oil imports, over the same period. In the late-90s, Pakistan reacted to falling vegetable oil prices by engineering a series of tariff hikes that doubled the import duties on soyabean oil and palm oil, while eliminating duties on oilseeds at the same time. Pakistan also raised its import duty on soyabean meal from 10 percent to 35 percent to stem the influx of Indian exports. In effect, the higher tariffs were intended to raise government revenue and favor domestic oilseed producers and processors. However, with a disappointing domestic cottonseed harvest, these steps were not enough to quell the surge in Pakistan's palm and soybean oil imports to 1.1 million tonnes and 0.4 million tonnes, respectively in 1997-98.

Incidentally, price quotations for most oilseeds, oils and fats experienced severe weakness due to seasonal harvest pressures. In fact, carry-in stocks have been extremely low in recent years. Not surprisingly, vegetable oil prices started skidding in the late-90s due to bumper Argentine and Brazilian oilseed harvests and record U.S. oilseed plantings. Greater rapeseed plantings in the EU, China, India and Canada also contributed to weaker oil prices as did the emergence of Australia as a major world producer. Malaysian palm oil prices also sank with fears of importers defaulting or deferring new shipments. At the same time, the Indonesian government, under a commitment to the International Monetary Fund, slashed a 60 percent export tax on crude palm oil to a mere 10 percent, which opened up more supplies for export markets, thereby, cutting world prices further.

Wheat

Wheat, one of the most widely cultivated food crops, has a share of nearly 20 percent in world agricultural trade.



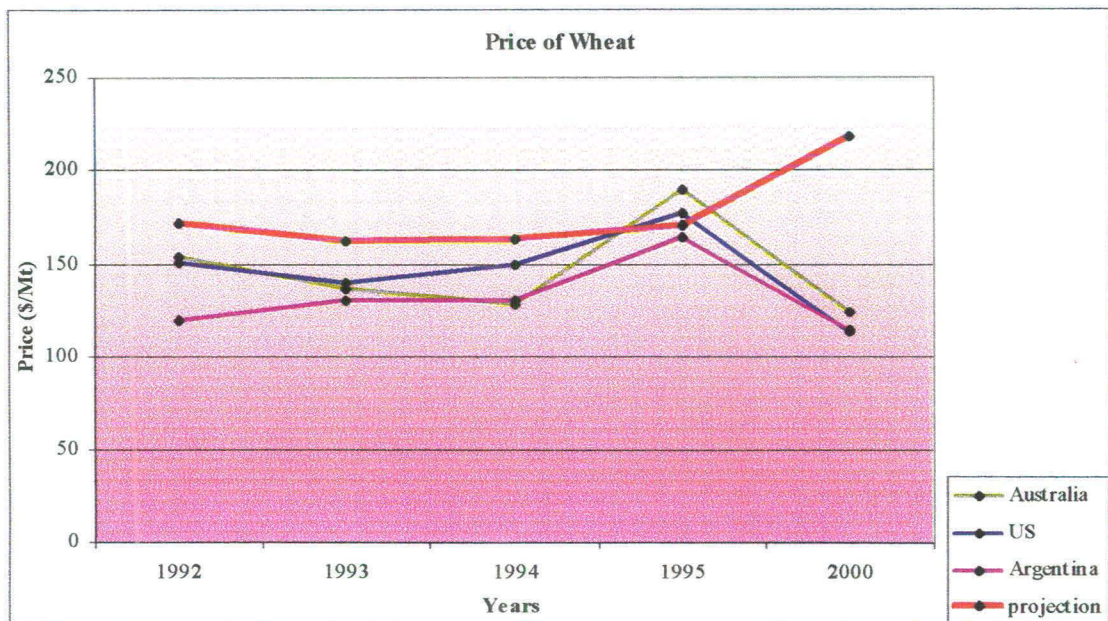
Source: Production and trade data from USDA

From the beginning of the '90s till the implementation of the AoA in 1995, world wheat production was generally perched on a downward trend. After a sharp fall in 1991 from preceding 1990 level, it had recovered to some extent in the interim period, but fell away sharply in 1995, returning the lowest figure for the decade. However, with the opening up of the world market, there was a significant expansion, with the highest figure for the decade being recorded in 1997. Thereafter, it veered off again towards the lower ranges. Incidentally, the rate of growth of production was negligible during both halves of the decade (Table 19).

Exports and imports of wheat were more or less stagnant throughout the '90s. Maximum trade volumes were recorded in 1999. Subsequently, there was a sharp fall in 2000. In fact, the share of exports to total production declined from 32.38 percent in the pre-WTO period to 29.75 percent in the post-WTO period. At the same time, the rate of growth of imports increased from 0.2 percent in the first half of the '90s to

0.4 percent in the second half of the '90s. On the contrary, the rate of growth of exports was negligible. Incidentally, United States, Canada, France, Australia, Argentina, United Kingdom, Germany and Italy are the major wheat exporters, whereas, Egypt, Japan, Italy, Brazil and Algeria are the major wheat importers. Interestingly, although developed countries have traditionally appropriated a larger share of the global wheat trade, developing countries were conspicuous by their enhanced market participation in the '90s.

It follows that the implementation of the AoA by the WTO has failed to secure improved trading conditions for wheat production worldwide as per projections. Although, there was some expansion in production and trade immediately after the execution of the agreement, it proved to be unsustainable in the long run.



Source: Production data from USDA and the projection data from the World Bank, Price Prospects for Major Primary Commodities, 1990-2005

The global wheat trade largely experienced negligible growth throughout the 90's, reflecting demand lulls in transition economies of the former Soviet Union and

Central and Eastern Europe. Depreciation of European Union, Australian and Canadian currencies, however, lowered wheat prices worldwide, thereby boosting sales. Now, although the sharp decline in wheat production coupled with higher world import demand shored up the global wheat markets somewhat, wheat prices persisted well below projected levels. World prices also tapered off owing to excess supplies from India and Pakistan (Table 20).

Chapter 4

An Assessment of the Impact of GATT on Global Agriculture

Throughout the '90s, prices of most agricultural commodities fell sharply, as was evident from the previous chapter. Also, trade in volume terms did not undergo any spectacular increase in the post-WTO period. This was contrary to the WTO's expectations that there would be a general price increase and expansion in exports due to the opening up of world agricultural markets. The underlying argument was that low world prices in the pre-WTO period had been artificially generated, primarily by the trade-distorting market practices of industrialized countries. Subsequently, there was a widespread belief among policymakers who brokered the WTO that world prices would rise sharply once the Agreement on Agriculture (AoA) was fully implemented. The AoA, it was argued, would compel industrialized countries to lower rates of protection accorded to their own farmers and eliminate export subsidies over time. This, in turn, would raise world prices and consequently, world trade. Neither prices nor trade volumes, however, reflected any marked departures from their pre-WTO trends and, in fact, prices of important agricultural crops actually touched rockbottom after the formation of the WTO. Not surprisingly, world exports of those crops dwindled further. It thus becomes important at this juncture to look into the probable factors that were responsible for the continuing downward trend in prices and exports.

At the outset, it should be noted that the AoA was negotiated in the backdrop of certain critical structural developments in world agricultural trade. Over time, developed countries, traditionally large-scale importers of agricultural commodities, had not only achieved self-sufficiency in agriculture, but had transcended that stage to become large-scale exporters of a wide range of agricultural products. This enabled them to keep their domestic markets out of bounds for developing countries' exports as well as to displace those countries, often through subsidized exports, in their niche markets. Hence, from the inception of the UR, a common agenda of negotiators from

developing countries was to ensure that reduction commitments in respect of tariff, domestic support and subsidies, be undertaken equally by developed and developing countries. This, it was thought, would enable fair trade in agriculture, raise world prices of agricultural goods and thereby, generate welfare gains in the agricultural sectors of all the member countries.

The impact of the UR on world agricultural trade then, needs to be assessed at two levels:

- (i) The specific impact on the volume of international traffic in agricultural commodities, world prices and the economic welfare of the sector.
- (ii) The impact on world economic growth and international trade in general and the consequence of those effects for the agricultural sector, in particular.

To assess the specific impact of the UR we first need to distinguish factors that specifically affect agricultural trade and prices of agricultural commodities. These are:

(a) **Overall demand:** Demand for agricultural commodities is critically dependent on the state of demand in an economy as a whole. This is because the agricultural goods, which are basically primary commodities, being extremely price sensitive, are highly responsive to the fluctuations in the aggregate demand. Like, if there is a recessionary trend in the economy, then the aggregate demand tends to inflate overall prices, thereby depressing demand in the agricultural sector.

(b) **Income:** Demand for food, in particular, is extremely sensitive to changes in income. At higher levels of income, consumers tend to diversify their diets to include more meat, fish and other higher-valued food products and consequently, a smaller proportion of household budgets are allotted to food.

(c) **Distribution of Income across countries:** Demand for food is generally more sensitive to changes in income in developing countries than in developed countries because low- income consumers spend a larger share of their budgets on food &

(d) **Aggregate supply changes,** which in turn, are contingent upon:

(i) The level of subsidies and production conditions in developing and developed countries &

(ii) Greater export orientation, marked shifts to cash crop production and enhanced foreign exchange-earning imperatives in developing countries. A host of developing countries are currently key exporters of farm products and these exports respond to changes in the structure of world agricultural trade according to local demand or producer incentives.

In their report, “Price Movements of Primary Commodities”, 2000, Paul Cashin, Hong Liang and C. John Mc Dermott have pointed to certain long-term trends in supply and demand that may reasonably explain the downturn in the prices of agricultural commodities. These are:

(a) Supply factors

- Increase in the supply of agricultural commodities due to improvements in technology, example the use of fertilizers and pesticides.
- Increases in government subsidies or production quotas.

(b) Demand factors

- Many commodities are necessities and have a low-income elasticity of demand. Consequently, as the consuming nations undergo increases in their average incomes, their demand for agricultural commodities grows but at a proportionately smaller rate.

The authors further argue that the prices of primary commodities, especially agricultural commodities, are inclined to fluctuate for a host of other reasons, namely

(a) Supply shocks

Agricultural commodities are particularly prone to unplanned changes in supply triggered by fluctuating weather conditions.

(b) Low price elasticity of demand

The price elasticity of demand for certain key primary products is relatively price-inelastic. These are usually necessities and have few close substitutes.

(c) “Adding up” problem

It is the increment in the exports of a commodity by a country, which lowers its world price in a manner as to reduce net revenues overall. This problem, which is a standard ‘large country’ issue, has been particularly pronounced for tea.

It can be argued that the above-mentioned factors generally determine movements in world agricultural prices. To analytically pin down the specific behavior of world prices in the second half of the ‘90s, however, it is also necessary to look into certain critical developments in the body politic of world agricultural trade wrought by the implementation of the AoA in the UR, against the backdrop of which, these factors may be presumed to have operated.

Firstly, since a relatively small proportion of world output enters world trade in several agricultural commodities, the persistence of non-tariff barriers in a host of developed countries and a few developing countries inspite of their professed adoption of WTO norms, meant that world prices were determined by relatively small surpluses and deficits, which entered world trade, but did not necessarily influence world consumption and production. This also implied that world prices responded disproportionately to even small changes in the proportion of world output, which was subject to free trade.

Secondly, the downward trend in prices was also partly due to mounting subsidies in the US and the EEC. Current levels of agricultural support in developed market

economies are still prohibitively high and continue to stimulate domestic production, distort trade and depress world prices. With the provision of “green, blue and amber boxes” and reduction commitments fixed on relative basis, it was left to the ingenuity of advanced countries to reproduce pre-WTO levels of domestic support to their agriculture, if not supercede them. In fact, there was an appreciable increase in expenditures under the Green Box in 1997-98, over the base period level, in major developed countries. Certain countries had also bypassed the AoA provisions by including the quantum of Blue Box support in their initial base period calculations of AMS as in subsequent years there were no reduction commitments for this category. Not surprisingly, the overall support to agriculture in all OECD countries taken together rose substantially from \$339 billion in 1998, to \$356 billion in 1999. It had then slightly reduced to \$327 billion in 2000. According to a World Bank Group¹ report, published in 2000, a key factor, which continues to affect the level and pattern of trade in agricultural commodities, is the nature and extent of agricultural protection that still persists in both industrialized and developing countries. Although, tariff levels have declined in conformity with successive GATT Agreements, non-tariff barriers, the report argues, have become the principal means of protection.

Finally, the growing concentration of Multinational Corporations (MNCs) in the international agribusiness has also contributed to the collapse in world prices. Nowhere in the GATT are there any rules, which regulate the working of MNCs. These enterprises, which had initially flourished in their host country markets (read developed countries), started seeking out new markets as they found stocks piling up in their inventories. Enhanced market access under the GATT allowed them to enter into oligopolistic competition with smaller domestic firms in developing countries and thereby capture large chunks of their agricultural markets. This is as, their size of operation, financial clout and specialized trading techniques, placed them in an advantageous position vis-a vis the large number of small producers dotting the agricultural landscape of developing countries. The World Bank Group report also

¹ Global Economic Prospects, 2000by World Bank Staff
World Bank Publication

carries data that confirms MNC concentration in the marketing of agricultural commodities globally and provides fairly conclusive evidence to cement the view that this may indeed have been instrumental in generating the price-collapse. It further argues that the MNCs are also involved in the production of certain key commodities. For example, United Kingdom MNCs continue to retain their shareholding in tea production, particularly in India and Kenya and a group of MNCs account for nearly 85 percent or more of world trade in grains and tobacco. According to the report, the concentration of agricultural trade with these enterprises, in such a wide range of commodities, arises partly because producer countries find it difficult to distribute and market products independently. For some countries, this may be due to economies of scale in processing. In others, large investments by MNCs in advertising has given them brand name, recognition and loyalty, which are extremely difficult to overpower without equally large investments by local competitors backed by high-quality products and competitive prices.

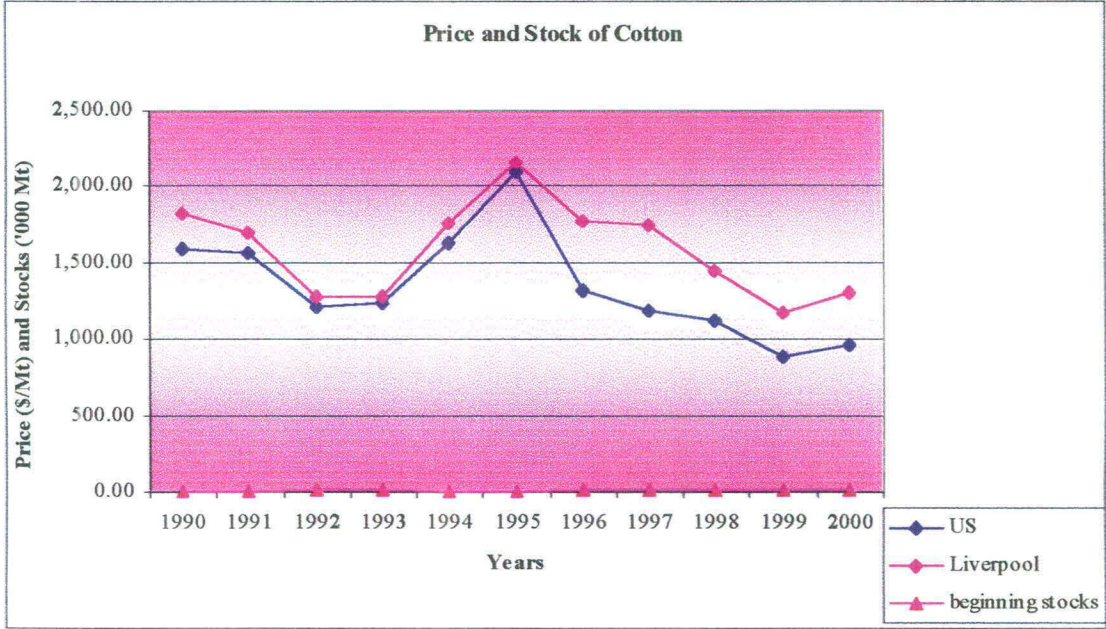
It follows that these developments critically underlie the declining trend in the prices of agricultural commodities in the post-WTO period. There is, in fact, a whole gamut of literature that supports this view. For example, another report by the World Bank, *“Managing the Recent Commodity Price Cycle”*, published in 2000, argues that the pronounced downturn in primary commodity prices since the mid -90s was driven by the weakening of global demand, weather-related supply shocks, supply responses to the high prices of the early ‘90s, technological innovations that cut production costs and exchange rate depreciation in key exporting countries in the aftermath of the Asian financial crisis. Specifically, the report argues that the decline in primary commodity prices since 1997 was, in due measure, a response to an unusually large expansion in global supply. The rate of growth of world production of agricultural commodities rose from 1 percent per year in 1990-94 to 2.6 percent in 1995-99. The Asian financial crisis also contributed to the fall in commodity prices. Declines in real incomes and steep currency devaluation in affected countries had a debilitating impact on the prices of commodities in which East Asia accounted for a voluminous share of world consumption - sugar and cotton, in particular.

The World Bank Group report (2000) referred to earlier, also contends that producers lagged behind in their responses to the low prices, which fueled their weakening further. Key agricultural commodities, it observes, are still facing large year-to-year production increases despite the nearly 32 percent fall in agricultural commodity prices from 1997 to 2001. Currency devaluations, relative to the US \$, have also depressed prices of certain commodities – especially in countries with weak currencies that are also major exporters like Brazil, Indonesia and Thailand. For example, Brazil's currency depreciated almost 50 percent relative to the US \$ since 1997 and that fanned out into lower dollar prices for its key agricultural exports – soyabean, coffee and sugar. Indonesia, a major exporter of natural rubber and vegetable oils, has seen its currency devalue nearly 30 percent relative to the US since 1997, which has rent rice prices lower.

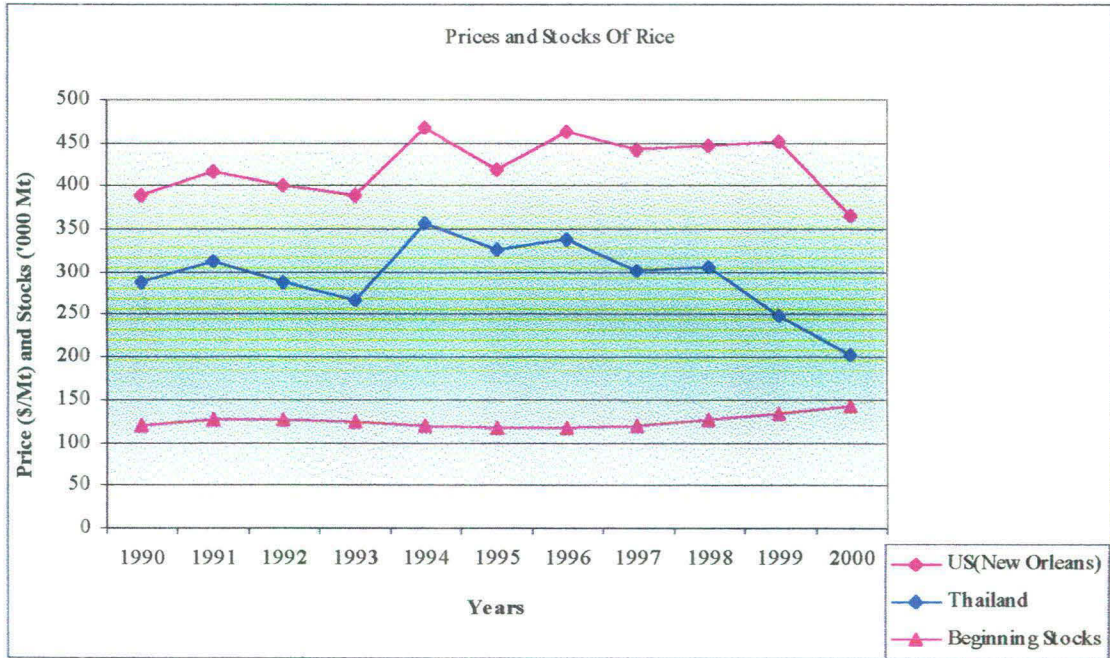
The categorical downturn in agricultural commodity prices also appears, from a particular viewpoint, to be the direct consequence of rapid productivity gains worldwide. These gains were fueled by rising yields, improved policies in developing countries and investments in infrastructure and irrigation. Subsequently, demand for agricultural commodities tapered off somewhat in response to slower population growth and declining income- elasticities. In fact, prices were down by almost 33 percent in 2000 compared to their 1995 high levels.

Therefore, critical changes in the rules governing trade, shifts in domestic policies and new developments in technology fundamentally altered world agricultural trade in the '90s. In their aftermath, unusually high global production and weak global demand pegged back commodity prices, particularly in the late '90s. Higher global supplies emanated from two sources – (a) from developing countries that were vigorously promoting agricultural exports and (b) from developed countries that persisted with high direct and indirect subsidy-support to agriculture. Not surprisingly, lower stocks in certain developed countries had adverse implications for the world prices of some crops. In fact, key crops that account for more than 80

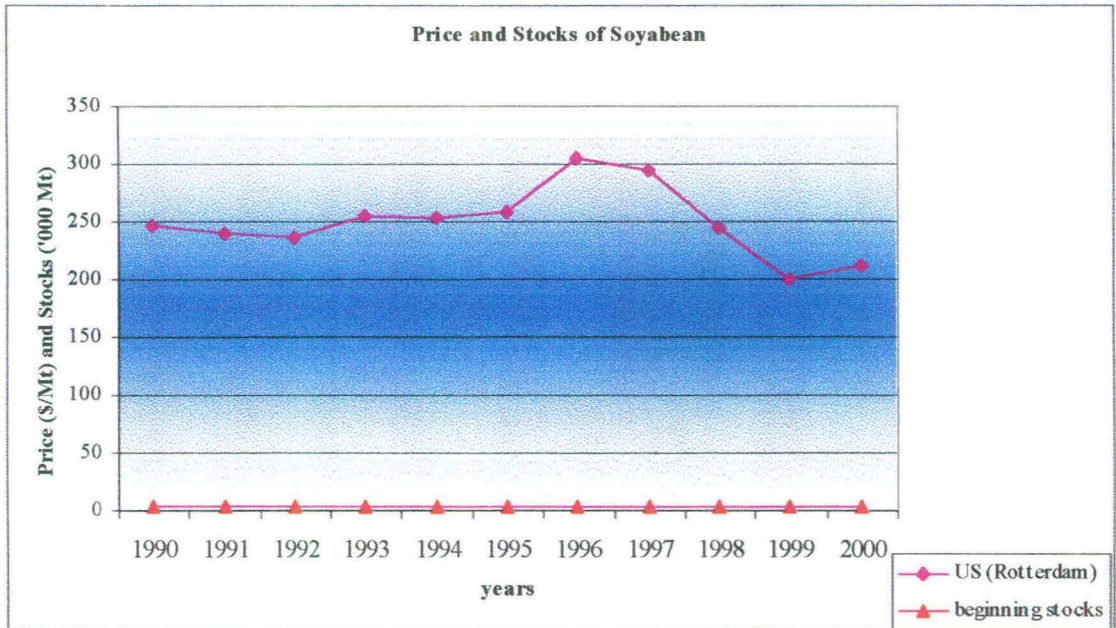
percent of world agricultural trade show the impact of stock values in the determination of their prices to a high level of significance (see Graphs below).



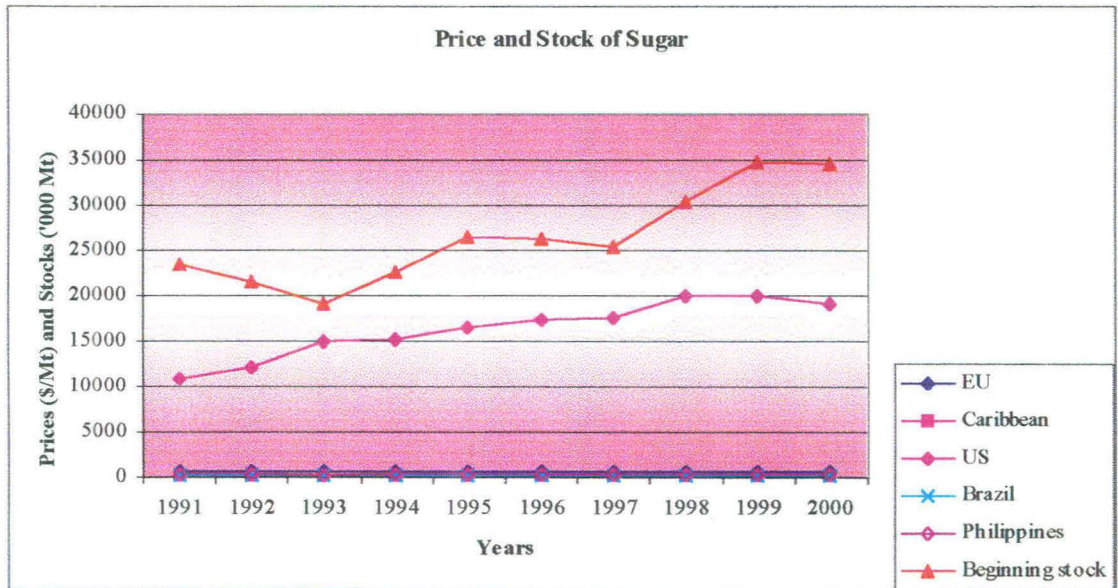
Source: Price and stock data from USDA



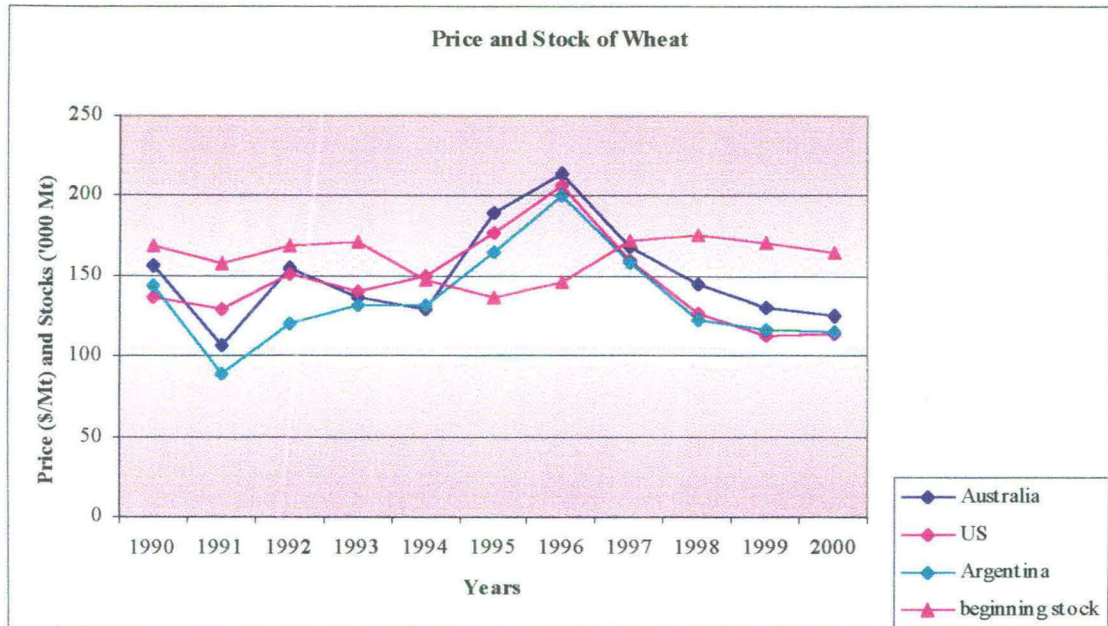
Source: Price and stock data from USDA



Source: Price and stock data from USDA



Source: Price and stock data from USDA



Source: Price and stock data from USDA

It is evident from the corresponding graphs that cotton and soyabean stocks were stagnant throughout the '90s, which consistently pegged back their prices. Also, while rice stocks did increase to some extent, world sugar stocks rose to record levels in 1999 and subsequently, its price fell to a 14-year low. Wheat stocks fluctuated heavily throughout the decade. Thus, it is easy to discern that world demand did not pick up significantly in the period under consideration. This occurred partly because of changes in consumption patterns concurrently with income growth and partly because of worsened income distribution at the international level. The global economic meltdown also affected agricultural trade adversely. Demand was weakened primarily by the global financial crisis of the late '90s. Economic shocks during 1998-2000 in developing countries in Asia, Latin America and the former Soviet Union (FSU), triggered off depreciation of local currencies, hikes in local real prices and drops in incomes that wrought significant changes in global farm trade and prices. Although, the economic recovery in 2000 in a number of countries strengthened global demand to some extent, it remained weak for most commodities.

Agriculture and agricultural exports, in particular, continues to play a critical role in the economic life of most countries, especially in the developing world. Hence, to analyze the macroeconomic impact of the UR as a whole on world economic growth and international trade and the consequence of those effects for the agricultural sector, we need to look into the production conditions in developing countries which adopted AoA norms in opening up their agricultural markets.

Now, although the AoA acknowledged the need for Special and Differential treatment (S & D) for developing countries, these were reflected only as differences in phasing and percentage reduction. The differential in the mandated order and period in respect of reduction in tariffs between developed and developing countries is illusory in as much as:

- (i) Developed countries had protected their agricultural sectors substantially and had imposed peak levels of tariff well before the UR; consequently, even after a 36 percent reduction, their rates continued to be prohibitively high, absolutely and relatively;
- (ii) The AoA did not mandate reductions in absolute terms but in relative terms only;
- (iii) Requirement of mandatory reductions being on an unweighted basis enabled developed countries to lower already-high tariffs on products of export- interest to developing countries by only the minimum level of 15 percent and to make substantial reductions in items of marginal trade relevance to the latter.

In fact, inspite of some shift away from price support and output payments in the OECD countries, these continue to be the dominant forms of support in most countries, insulating farmers from world market signals and distorting global production and trade. As such, the anticipated benefits of enhanced market access did not accrue to developing countries. For example, the share of developing countries in world agricultural exports remained virtually unchanged – it rose marginally from 42

percent in 1997 to 43.5 percent in 1998, but slipped to 43 percent in 1999. Also, the rate of growth of agricultural exports from developing countries in Asia in the post-Uruguay period, i-e, 1994-98, fell steeply from 8.2 percent in 1990-94 to 0.5 percent. Incidentally, the WTO has claimed recently that for the first times since its inception, member governments are henceforth committed to phasing out export subsidies and trade-distorting domestic support. Not a single step by developed countries has materialized in that direction, however. The protection and support measures adopted by these countries continue to distort world markets. They fundamentally differ from those used by developing countries to ensure food security, promote broader economic development or to diversify agricultural production.

In both industrialized and developing countries, agricultural commodities have constituted a smaller and smaller share of total exports over time. However, industrialized countries account for nearly two-thirds of global agricultural exports, although, developing countries have been traditionally associated with agricultural production and exports. Their share in the global cereal market is nearly 80 percent. Developing countries, on the other hand, dominate world markets in tobacco (60 percent), sugar - partially because beet sugar from EU has captured large segments of the world market - and tea (80 percent).

Now, globalization of agricultural trade essentially implies that a country's agricultural sector would have to share the costs of global instability. Even if agricultural commodities show competitiveness in the international market then, two issues would continue to engage critical attention. They are:

- 1) Volatility of prices in the international market; and
- 2) Price trends.

These factors critically mediate in the realization of gains to countries from agricultural trade. Prices will always be determined by the interaction of the demand and the supply in the market at any given point of time. Hence it is extremely important to distinguish the stock of demand and supply in the global agricultural

market while considering the impact of price increases on individual countries. Like food consumption – an important demand factor - accounts for a large share of expenditure out of the total household income in developing countries, while in developed countries, it accounts for a small and decreasing proportion. Therefore, even small changes in agricultural prices, can have major socio-economic effects in developing countries.

Equally important is the fact that whether a country is predominantly an exporter or an importer of agricultural products and, more precisely, what a country exports and what constitutes its imports, On these lines, countries can be classified into three broad categories according to whether they are (a) net exporters, (b) net importers or (c) basically self-sufficient and hence only occasionally and marginally involved, either as exporters or importers, in international trade. There are critical differences between net exporting and net importing countries, with respect to the products, food grains and cash crops, for which they are dependent on world markets and the extent of their dependence. The degree to which the developing countries import demand can be met is also constrained many a time by their meagre foreign exchange resources. In that case, international price fluctuations, if transmitted to the domestic economies of developing countries, can seriously affect the prices of food grains and food entitlement of the poor.

Another grave problem that globalisation of agriculture drags in is the corporatisation of agriculture resulting in greater promotion of monopoly control of own food production and distribution. Especially the developing countries open up for MNC exploitation more. In the process the countries tend to lose their food sovereignty, which is the right of the people and its nations to define their own agricultural and food policy.

The New Rounds of Negotiations

There was widespread discontent among developing countries with the final form in which the AoA was drafted. That their apprehensions were not entirely unfounded became evident from the manner in which the agreement unfolded in reality. In particular, access to developed countries' markets was below professed targets; instead, many developing countries experienced import surges following trade liberalization. In fact, farmers in low-income countries were literally forced to compete on unequal terms with the highly subsidized agricultural production of affluent countries. These and other contradictions came to the fore at the Doha Ministerial Conference held in November 14, 2001. The problems that were highlighted at the Conference were:

- Access to markets in developed countries had not been achieved to the mandated degree.
- Import surges, following trade liberalization, had affected developing countries adversely with farmers in those countries being threatened with loss of livelihood.
- Existing distortions in world agricultural trade were threatening the life-chances of low-income and resource-poor farmers who were already mired in precarious food security conditions. The Blue Box and Green Box exemptions effectively ensured that there were practically no limits to the levels of domestic support provided by developed countries to farmers in those countries despite the AoA reduction commitments.
- There was no recognition of the fundamental difference between the role of agriculture in developing and developed economies. While in developed countries, agriculture is primarily tied to agri-business, involving merely 3 percent to 4 percent of the population in those countries, it is the chief source of livelihood for the majority of the population in developing countries.

- The AoA had failed to distinguish between support to boost exports and support to enhance production for domestic markets.

There were two phases in the rounds of negotiations. The first phase began in early 2000 and ended in March 2001. Altogether, 126 member governments (89 percent of the 142 members) submitted 45 proposals and 3 technical documents. The countries submitted proposals containing their starting positions for the negotiations. The proposals received in the first phase covered all major areas of the agriculture negotiations and a few new ones. In Phase 1 the discussions mainly revolved around market access and export subsidies. Some developing countries proposed the total elimination of all forms of export subsidies. They argued that their domestic producers are handicapped if they have to face imports whose prices are depressed because of export subsidies, or if they face greater competition in their export markets for the same reason.

The second phase was more complicated because the discussions were by topic, and included more technical details, which was needed in order to find a way to allow members to develop specific proposals and ultimately reach a consensus on changes to rules and commitments in agriculture. It also consisted of detailed discussions on the many issues raised in the first phase. Despite the increased complexity, developing countries continued to participate actively. Some developing countries wanted to retain high tariff barriers or to adjust their current tariff limits, in order to protect their farmers – unless export subsidies in rich countries are substantially reduced. A system of tariff-rate quotas were created to maintain existing import access levels, and to provide minimum access opportunities. This means lower tariffs within the quotas, and higher tariffs for quantities outside the quotas. Two proposals emerged for tariff reductions in general. One would copy the formula of the 1986-94 UR negotiations which used an average reduction over all products, allowing some variation for individual products provided a minimum reduction was met. Another, known as a “cocktail” approach envisages a flat rate percentage reduction for all products with additional “non-linear” reductions on higher tariffs, expanding quotas,

and special treatment for developing countries. Some countries have also proposed steeper cuts on higher levels of support, with some disaggregation according to products. They want amber box subsidies to eventually be eliminated completely. Regarding the green box a set of measures have been proposed that would not distort trade or will be minimally distorting. Programmes would be introduced that reimburse additional costs arising from the protection of animal welfare, and special flexibility for developing countries tackling food security and poverty alleviation.

A Trade Negotiation Committee (TNC), consisting of all WTO members and all countries, which had negotiating membership, was formed upon the completion of the Doha Conference with the professed aim of resolving these contradictions. The Committee held its first meeting on January 28, 2002 and after four days of deliberations, agreed upon the composition and modus operandi of the various bodies, which would handle negotiations on specific subjects. The following questions did the rounds at the meeting:

- Should a different set of rules be established for developed and developing countries that would partly exempt the latter from commitments under the AoA?
- Is allowing more flexibility for developing countries to protect and support their domestic production (especially with regard to staples and food security crops) the best way to deal with their weaknesses? Or is further liberalization, safety-valved with some flexibility, more effective?
- Should developing countries only be allowed to address non-trade issues such as food security and rural development?
- Should additional Special and Differential Treatment (S&D) provisions apply generally to all developing countries? Or do specific groups of developing countries need extra flexibility? Should the “enabling clause” of a 1979 GATT decision, allowing Members to accord differential and more favorable treatment to all developing countries as a departure from most-favored nation treatment, be revised?

In a meeting of WTO constituents, held in December 2001, the Cairns Group¹, who continue as net agricultural exporters, had argued that trade and production-distorting subsidies provided to farmers in developed countries had adverse implications for agri-exports from developing countries, contributing, in large measure, to the widespread poverty and environmental degradation in those countries. Therefore, genuine trade liberalization, they proposed, would be the desired corrective. Norway, on the other hand, emphasized the need to secure a minimum degree of domestic production through support outside the framework of the Green Box to address non-trade concerns like biodiversity and land conservation.

The Green Box required that support payments be separated from production or be targeted specifically to create minimum trade distortion. Subsidies under the Green Box had to be entirely funded by the government in question and could not be passed onto consumers in the form of higher prices. Examples include food security stocks, direct payment to producers, structural adjustment assistance, safety-net programmes, environmental programmes and regional assistance programmes which do not affect either output or prices. Developing countries found those conditionalities extremely prohibitive because typically, the governments in these countries did not have the resources to offer such subsidies. Norway's proposal, in effect, meant that developing countries should be allowed to give subsidies that were not Green Box compatible.

Incidentally, the African Group², EU, Namibia, Paraguay and Swaziland argued at the same meeting that if major markets liberalize and eliminate subsidies, the poorer countries would actually gain even if they had to forego preferential status, in return. In fact, the African Group contended that the lack of investment and limited market

¹ The Cairns Group comprises of Argentina, Australia, Bolivia, Brazil, Canada, Chile, Columbia, Fiji, Guatemala, Indonesia, Malaysia, New Zealand, Paraguay, Philippines, South Africa, Thailand and Uruguay

² the African Group comprises of Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Congo (Democratic Republic), Cote d'Ivoire, Djibouti, Egypt, Gabon, The Gambia, Ghana, Guinea, Guinea Bissau, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Swaziland, Tanzania, Togo, Tunisia, Uganda, Zambia and Zimbabwe.

access confronting the agricultural sectors in the majority of African economies, was largely due to high levels of protection and domestic support in developed countries and competition in local and foreign markets from highly subsidized products from those countries. The Group demanded among other concessions:

- Substantial reduction in peak tariff rates confronting developing countries' exports in developed countries.
- Substantial reduction in tariff escalation in developed countries.
- Tariff-free and quota-free access for exports of LDCs in developed countries.
- Continuation of existing preferences that have been historically accorded to developing countries, legally bound under the framework of the AoA.
- New or enhanced preferences for developing and LDCs over and above the existing preferential market access agreements.
- Special measures to assist small-scale and limited commodity exporters to benefit from tariff-rate quotas in major markets.
- The option of maintaining the current rate of bound rates (i.e. no reductions) on key staples in developing countries.

Interestingly, Small Island Developing States (SIDS)³ also extended their support to the proposals and demanded long-term preferential treatment citing lack of competitiveness. Further, they were of the opinion that since their share in world agricultural trade was negligible, such preferences would not harm other countries.

Australia, however, challenged the notion of long-term preferential treatment for economically weaker countries. It argued that such preferences would prevent diversification in the preferentially treated countries and would hinder other countries from supplying those products falling under the preferential scheme. On the other hand, the EU demanded increased market access for developing countries and accepted the need for providing duty-free access to agricultural products from LDCs.

³ SIDS comprises of Barbados, Cuba, Dominica, Jamaica, Mauritius, St Kitts & Nevis, St Lucia, St Vincent, and the Grenadines, Trinidad and Tobago.

Namibia is an example of a country, which benefited immensely from the preferential market access that it enjoyed for its beef products. The country is a small exporter and its exports are dominated by livestock and live stock products. Incidentally, much of agricultural production in the country is organized under communal ownership and is primarily geared towards subsistence production. At the meeting, Namibia voiced its concerns over certain sanitary and phytosanitary measures and growing apprehensions over food safety and quality in developing countries that would render its exports uncompetitive. Further, it was argued that with tariffs falling in many developed countries, Namibia would cease to enjoy the advantages of preferential trade. In their proposal, the country's representatives requested for a longer time period to wring the requisite structural changes, necessary to cope with the dilution of trade preferences that Namibia and other countries, in a similar situation, had enjoyed thus far.

Swaziland, in its proposal, demanded secured preferential market access arrangements for a sufficiently long time period to enable adjustment and allow meaningful development that would offset the losses incurred once preferential access had been done away with. However, the country was categorically opposed to rendering some other developing country worse off in the process of offering some developing country preferential market access. Its representatives argued that the net result of such a move would be a win-win outcome for all developing countries taken as a whole. Incidentally, the EU also supported Swaziland in its demand that the Green Box of minimally trade-distorting subsidies be re-examined to enable states to compensate their farmers for costs incurred due to higher national animal welfare standards.

At this point, it would be worthwhile to mention that a set of demands, termed as the 'Development Box', was articulated by a number of developing countries, outlining the changes to the AoA rules required for developing countries and especially, poor communities within them, to benefit fully from agricultural trade and moreover, to

enable them to better address their food security concerns and to preserve and improve rural livelihoods. The policy goals suggested in the Development Box were:

- ❑ Protection and enhancement of developing countries' domestic food production capacity, particularly in key staples.
- ❑ Greater food security and food accessibility, especially for the poorest.
- ❑ Provision for new employment and fortification of existing employment for the rural poor.
- ❑ Protection for farmers who produce large quantities of key agricultural products from the onslaught of cheap imports, particularly in countries with a high proportion of low-income and resource-poor farmers and exemptions for them from commitments on staple food items.
- ❑ Flexibility to provide necessary props for small farmers, especially in increasing their production capacity and competitiveness.
- ❑ Prevention of dumping of cheap, subsidized imports on developing countries⁴.

Specific proposals made by the developing countries under Special and Differential Treatment were:

- ❖ Better access to export markets in developed countries.
- ❖ Protection of domestic markets for certain products by re-evaluation of current tariff bindings.
- ❖ Flexibility to support and encourage domestic production.
- ❖ Use of special safeguards in response to import surges.
- ❖ Use of countervailing duties on subsidized imports.
- ❖ A longer timeframe for implementation for developing countries
- ❖ Differentiated AMS formula and commitments for developing countries, including preserving de minimis provisions and exceptions for investment and

⁴ Dumping is the selling of goods in foreign markets at prices lower than the prices at which comparable goods are sold in the domestic market of the exporter.

input subsidies and domestic support to encourage diversification from growing illicit narcotic crops.

- ❖ Enhanced technical assistance and the promotion of international co-operation to assist rural development and food security programmes in developing countries.
- ❖ Exemption from reduction commitments for any measure that targets the viability of small-scale and subsistence farmers, poverty alleviation, food security and product diversification.

Finally, Mauritius, supported by the African Group, called for transparency in the operations of MNCs similar to that applicable for State Trading Enterprises (STEs). The underlying argument was that MNCs, left to their own devices, would hold single-commodity-producing countries to ransom by establishing total control over the production, distribution and sale of the singular commodity those countries produce. Together with members of the Caricom⁵ group of countries, it also expressed its concerns over the practice of switching from Amber and Blue Boxes to Green Box adopted by certain countries, which enabled those countries to circumvent WTO restrictions without cutting subsidies in real terms.

India's Proposals in the New Rounds of Negotiations

Agriculture supports nearly 70 percent of the Indian population. Thus India's stand in the new rounds is extremely important. India has proposed additional flexibility for developing countries to allow subsidies on some products to increase when subsidies on other products are reduced. It has rightfully complained that the rules are unequal and objected in particular to the fact that developed countries are allowed to continue to spend large amounts on export subsidies while developing countries cannot because they lack the funds, and because only those countries that originally subsidized exports were allowed to continue subsidizing – albeit at reduced levels.

⁵ Caricom Group comprises of Antigua and Barbuda, Belize, Dominica, Grenada, Guyana, Jamaica, St Kitts & Nevis, St Lucia, St Vincent and the Grenadines, Trinidad and Tobago, and Suriname.

India's proposals in the new rounds have basically been four fold:

Food Security: with regard to food security India's proposal is to constitute a "Food Security Box" which would have the following important measures:

- All measures taken by the developing countries for poverty alleviation, rural development and employment, and diversification of agriculture should be exempted from any form of reduction commitments;
- Flexibility to be given to developing countries in the manner of providing subsidies to key farm inputs;
- Appropriate level of tariff bindings to be allowed to be maintained by developing countries as a special and differential measure, keeping in mind their developmental needs and high distortions prevalent in the international markets so as to protect the livelihood of their very large percentage of population dependent on agriculture.

Market Access: the main proposals given were:

- An appropriate formula with a cap on tariff bindings should be evolved to effect substantial reduction in all tariff levels including peak tariffs and tariff escalations in developed countries.
- Tariff Rate Quotas (TRQs) should be eventually abolished.
- Developing country members should be exempt from any obligation to provide any minimum market access.

Export Competition: in this main proposals put forward were:

- Export subsidies on all agricultural products should be eliminated, both in terms of export subsidy outlays and subsidised volumes.
- All forms of export subsidisation including export credit, guarantees, price discounts and insurance programmes etc. in developed countries should be added to the export subsidies and should be subjected to the overall disciplines applicable to export subsidies.

Domestic Support: the important proposal was:

- Direct Payments along with decoupled income support and Governmental financial participation in income insurance and income safety-net programmes as well as direct payments under production limiting programmes should be included in the non product specific AMS and should be subject to reduction commitment so as not to exceed the *de minimis* level, that is 5 percent for developed countries and 10 percent for developing countries of the value of that Member's total agricultural production.

Implications of China's Joining of WTO

According to Ma Yongzhang, the WTO expert and an official at the Chinese Ministry of Agriculture, China's entry into the WTO will bring a new round of emancipation of Chinese people's thinking. He optimistically claimed that the entry may reshape China's position in the world agricultural trade scenario and may make adjustments in production and development strategies to take into account global economic development prospects and conform to WTO rules.

From the beginning, therefore, China's agricultural industry established an agricultural management system and an agricultural product circulation system that conforms to international market rules so that the risks of joining WTO gets minimised. The goals set under these systems are:

- Pursuing quality rather than quantity and breeds;
- Developing animal husbandry and dairy processing industries;
- Making proper use of resource advantages of different regions.

China has also made concessions on a large package of agricultural trade. There were provisions, which were greatly appreciated by US farm groups and seen as of great advantage to American agriculture. The significant aspects of the deal include:

- China will cut import duties from an average of 22.1 percent to 17 percent.
- China will eliminate export subsidies.
- China will make even greater reductions on agricultural items of particular interest to the US.
- China will establish large and tariff-rate quotas for wheat, corn, rice and cotton with a substantial share reserved for private trade.
- State trading for soya oil will be phased out.

However, since China possesses a huge market, liberalization will inevitably bring its share of hard consequences for the country. Considerable pressure is likely to be felt by the agricultural sector. Agriculture being most unevenly modernized, it has experienced shrinking of arable area under grain cultivation. China is in fact a net importer of grain and the price of grain in the rural areas is higher than in the international market. There was also an agreement easing Chinese import restrictions on wheat. Hence its corn, wheat and cotton trade will be seriously influenced with more and more inflow. It might also have a negative impact on the domestic rice market, as it will be required to reset its quota for imported rice. Thus lack of attention to breed improvement and market development may lead to serious adversities regarding agricultural trade. Moreover, the agricultural companies being small in the country it may fall easy prey in the hands of the giant MNCs that operate agricultural trade globally.

Nevertheless, China may benefit in meat, vegetables and fruits because they will have a price advantage. In terms of planting area and production, China is the world's number one fruit and vegetable producing country.

US Farm Bill

The US Farm Bill that was passed by the US Congress is highly significant in today's world agricultural trade environment. The provisions of the US Farm Bill 2002 include:

- **Subsidy payments:** it raises subsidy payments to large cotton and grain farmers, without the significant payment limits passed by the Senate. To restrict payments to the wealthy farmers, the senate wanted to limit subsidy payments to US \$ 275, 000 per farmer. However, after negotiations, the limit was raised to US \$ 360, 000, that too with enough exceptions to make the limit symbolic.
- **Conservation payments:** it dedicates \$ 17 billion over 10 years to preserve farmland, save wetlands and improve water quality and soil conservation on farms.
- **Food stamps:** it increases food stamp benefits for working American families and restores the rights of legal immigrants to receive them.
- **Dairy programme:** it creates a new national \$ 1.3 billion dairy programme to replace the lapsed Northeast dairy compact.
- **Food Labelling:** it requires that all meat and fish produce be labelled with its country of origin.

The Bill is estimated to cost more than US \$ 100 billion during the next 6 years and \$ 180 billion over a 10-year period. This marks a complete reversal of the attempt made by the US Congress 6 years ago, to eliminate subsidies and let the market dictate prices and production levels. The US is a major wheat exporting country. The farm subsidies proposed in the Farm Bill will no doubt propel output and hence increase the exportable surplus. This will further depress international wheat prices, and rule out exports from countries, which cannot subsidise their wheat producers. In rice also,

the US has a share of about 12 percent in world exports, which, though not as high as the share in wheat, is nevertheless significant enough to affect world prices. On the whole the corn growers of the US will emerge as the biggest gainers from the US Farm Bill. The US is again a key player in the world cotton market, producing about 20 percent of the world's cotton. Thus any change in the exportable surplus owing to a subsidy-backed output increase will definitely have a downward pressure on world cotton prices in the future.

It will boost cotton and grain farmers' incomes at a time of record-low prices for commodities. It amounts to \$ 4.8 billion annual subsidies to US farmers over the next 5 years. This will further depress commodity prices. Concomitantly it will also affect the exports from Australia because Australia and the US are strong rivals in wheat and cotton exports to Asian markets.

This bill has been immensely criticised by the other trading partners, IMF, World Bank etc. It is in this context of high trade distortions being practised in developed countries that the developing country members would require an appropriate level of tariff protection. As such any reduction in tariffs by the developing countries could be considered only after substantial reduction in trade distorting domestic subsidies and elimination of export subsidies.

Conclusion

Agricultural trade is now firmly within the multilateral trading system. The WTO Agriculture Agreement, together with individual countries' commitments to reduce export subsidies, domestic support and import duties on agricultural products were a significant first step towards reforming agricultural trade. The reform programme had aimed to strike a balance between agricultural trade liberalization and government's desire to pursue legitimate agricultural policy goals. The reform had tried to bring all agricultural products under more effective multilateral disciplines.

As was documented in one of the earlier chapters, negotiators from developing countries who had brokered the AoA, had been genuinely optimistic that the agreement, negotiated as part of the UR and signed at Marrakesh in 1994 by 120 countries, would open up export markets for their products in the developed countries. In the post-WTO period, however, these countries have gradually discerned, at the cost of severe market losses, that several asymmetries and inequities were built into the agreement, at substantive odds with their national interests. It is evident from the complex history of past negotiations chronicled in this dissertation that developing countries, including India, did not gain substantially from the agreement; instead, they were coerced into fundamentally unequal exchanges of agricultural commodities with developed countries.

It is by now well established that despite reduction commitments, the level of distortions in agricultural trade continues to be high. The anticipated benefits in terms of an increase in exports for developing countries have consequently not materialised. Neither have the prices of the agricultural goods risen as was expected. The negative impacts of the AOA are thus many:

- Drawing imports for cheap productions
- More production for exports
- Intensifying monopoly control

- Eroding food sovereignty
- Increasing unemployment and poverty

Nevertheless, deep into the post-WTO period, the situation is markedly different than in the immediate aftermath of the UR negotiations. Member-countries have gained considerable experience and exposure of trade negotiations in the interim period. In fact, developing countries have warmed up to the complexities of multilateral trade negotiations and have actively aligned with like-minded governments to raise their concerns at several WTO forums and as a result, have driven hard bargains in the new round of negotiations, as the previous chapter illustrates. Their stance on the New Round was basically:

- Elimination of high tariffs on agricultural imports in many industrialized countries, especially on products of export interest to the developing region.
- Reduction of subsidies by the developed countries as per the AOA requirements.

Policies governing the agricultural sector are currently going through a series of changes the world over as countries make attempts to fulfill their commitments under the UR AOA. The central focus of the AOA is clearly on the introduction of mechanisms that would ensure a better climate for agricultural trade. However, the ongoing negotiations are difficult because of the whole range of views and interests among member governments. They aim to contribute to further liberalization of agricultural trade. This will benefit those countries, which can compete on quality and price.

Considering the fact that agriculture is a way of life in most developing agrarian economies, the food securities concerns can be meaningfully addressed in the current negotiations only by ensuring that disciplines, especially in the area of market access and domestic support, sub serve the food security interests of developing countries.

Food sovereignty takes precedence over any macro economic policies in all nations. It is thus the right of each nation to maintain and develop its capacity to produce its basic food for a balance diet, respecting cultural and productive diversity. For most developing countries, the need is hence to raise agricultural productivity and increase production, particularly of basic foodstuffs.

It is also now more or less well-established and commonly-accepted that for major agricultural products exported from developing countries, import protection was maintained at prohibitively high levels in industrialized countries, even in the post-WTO period. It follows that the developing countries are in no position to harness the gains that should rightfully accrue with them from greater domestic policy reform and further opening up of global markets for their exports, under the aegis of the AoA. Another potential avenue for a profitable and income-inequality-reducing expansion of world agricultural trade lies in stimulating demand in developing countries. Hence, if these absences are incorporated in the AoA and the WTO ensures enforcement of its provisions in toto, world agricultural trade stands to benefit immensely. Also, the reduction of subsidies in developed countries and the disciplining of MNCs, needs to be taken up vigorously. Therefore, many changes remain to be wrought for deepening the process of liberalization in world agricultural trade and developing countries are well within their rights in demanding the genuine liberation of agricultural markets.

APPENDIX TABLES:

Cotton

Table 1: World Trade in Cotton

Year	Area Harvested (‘000 ha)	Yield	Production (‘000 Mt)	Growth Rate of Production	Total Imports (‘000 Mt)	Growth Rate of Imports	Total Exports (‘000 Mt)	Growth Rate of Exports	Total Dom. Consumption (‘000 Mt)	X/Output % (‘000 Mt)	Beginning stock (‘000 Mt)
1990	33144	2.63	87051		30608		29566		85465	33.96	5.58
1991	34776	2.75	95732	0.042	29095	-0.022	28220	-0.020	86120	29.48	6.05
1992	32620	2.53	82485	-0.063	26945	-0.033	25574	-0.042	86046	31.00	8.18
1993	30699	2.51	77029	-0.029	27728	0.013	26811	0.021	85438	34.81	7.56
1994	32165	2.67	85837	0.048	30618	0.044	28447	0.026	84743	33.14	5.83
subtotal			428134		144994		138618			32.38	
1995	35925	2.59	93043	0.036	27529	-0.045	27781	-0.010	86025	29.86	6.51
1996	33807	2.65	89569	-0.016	28977	0.023	26925	-0.014	88061	30.06	7.97
1997	33721	2.71	91550	0.010	26185	-0.043	26777	-0.002	87119	29.25	8.71
1998	32950	2.58	84859	-0.032	25121	-0.018	23762	-0.051	85300	28.00	9.50
1999	32299	2.7	87180	0.012	28341	0.054	27217	0.061	91855	31.22	9.76
2000	31569	2.77	87519	0.002	27117	-0.019	26333	-0.014	91645	30.09	8.93
subtotal			533720		163270		158795			29.75	

Source : USDA

Table 2: Prices of Cotton (\$/Mt)

Years	United States: Liverpool Index (10 Markets)	
1990	1,583.63	1,820.45
1991	1,557.83	1,695.87
1992	1,206.58	1,277.58
1993	1,231.49	1,279.34
1994	1,625.75	1,757.83
1995	2,092.99	2,167.52
1996	1,317.93	1,775.91
1997	1,181.66	1,747.02
1998	1,125.65	1,444.94
1999	885.97	1,171.52
2000	965.35	1,302.05

Source : USDA

Table 3: Growth Rates

Years	Production	Export	Import
1990 -94	-0.001	-0.003	0.0003
1995-2000	-0.004	-0.004	-0.001

Rice

Table 4: World Trade in Rice

Year	Area Harvested ('000 ha)	Yield	Production ('000 Mt)	Growth Rate of Production	Total Imports ('000 Mt)	Growth Rate of Imports	Total Exports ('000 Mt)	Growth Rate of Exports	Total Dom. Consumption ('000 Mt)	X/Output % ('000 Mt)	Beginning stock ('000 Mt)
1990	146741	2.4	352036		11322		12803		345899	3.64	119.3
1991	147456	2.41	354670	0.003	12778	0.054	15157	0.076	353421	4.27	126.3
1992	146409	2.43	355714	0.001	13938	0.038	15630	0.013	355887	4.39	126.9
1993	144899	2.45	355396	0.000	17146	0.094	16729	0.030	358325	4.71	123.9
1994	147432	2.47	364534	0.011	20263	0.075	21921	0.125	364907	6.01	120
subtotal			1782350		75447		82240			4.61	
1995	148080	2.51	371442	0.008	18970	-0.028	20472	-0.029	369954	5.51	118.5
1996	149747	2.54	380199	0.010	17815	-0.027	20154	-0.007	377363	5.30	117.9
1997	151290	2.56	386840	0.008	25223	0.163	27661	0.147	380462	7.15	119.2
1998	152394	2.59	394057	0.008	26184	0.016	26721	-0.015	389592	6.78	126.5
1999	154865	2.64	408558	0.016	21348	-0.085	24175	-0.043	400499	5.92	133.3
2000	151871	2.63	399901	-0.009	22840	0.030	23769	-0.007	402614	5.94	143.9
subtotal			2340997		132380		142952			6.11	

Source : USDA

Table 5: Prices of Rice (\$/Mt)

Years	United States (New Orleans)	Thailand (Bangkok)
1990	389.5	287.17
1991	418.02	312.58
1992	401.14	287.44
1993	389.15	267.94
1994	466.68	358.03
1995	419.7	327.78
1996	463.97	338.06
1997	441.53	302.47
1998	446.34	305.42
1999	450.65	248.97
2000	367.35	203.69

Source : USDA

Table 6: Growth Rates

Years	Production	Export	Import
1990 -94	0.003	0.048	0.052
1995-2000	0.005	0.011	0.014

Soyabean

Table 7: World Trade in Soyabean

Year	Production (‘000 Mt)	Growth Rate of Production	Total MY Imports (‘000 Mt)	Growth Rate of Imports	Total MY Exports (‘000 Mt)	Growth Rate of Exports	Total Dom. Consumption (‘000 Mt)	X/Output % (‘000 Mt)	Beginning stock (‘000 Mt)
1990	68811		26922		26859		69668	39.03	3.67
1991	72843	0.025	27681	0.012	27928	0.017	72535	38.34	2.88
1992	77502	0.027	27980	0.005	29025	0.017	76055	37.45	2.93
1993	81312	0.021	29508	0.023	30105	0.016	81004	37.02	3.33
1994	89286	0.041	31502	0.029	32389	0.032	87710	36.28	3.04
subtotal	389754		143593		146306			37.54	
1995	87921	-0.007	32692	0.016	32218	-0.002	88640	36.64	3.73
1996	89578	0.008	34364	0.022	32576	0.005	91757	36.37	3.48
1997	103700	0.066	37569	0.039	41461	0.110	99946	39.98	3.09
1998	107824	0.017	39402	0.021	38874	-0.028	107403	36.05	2.96
1999	108770	0.004	39386	0.000	38839	-0.0004	109719	35.71	3.90
2000	115238	0.025	39583	0.002	39886	0.012	114713	34.61	3.50
subtotal	613031		222996		223854			36.52	3.72

Source: USDA

Table 8: Price of Soyabean (\$/Mt)

Years	United States (Rotterdam)
1990	246.75
1991	239.56
1992	235.52
1993	255.25
1994	252.82
1995	259.25
1996	304.5
1997	295.42
1998	245.42
1999	199.58
2000	211.25

Source : USDA

Table 9: Growth Rates

Years	Production	Export	Import
1990 -94	0.023	0.016	0.014
1995-2000	0.020	0.016	0.014

Sugar

Table 10: World Trade in Sugar

Year	Production ('000 Mt)	Growth Rate of Production	Total MY Imports ('000 Mt)	Growth Rate of Imports	Total MY Exports ('000 Mt)	Growth Rate of Exports	Total Dom. Consumption ('000 Mt)	X/Output % ('000 Mt)	Beginning stock ('000 Mt)
1990	109393		31488		34078		106802	31.15	
1991	114169	0.019	32060	0.008	34069	-0.0001	110575	29.84	23509
1992	117300	0.012	30692	-0.019	32591	-0.019	112971	27.78	21571
1993	114598	-0.010	28884	-0.026	29506	-0.042	113332	25.75	19238
1994	128402	0.051	33182	0.062	36415	0.096	127363	28.36	22513
subtotal	583862				166659			28.54	
1995	132987	0.015	34714	0.020	36244	-0.002	128974	27.25	26569
1996	139750	0.022	35941	0.015	39906	0.043	131619	28.56	26276
1997	140923	0.004	36109	0.002	42319	0.026	134863	30.03	25463
1998	143388	0.008	35937	-0.002	41933	-0.004	138168	29.24	30454
1999	133634	-0.030	35464	-0.006	36742	-0.056	127499	27.49	34789
2000	136882	0.010	36532	0.013	39911	0.037	129449	29.16	34658
subtotal	126108	-0.035	34225	-0.028	33216	-0.077	131031	26.34	
	953672				270271			28.34	

Source: USDA

Table 11: Prices of Sugar (\$/Mt)

Years	EU Import Price	Caribbean & Import Price (New York)	Brazil	Philippines	
1990	583.22	275.85	8,971.18	351.48	429.09
1991	612.33	198.01	10,781.30	261.73	420.93
1992	627.98	199.99	12,174.00	245.2	419.39
1993	619.61	220.94	14,983.03	256	311.57
1994	621.81	267.03	15,240.38	289.74	487.08
1995	688.18	292.82	16,484.59	303.19	434.83
1996	686.86	263.72	17,467.35	288.86	425.57
1997	625.78	251.37	17,562.53	272.1	389.4
1998	598.22	196.69	20,072.97	228.66	410.57
1999	591.82	138.25	20,069.62	148.62	459.74
2000	554.78	178.16	19,153.65	175.3	387.64

Source: USDA

Table 12: Growth Rates

Years	Production	Export	Import
1990 -94	0.014	0.006	0.005
1995-2000	0.002	0.007	0.004

Tea

Table 13: World Trade in Tea

Years	Value (Million US\$)	% Share
1990	2,650.49	1.11
1991	2,420.47	0.98
1992	2,278.08	0.85
1993	2,397.03	0.93
1994	2,262.69	0.82
1995	2,375.80	0.73
1996	2,458.70	0.72
1997	2,685.90	0.81
1998	2,880.80	0.91

Source: FAO

Table 14: Prices of Tea (\$/Mt)

Years	Average Auction (London)	Sri Lanka
1990	2,032.35	2,291.22
1991	1,842.72	2,033.67
1992	1,997.73	1,870.72
1993	1,856.61	1,887.04
1994	1,833.46	1,848.01
1995	1,641.84	1,996.63
1996	1,771.94	2,524.95
1997	2,372.36	2,685.25
1998	2,386.03	2,868.71
1999	2,324.07	2,301.80
2000	2,481.73	2,407.20

Source: USDA

Tobacco

Table 15: World Trade in Tobacco

Years	Value (Million US\$)	% Share
1990	17,860.09	7.46
1991	19,215.33	7.74
1992	21,286.09	7.92
1993	19,925.09	7.77
1994	21,473.92	7.79
1995	23,902.80	7.33
1996	26,845.10	7.83
1997	26,151.50	7.85
1998	24,407.20	7.67

Source: FAO

Table 16: Prices of Tobacco (\$/Mt)

Years	United States (all Markets)
1990	3,392.19
1991	3,500.07
1992	3,439.54
1993	2,695.34
1994	2,974.85
1995	2,643.44
1996	3,055.17
1997	3,531.81
1998	3,336.12
1999	3,101.45
2000	2,988.17

Source: USDA

Vegetable Oil

Table 17: World Trade in Vegetable Oil

Year	Production (^{'000} Mt)	Growth Rate of Production	Total MY Imports (^{'000} Mt)	Growth Rate of Imports	Total MY Exports (^{'000} Mt)	Growth Rate of Exports	Total Dom. Consumption (^{'000} Mt)	X/Output % (^{'000} Mt)
1990	56095		20156		20541		56109	36.62
1991	59089	0.023	20062	-0.002	21644	0.023	57000	36.63
1992	59675	0.004	19969	-0.002	21610	-0.001	58260	36.21
1993	61556	0.014	23080	0.065	24374	0.054	61390	39.60
1994	68107	0.045	26106	0.055	27360	0.051	66268	40.17
subtotal	304522		109373		115529			37.94
1995	70803	0.017	25069	-0.017	25714	-0.027	69341	36.32
1996	73548	0.017	27904	0.048	28958	0.053	72601	39.37
1997	76154	0.015	29027	0.017	31443	0.036	73971	41.29
1998	80608	0.025	31387	0.035	32486	0.014	78596	40.30
1999	85076	0.024	32149	0.010	34058	0.021	82639	40.03
2000	87700	0.013	33854	0.023	35199	0.014	86283	40.14
subtotal	473889		179390		187858			39.64

Source: USDA

Table 18: Growth Rates

Years	Production	Export	Import
1990 -94	0.017	0.025	0.023
1995-2000	0.016	0.023	0.022

Wheat

Table 19: World Trade in Wheat

Year	Area Harvested (‘000 ha)	Yield	Production (‘000 Mt)	Growth Rate of Production	Total Imports (‘000 Mt)	Growth Rate of Imports	Total Exports (‘000 Mt)	Growth Rate of Exports	Total Dom. Consumption (‘000 Mt)	X/Output % (‘000 Mt)	Beginning stock (‘000 Mt)
1990	231357	2.54	588058		112983		117276		557656	19.94	167.7
1991	222523	2.44	542919	-0.034	123351	0.039	123760	0.024	555068	22.80	157.3
1992	222947	2.52	562407	0.015	123357	0.000	124344	0.002	549843	22.11	168.6
1993	221961	2.52	558740	-0.003	114265	-0.033	119655	-0.017	556058	21.42	171.1
1994	214474	2.44	523966	-0.028	115565	0.005	113651	-0.022	549128	21.69	147.2
subtotal			2776090		589521		598686			21.57	
1995	218684	2.46	538410	0.012	116246	0.003	118340	0.018	545910	21.98	136.2
1996	229978	2.53	581912	0.034	120102	0.014	127261	0.032	570786	21.87	145.8
1997	227965	2.67	609170	0.020	125265	0.018	125702	-0.005	583023	20.63	171.8
1998	224674	2.62	588796	-0.015	121523	-0.013	122578	-0.011	588693	20.82	175.6
1999	217029	2.71	587515	-0.001	131114	0.034	135189	0.043	594313	23.01	170.3
2000	214252	2.71	580674	-0.005	125779	-0.018	126927	-0.027	592263	21.86	164.6
subtotal			3486477		740029		755997			21.68	

Source: USDA

Table 20: Prices of Wheat (\$/Mt)

Years	Australia	United States (US Gulf Pts)	Argentina
1990	156.16	135.58	144.16
1991	106.92	128.6	89.65
1992	154.32	151.01	120.15
1993	136.68	140.36	131.17
1994	128.6	149.91	131.17
1995	189.96	177.1	164.24
1996	214.21	207.23	200.62
1997	168.65	159.83	158
1998	145.14	126.03	123.09
1999	129.34	112.07	116.84
2000	124.56	113.9	115.37

Source : USDA

Table 21: Growth Rates

Years	Production	Export	Import
1990 -95	-0.006	0.001	0.002
1996-2000	-0.0002	-0.0002	0.004

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