Impact of the WTO Regime on Indian Agricultural Trading Commodities

Professor Anil Bhuimali,
Vice Chancellor-Raiganj University,
Raiganj, West Bengal
Corresponding Author:
Dibasic Chakraborty,
PhD scholar, Department of Economics,
University Of North Bengal,
West Bengal, India.

Abstract : Agriculture remains the back bone of societies since ages and histories, and it is of no difference in case of India. Though it is declining, agricultural sector comprised around 50% of India's GDP in the early 1950's. Today around 17% of India's GDP (India's GDP is US $ 2.545 trillion) is from agricultural sector and 55% of total employment comes from agricultural sector. About 70% people directly or indirectly depends on it and about 43% of India's total land is covered by agricultural sector. India became self sufficient in Food grain production decades after independence. It is now producing around 280 million metric tons of food grains in the world and ranks first in many major agricultural food crops in the world. But after liberalization phase started in the world with WTO(1st Jan 1995) and AOA many thing has dramatically changed in agricultural sector of India, for example, Total yield or Output, Farm Pattern, Agricultural Infrastructure, Annual Compound Growth rate in Production & Export, Imports, Prices of major agricultural food and non food materials, Export Competitiveness, quantitative restrictions, tariff & non tariff barriers , export subsidy, domestic support, sanitary & Phyto sanitary measures, Geographical Indication, Trade related intellectual property rights etc. WTO which has replaced GATT (general agreement on trade & tariff 1947-1994) was established for multilateral trade agreements among nations is committed to Free trade, Non discriminations in trade, Removal of Quantitative Restrictions, non tariff barriers between nations and free & fair competitions in trade among nations. India who is a founding member among 162 member nations of WTO, maintaining and obeying most of the clauses related to developing nations in WTO charters. Our study have looked into the norms and rules of WTO, how far India has followed those rules and what are the consequences has happened to India's agricultural trade since WTO and a comparison between the pre & post WTO era in trading of Indian agricultural commodities. And our Findings in this small study is that India has benefitted in many extent in agricultural trade the post liberlisation or post WTO period and trade indicators are positive in many extent. This thing has surfaced many issues that may be taken for study and research

Keywords: WTO, AOA, Market Access, Domestic Support, Trade, Agricultural Commodities, Import & Export growth etc.

1. Introduction:

The WTO is an institutional body which was formed on Ist January, 1995 with the objective of promoting global trade in more liberalised way. The WTO came into existence after the GATT (General Agreement on Tariffs and Trade) which was formed on 1948 with 23 member countries and the objective of growth and development of all member countries. In place of ITO, GATT was established in 1947 by the western nations. Since it came into existence GATT emphasized for the expansion and promotion of global trade by reducing tariffs and other forms of protection imposed by member countries on trade. This continued effort of GATT finally increased it members from 23 countries to 123 countries. The GATT also provided framework for settlement of trade disputes. Continued reduction in trade barriers helped trade growth consistently outpaced production growth. There existed several limitations of the GATT appeared in the early 80s. It was less effective in the settlement of conflicts and disputes between DCs and LDCS in tariff, nontariff barriers and market access. World trade became more and more complex and GATT failed to apply its principles into practice, and thereby led GATT members to have fresh round of trade negotiations, the eighth round of multilateral trade negotiations popularly known as Uruguay Round, it covered new areas like agriculture, textile, TRIMS, TRIPS, services etc. The eighth and the most popular round known as Uruguay Round commenced in 1986, which was to be concluded in 1990 but this could not be happened as the issues involved in it faced huge dissatisfaction among the participating countries. At the Uruguay Round, developing countries took on unprecedented obligations not only to reduce trade barriers, but to implement significant reforms on trade procedures, custom valuation and on many areas of regulation that established the basic business environment in domestic economy (example, technical, sanitary standards and intellectual property law). On December 20, 1991, the Director General of GATT and the Chairman of the trade negotiations committee, Arthur Dunkel, finally drafted a proposal covering all negotiation areas including TRIPS, which was finally accepted by 117 countries after years of discussions on 15th April, 1994 in Marrakesh, Morocco. Uruguay Round enclosed mandate to have negotiations in 15 areas, in part 1, negotiations on trade in goods to be concluded in 14 areas and in part 2 negotiations on trade in services. Thus this new round of negotiations also known as WTO agreement not only covers traditional GATT subjects but also new areas like Trade Related Intellectual Property Rights (TRIPS), Trade Related Investment Measures (TRIMS) and Trade in Services etc. In this way the GATT was converted to WTO on first January 1995 as a conclusion of the Uruguay Round agreement to give encouragement and promotion global trade. Several agreements had taken place in WTO summits. Some of them like Agreement on Agriculture (AOA) is mostly important. With the implementation of the provisions of the Agreement on Agriculture (AOA) by the members of WTO, the international trade opportunities are expected to change as trade barriers are reduced and free trade takes place. These changes would also ensure that competition among the countries in producing individual product or commodity will play a major role in the international trade. With the Agreement on Agriculture (AOA) in the Uruguay Round of GATT /WTO, an attempt was made to formalize the removal or reduction of these interventions, which distort the agricultural markets. The rules and regulations governing agricultural trade covered in the clauses of AOA required the nontariff barriers to be converted to tariffs, reduction of tariffs over a period of time, and reduction of subsidies to production and exports of agricultural commodities. Agricultural policies now are therefore, governed by the rules under the WTO. Measuring the extent of changes in those policies and examining the impact of such changed policies on agriculture and the economy are crucial to the member countries of WTO. In India too, government interventions in agricultural markets are seen in many forms, like fixation of support prices, procurement of marketed surplus for the public distribution to the consumers, maintenance of buffer stocks, provision of input subsidies, imposition of restrictions on movement of products and control on external trade in inputs and outputs through the tariffs and Quantitative Restrictions (QRs). The provision for removal of restrictions on agricultural import was mandated like 6 years time period was for developed nations (by year 2000) and 10 years for developing nations (by year 2004). Total agricultural export is around 11% of India's total export and it is the third largest producer of agricultural commodities in the world. Though declining agricultural growth rate along with export shows country's loss in agri-trade due to deteriorating terms of trade.

2. Objectives of the Study:

The main objective of the study is to investigate the impact of the New Agricultural policies under the WTO on Indian major agricultural trading commodities. Including

1. To review the trade policies of India, specifically relating to trade in agriculture and examine the nature and extent of liberalisation in agriculture trade.
2. To examine the trends in domestic and world prices, fluctuations in both of the prices and the relationship between the two, of the chosen agricultural commodities.
3. To identify the changes in trade pattern in agriculture in the post reform period and causes for such changes, and its impact on domestic prices.

4. To analyse India's Export of agricultural commodities under the WTO regime.

3. Review of Literature:

Introduction & background of Indian agricultural trade: In the colonial period before independence the Indian agricultural trade was fully controlled by British only to serve colonial interest as India once used to export different types of diversified goods including textiles, Cotton, Rubber & spices was forced to export only agri-food products and raw materials for smart industrial products from Britain, which resulted in favorable trade balance with Britain. After Independence India Soon realized that in order to overcome food shortage problem and dependent agricultural economy it should revolutionize the production, finance, marketing, export, distribution, and modern infrastructural base of the nation. Green Revolution is one of the practical example that how India fought to develop its agricultural economy. Then in the late 80s and early 90s before liberalization phase started India's agricultural growth was timid and growth of exports also was slow comparing to the early decade. After the W.T.O. the countries of world became more open to markets and less to Government intervention in case of economic policy. After trade liberalization & WTO the visible empirical and theoretical studies have shown that economies of the world have gained in productivity through increased competition, efficiency, innovation and acquisition of new technologies. As it has been mostly non-discriminatory towards LDCs, therefore they have gained from trade liberalization by increased market access of the developed nations and economic opportunity in increasing income level and jobs. Impact of WTO and trade liberalization on agriculture may be discussed in the three major components –**firstly** betterment of productive efficiency by ensuring all the facilities to realize the productive potential of the country, **secondly** substantial increase In exports of agricultural produce, and **Thirdly,** better access to international markets that were protected earlier. That is why to achive higher growth rates in the coming future economic reforms were needed as **Ahluwalia (1996)** had explained. As the reform is a gradual process that is why since Uruguay round agreement in GATT to Doha round In WTO the argument was always in favour of removing QRs (Quantitative Restrictions were removed after the Uruguay round Agreement by tariff & price based mechanism), Land reform, agrarian reform, 87 percent cut in tariff on agricultural products, introducing HYV seeds with sustainability in agricultural growth in export & productivity for economic development. **Market Access along with Domestic Support and Export Subsidies for** LDCs was the main agenda in the **Doha Round** of trade talks was meant for ensuring substantial improvements in the access to domestic and international for agricultural goods. The **Developing countries** need to allocate proper mechanisms and infrastructure to take advantage of these policies for rapid growth in production and comparative advantage to trade and export. That is why Public Investment is necessary for building and creating proper infrastructure for reaping the gains from reform. The process of deceleration in the agricultural growth ended in 2.4% in the 90s from 3.8% average in the last decade. That is why in order to achieve at least 4% targeted growth in Agriculture the coming plans was necessary as agriculture is the main stay and back bone of the economy of India. There are private investments in Indian agricultural sector which is increasing but cannot compensate for the fall in public investment, for example we can highlight the evidence of falling of the **TFP (total factor productivity**) in the 1990s. The **XII Five years Plan** suggested doubling the existing agricultural growth of India, where future growth would depend on sustaining the growth of inventible resources, achieving widespread productivity improvement on the supply side, and maintaining macro-economic stability on the demand side. There is huge studies exists on the impact of WTO and IMF-World Bank sponsored economic reform on developing countries like India, where many emphasized on possible impact of new provisions of WTO on Indian agriculture. In this many studies reflects the inappropriateness of the measures taken up by the IMF, the World Bank and the WTO, particularly from the point of view of the LDCs (Stiglitz 2001). Many of the studies based on the matter of impact of WTO on developing countries provide hosts of useful insight to the subject matter and helps for further study. Many studies on Impact of WTO on Indian Agricultural trade suggests that Indian agriculture suffers from some serious institutional constraints (Vaidyanathan – 2000, CHH Rao , A. Gulati , 1984, Various Issues of EPWs).

Empirical Studies: Some important studies done recently have shown that terms of trade in agricultural trade declines in many very poor countries (Least Developed Countries as mentioned by the UN) especially Sub-Saharan African countries. These heavily indebted marginalized countries fell in the group where few agricultural commodities comprise about 90% of their total export making them marginal player in global trade (Watkins and Fowler 2002; FAO 2004; UNCTAD 2004). One study recently done by FAO show the terms of trade has declined to about half of these developing nations. A different opinion regarding TOT is found in case of BRICS and ASEAN nations by policy makers.

One major finding in recent studies it has been revealed that since 1950 to 2010 it is found that real prices for agricultural exports of developing countries exports declined comparing to the relative prices of Imports of their manufactured goods by almost 70 percent (FAO 2004). The DCs mostly rely on exporting synthetic products and protectionism in domestic import of agricultural goods from LDCs., that is why the third world countries unitedly drawing attention of the world in the WTO conference of CANCUN in 2003 on the pricing problems associated with the commodities. Though the chance is very less that the final outcome of the **DOHA** round will end with proper solution to the LDCs long standing grievances.

The 12 OECD countries controls about 65% of the world's total Agricultural trade which was reflected in the book '*Negotiating the Future of Agricultural Policies'* by Bilal (2001). Though the U.S., EU, Canada, and Australia have proven production advantages in wheat and other cereals and other temperate zone commodities, India has benefitted from its good comparative advantage in many agri-commodities.

Market should be open rather than manipulated being the narrative and contention of the Developed world particularly the USA and EU, these countries always tried to create pressure on developing nations for maintaining open market norms but they themselves violated these norms time and time again by putting tariff barriers, QRs, Anti Dumping measures and other different types of protectionist measures on importing agricultural goods from developing nations. Here India's role is very crucial and different as India being in a significantly comparatively advantageous position (India's agricultural export has risen multiple times after the WTO to the Developed nations) and being a developing nation has always tabled argument against the DCs for the discriminations to LDCs by them and protectionist measures adopted by them. India's role has been positive and constructive in the post trade liberalization era for multilateral free and fair trade.

There has been substantial empirical literature on various aspects of this research paper. Where some of the researchers have expressed their opinion which is as follows,

Matthew Saunders and Rolf Mirus (2003): They argued in favour of free trade and against protectionism and they argued in favour of proposed changes to anti dumping agreements. And even they have argued in favour of Proposed Changes to the Agreement on Subsidies and Countervailing Measures.

Peter M. Rosset(2004) : According to him the three basic pillars of AOA are I) Market access ii)Export subsidy iii) Domestic support. He showed a lot in the media about "trade wars" between the U.S. and Europe, about steel quotas and cotton subsidies, and about how dissatisfied poor countries are with global trade rules.

R S Deshpande, J Prachitha

(2005): These persons have put forwarded impacts of WTO policies on the Indian state of Karnataka, where according to their study the cell recommends that India's concern on food security, rural employment and need to protect the environment should not be neglected in a purely market-oriented 82 approach. They argued that it is necessary to adopt market-friendly approach without government support.

Martin Khor(2004): He has studied and worked on the topic "THE WTO AGRICULTURE AGREEMENT: FEATURES, EFFECTS, NEGOTIATIONS, AND WHAT IS AT STAKE". Here his paper starts with a brief summary of the main features of the commitments made by Members in the World Trade Organization's Agreement on Agriculture (AOA).

Rani, Pooja (2015): in this paper **"A Study of WTO and Agriculture Sector in India"** they have explained the global trade that how it is well connected. What they have found regarding WTO and India is that after engaging with WTO India has increased its domestic production and export of agricultural product and it has been helpful in increasing employment level of the country in agricultural sector. According to them Indian agricultural growth will take momentum in the coming future as investments are taking place in agricultural infrastructure in the country.

Deepika MG(2005): In her theses named **"**CHANGING TRADE SCENARIO IN AGRICULTURE AND ITS IMPLICATIONS FOR THE INDIAN ECONOMY" she wanted to express that tough trade libcralisation assumed a special significance in the context of economic reforms in the late eighties and early nineties in India, they were not directly made applicable to the agricultural sector due to its unique characteristics.

Hedayat Hosseinzadeh(2008): The main object of his research was to examine the economic effects of Globalization and the trade openness on Iran's agricultural sector. He reviewed the agricultural exports and imports policies in Iran during the period from 1980 to 2004. He surveyed the impact of economic liberalization and privatization policy on the performance of agricultural export and import during 1980-2004.He studied the future prospects of agricultural products, exports and imports.

K.B.Umesh, Akshara M., Shripad Bhat, Harish Kumar.K., Srinivasan, S.M.(Beijing 2009) :

In 2009 these people have worked together for presenting paper in Economists Conference, Beijing, China, August 16-22, 2009 on the topic "Performance Analysis of Production and Trade of Indian Silk under WTO Regime" where they have showed that India is the second largest producer of silk and also the largest consumer of silk in the world having a strong tradition bound domestic market. In this paper, they estimated growth functions for India's aggregate production and trade parameters using annual data from 1984/85 to 2006/07.

Andre M. Nassar, Diego Ures (2009): In their IFPRI Discussion paper named "Brazil: Shadow WTO Agricultural Domestic Support Notifications" where they has argued that Brazil is presenting itself as being in a comfortable position with respect to domestic support in the Doha Round negotiations, and our analysis confirms this position. New rules are necessary to guarantee that policies oriented to create demand for biofuels will not jeopardize world agricultural markets. WTO rules, however, must be improved in order to capture the specific situations of biofuels, which are not the same as other agricultural commodities.

M.Ranga & D. Sharma (2014): in their paper **"WTO and Indian Agriculture"** showed that if aspects there exists no real insecurity, related to WTO norms (like market access, domestic support , export subsidy, removal of tariff, provisions related to IPR, non tariff barriers etc) be dealt with good vigilance there exists no real threats or insecurity on agricultural trade.

Renuka Mahadevan(2003): In her paper named "PRODUCTIVITY GROWTH IN INDIAN AGRICULTURE:THE ROLE OF GLOBALIZATION AND ECONOMIC REFORM" she has explained that although India missed the opportunity to open up two decades ago, its attempts to do so now must be regarded as better late than never. Having realized that globalization is a necessary but not a sufficient condition for high growth production, India has undertaken economic reforms, both internal and external.
Mithilesh Kumar (2006): In his work titled "TEMPORAL CHANGES IN DAIRY INDUSTRY IN INDIA" he has explained that the dairy sector occupies a dominant place in providing food, income, employment and foreign exchange to the Indian economy. The positive trend in export and negative trend in imports was observed due to the success full implementation of Operation Flood and set of Government policies regarding international trade.

Kavitha, N. V. and **Reddy, N. Suma (2015):** Their paper named *"A* Study on the Commodity Derivatives Market and Development in India - Towards Sustainability" was based on the agricultural commodity trading in India. They have shown on their paper that how the Government of India has initiated reforms in the commodity market of agriculture so as to solve the issue of dependant farmer or people using old agricultural exchange mechanism of agricultural commodity trade.

Vijayakumar B.K.(2007): Mr. Vijayakumar worked on impact of WTO on the Indian state of Karnataka's cereal production and his research was named " CHANGES IN CEREALS ECONOMY OF KARNATAKA PRE AND POST WTO ANALYSIS" where he analysed that the global competitiveness of cereals (rice and maize) and their economics of production over the period of time in Karnataka. In his study, he has made an attempt to estimate NPC, DRC, direction of trade, integration between domestic and international prices and supply response of rice and maize. The findings of the study would help the planners and the policy makers to formulate appropriate agricultural development, export and stabilization policies for the state as a whole.

B. Sheshagiri & G. G. Honkan (2011): This paper named "**Impact of W.T.O on Indian Agriculture : Performance and Prospects"** showed that the developed countries which have high tariff on agricultural import from countries India should bring down their tariff rate in order to improve agricultural commodity trade. Their study highly suggests that there is huge scope in increasing agricultural trade between developed and developing nations like India even without resorting to paradigm shift to new improved technology or policy regarding that.

Nitin Vinod Dacha(2005): In his paper "Prospects of the Uruguay Round Agreement on Agriculture and the Reality of its Impact on Indian Agricultural Trade" he showed that Inconsistencies within the developed countries agenda concerning agricultural liberalization have stalled the progress of the process at least until the next trade round. It seems that developed countries only concede when it is convenient and have protected themselves exclusively at times through the use of such measures as the 'special safeguard' provision and the 'peace clause'.

S. P. Shukla(2000): In his paper titled "From GATT to WTO and Beyond" he intended to show that to analyse the evolution of the international trading system from its inception as the GATT in 1947 to its latest incarnation in the form of WTO, comprising the complex array of agreements forming its substance and mandate. His study focuses on the adequacy and in adequacy of the system as it evolved and functioned in an environment of changing international economic and political reality.

4. Research Methodology:
The present study is based on secondary data. These data has been collected from various secondary data sources which includes government data from Ministry of Agriculture & Cooperation, NSSO reports, Agricultural census data, Beauro of Economics & Statistics, CMIE and other public reports, state government department of agriculture, internet website www.wto.org, Economic survey of India, (GOI) data like Ministry of agriculture, A.P.E.D.A., FAO trade & production year books, Indian Journal of Agricultural marketing and Indian Journal of Agricultural Economics, Related data published on E.P.W.S., Ministry of commerce Government of India and various papers published on interested topics. Reference period of the study is taken from 1980-81(pre WTO period) to 2011- 12 (post WTO period). We have taken 1994-95 as the cutoff date for pointing the pre and post WTO periods was the beginning of the WTO era from 1st January 1995, with the support of 85 founding members including India. This research study would discuss the comparative performance of trade of major Indian agricultural commodities during pre (1980-81 to 1994 – 95) and post WTO (1995-96 to 2011 – 12) regime. It would analyze the export performance and competitiveness of major Indian agricultural commodities during pre and post –WTO regime.,

Where, **NPC i =** $\mathbf{P\ i^{d} / P\ i^{w}}$

Where **NPC i** = Nominal protection coefficient of commodity i.

$\mathbf{P_i^{d}}$ = Domestic price of commodity i.

$\mathbf{P_i^{w}}$ = World reference price of commodity i, adjusted for transportation, handling and marketing expenses.

Here, **NPC < 1** indicates the commodity is exportable and **NPC > 1** indicates that the commodity is importable.

5. Impact of the WTO Regime on Indian Agricultural Commodities
The formation of the WTO was an important achievement in the history of international trade. All the LDCs realized that institutional framework like WTO was much needed when they were liberalizing their trade.
Different wings of WTO
- **Agreement on Agriculture(AOA)**
- **Agreement on the application of sanitary and Phytosanitary measures(SPS)**

- **Agreement on Textiles and Clothing(ATC)**
- **Trade Related Investment Measures(TRIMS)**
- **Agreement on Technical Barriers to Trade**

Out of these five agreements **AOA** perhaps the most important international agreement under **WTO** regime.

Agreement on Agriculture: The AOA is based on,

- **Market access**
- **Domestic Support Mechanism**
- **Export Subsidies**

The WTO Agreement on Agriculture (AOA)(which has been affected since January 1995 with a ten years implementation period for LDCs) was a multilateral trade negotiation was one of a major part of the Uruguay Round Agreement in 1994 (The Uruguay Round was been carrying since 1986 to 1994). Many adequacies have been rectified through ongoing negotiations of AOA since 1995 so far.

The AOA tells us that there would remain no non tariff barriers(like quantitative restrictions through quotas etc.) under WTO, though there are still place remains for tariff barriers in order to safeguard domestic agricultural trade, but these tariff barriers should be reduced over the time. Countries like India were given freedom to set ceiling on agricultural imports in the ministerial conference under WTO.

India is still negotiating in WTO ministerial conferences with many developing nations on domestic farm support, export opportunities of Indian domestic agricultural products, livelihood security of India common mass, and in no way wants to cut down domestic subsidy to zero level but wants to maintain it under 10 % level as per the WTO rule for developing countries. In order to do so India has taken measures to give safeguard its agricultural sector, when phasing out quantitative restrictions on much agricultural commodity imports including import barriers on 131 imported items were progressively removed but the exporting nations of those items has to comply fully with India's domestic quality standard norms. India proposed to the General council of WTO for the negotiations on market access, domestic support & export subsidy with food security.

The WTO being the only global institution was established to ensure smooth, free and fair international trade among nations. The AOA under Uruguay round agreement was built on three major pillars, that are,

Market Access: Market Access can be broadly classified into three characteristics. Like

Conversion of all non-tariff import restrictions into tariffs: Tariffication

All agricultural tariffs are required to be bound.

After binding the tariff it be gradually reduced over a period of several years.

Market access means that how much a country is ready to open its own market to reach by the foreign exporters or global countries, in order to regularize the trade by reducing or removing tariff and non-tariff barriers between nations to facilitate smooth & fair trade. In this case both the developed and developing nations are in a commitment to reduce or completely withdraw the non-tariff barriers like quotas, trade licenses etc, and leaving least possible tariff on one another in special cases to safeguard domestic production. Under Market access of WTO norm countries are committed to reduce import duty by 36 %(for DC's) and 24% (for LDC's) in six and ten years respectively. In case of India, it is maintaining some quantitative restrictions (and providing subsidies on primary agricultural products, food products and edible oil to certain extent) with reduced amount of tariff barriers.

Domestic Support: The **Domestic support** is different form of annual subsidy or financial help to the farmers, agricultural producers, trader, exporters etc by the government either in specific agricultural area or in agricultural marketing or infrastructural development etc. this domestic support of WTO may be classified into three broad categories like (i) **Green box,** (ii) **Blue box** and (iii) **Amber box subsidies**.

- **Direct Support: The direct support** directly stimulates production and trade of agricultural product. This support may be trade distorting by nature that's why it should be restricted as per the WTO norms. These types of subsidies are called **Amber Box subsidies**. In case of Amber box subsidy the developed nations are to reduce a total of 20% subsidy within six years from 1995 and a 13% reduction of AMS in case of developing countries over a period of 10 years.
- **Indirect Support:** The indirect supports by the govt. does not necessarily affect production and trade directly, rather it influence the international trade by boosting domestic export promotion some times. The examples of indirect support are
  (i) Green box and (ii) Blue Box subsidies. These types of subsidies are not restricted by WTO as these are not trade distorting mostly.

Green Box Subsidy: This subsidy is granted for enhancing agricultural production, research, disease control, infrastructure, food security and development of universities etc without any limitations. This subsidy has minimal impact on trade.

Blue Box Subsidies: This type of subsidy is given to the farmers to limit their production for reason like environmental concerned. This also covers government helps for agricultural development in LDCs.

In case of **India** it has never given support to certain product or specific product other than market price support. If we take reference period for India's domestic support as during the time of Uruguay round agreement, around 1988 there was market price support programs on 22 Indian products and all most all the support programs did not violate GATT norms.

Export Subsidies: Export subsidies are those subsidies which the govt. of any country provides to its farmers for growth of agricultural export. These types of subsidies are trade distorting often. That is why the WTO has recommended countries to reduce it over time. For example according to the WTO norms the Developed countries should reduce the Export Subsidy by 36% over years based on the 1986 -90 base period, and developing countries should reduce the Export subsidy by 24% over 10 years based on the 1986-90 base period. An export subsidy has been mostly trade distorting, especially for developing nations.

The AOA and India's stand on trade Negotiations

(a) Reducing the amount of Subsidies: In the AOA declarations it is outlined that developing countries like India would face marginal amount of impact on agricultural trade after slashing down its Subsidies On the whole, but Indian Agricultural sector is mostly based non-commercial character and farmers are mostly subsistence farmers. So it is evident that it would have been compatible with AOA negotiations on cutting down subsidies if Indian agriculture would be a fully commercialized and farmers would cultivate for export not for sustenance. That is why AOA's stance was not very attractive for India and India started negotiation on Subsidies since Doha round of conference.

(b) Increase in Domestic Agricultural Production: India's stand on negotiating table was to diversify, boost & encourage domestic production of agricultural commodities as it felt that sudden opening of markets without increase of domestic production of food crops like oilseeds would end up with rising price of domestically produced agri-commodities and dependency of foreign supply.

(c) Increase in Indian Agricultural Exports: Many developed countries for example Japan, south Korea which imports food products like rice from India, many increase it as a result of their domestic price rise after reducing their subsidies and our farmers would also may benefit by exporting those commodities that are comparatively cheaper here.

(d) Patents policy and India: As per the WTO rules of Sui –Generis system seed patenting should be there to ensure plant breeders sole right on seeds improvement and trade. But the government of India is following the old system of not patenting the seeds. In India large sections of Bio-technological research and development has been in the Govt. sector he system is the basic research in seed and breed technology India, i.e., development of new varieties, their multiplication and marketing which were largely under Government sector in the last few decades. Now it is in the hand of private corporations in India in many areas. India has huge potential in the development of hybrid and synthetic seed and planting materials and as a result of it is emerging as a major global exporter of seeds.

(e) The market Access: In WTO the term MCA (minimum compulsory access) is a binding treaty which tells that access to importers to domestic agricultural market to at least 3% in no way hinders the interest of the domestic farm producers and in many way encourages research and development in agriculture and rural upliftment. The govt. in not under any control by this treaty to cut down subsidies and the farmers are free to use their crops as seeds to the next seasons without any pressure.

(f) WTO has widened the right to Use Seeds: In the beginning of WTO era it was doubtful that inequality would spread among farmers or between rich and poor farmers by facing non availability of seeds, though the doubts were cleared after WTO declared that farmers are now free to exchange seeds freely with each other they necessarily need not to buy branded seeds from market.

(g) India's PDS in the WTO regime: The agreements Proposed on AOA does not necessarily change in the Public Distribution System (PDS). India has been allowed to continue will continue food supplies at subsidized rates to the weaker sections of the society, as it is not expected to raise India's imports of food grains, as LDC countries facing BOP Issues can continue to impose Tariff on the import of food materials.

(h) The AOA's proposal of reducing subsidies and Indian Agricultural Sector: The small & marginal farmers of India was scared that after cutting down subsidies prices of farm Inputs (including seeds, fertilizers, pesticides and insecticides) would rise up and only few big rich farmers only benefit from costly inputs provided and distributed by Multinational Corporations and marginal cultivators will become land less laborer in the future and agriculture in India will no longer remain a source of livelihood for millions of people. The AOA proposed slashing down direct on agriculture & indirect subsidies on electricity, water, credit and fertilizers to less than 10% for developing countries and 5% for developed countries. But Indian small farmers would have suffered less as AOA's new draft told the amount of subsidy reduction should be exempted for small farmers. As of today it is less than 6% in India.

Changes occurred in Indian Agricultural trade after Signing in WTO and agricultural trade policy liberalization. Liberalisation of Indian Agricultural trade and Imports - Exports after reducing the QRs.

Though the policy of import liberalization of Agricultural commodities started in the early 90s but it took faster move in the mid 90s after some major initiatives were taken at that time and liberalization policies were much intensified in the early 2000 since the exim policy. For example decanalisation, moving of agricultural commodities from restricted periphery to more free trade area, staring of exim policy in the early 2000, Export Promotion policy, access of more credit facilities for agricultural export, Duty exemption scheme, abolition of minimum export price, deregulation of import policies, tax exemption in agricultural export, relaxation of export quotas etc were made to accelerate the speed of export of Indian agricultural commodities. The govt. of India took initiative in export liberalization in agriculture, for example the establishing of export promoting zones, making schemes like ASIDE (Assistance to States for Infrastructure Development and Exports) and SLEPC, establishing Export promotional councils, removing restrictions on export of all cultivated varieties of seeds & pulses shows governments initiative in liberalizing export. The govt. of India showed its obligations to WTO by cutting down quantitative restrictions on most major agricultural commodity imports other than to those commodity imports which are hazardous to human health or environment. Following data shows how Indian market gradually became open to foreign imports of agricultural commodities.

Percentage Change In Licensing of Indian Agricultural commodities
Table: 1

Year	Restricted	Prohibited	Canalised	Free
95-96	65	5	10	20
97-98	60	3	10	27
98-99	54	3	12	31
2000-2001	37	3	2	58
2002-2003	22	1	2	75

Source: Exports and imports, (1995, 1997) Govt. India (2000-2004) ,various issues Goyal 2002.

Changes in Import Policy of major Indian agricultural commodities
Table 2 - Import-

Agricultural Commodities	Current Condition of Trading	Year of Delicencing or Decanalised
Pulses	Free	1980
Cotton	Free	1991
Rubber	Free	1991
Sugar	Free	1994
Palm Oil	Free	1994
Skimmed Milk & Butter	Free	1995
Edible Oil	Free	1995
Edible Oil Seeds & Castor bean Oil	Free	1999
Wheat	Tariff rates levied STE (Import through FCI)	2000
Rice	Tariff rates levied STE (Import through FCI)	2000
Milk	Free	2000
Tobacco	Free	2000
Tea	Free	2001
Coffee	Free	2001
Coconut	Free	2001
Cashew & Indian Silk	Free	2001
Soya bean & Ground Nut Oil	Free	2002

Source: Exim Policy, ministry of Commerce. Govt. of India.

Table 1 and 2 shows the status of Indian agricultural trade policy in the early 2000 and so on after removal of QRs and delicensing and decanalisation of many major agricultural commodities.

The following table shows the current status of Agricultural trade policy of India in Indian Agricultural Commodity trading of various agricultural commodities.
Table 3

Agricultural Commodities	Current Status in Trading	India's Rank In the World In Production.
Rice	Other than Basmati other origins of rice are restricted in Import or export.	2nd
Wheat	Both Import & Export of wheat are restricted and subject to state canalization.	2nd
Coffee	Export of Coffee is Free and imports are restricted.	3rd
Tea	Export of Tea is free but Imports and exports are subject to the regulatory supervision of Tea board of India.	3rd
Cashew	Both Imports and Exports of Cashew Nuts	Important

	are free.	
Sugar	Imports & exports of sugar are free.	2nd
Edible Oil & Oil Seeds	Imports of edible oil were freed in some cases but are subject to OGL in some cases.	Leading
Onion	Onion exports are highly restricted but imports are freed since early 2001.	Leading
Potato	Though exports of potato were completely freed by there is still many QRs on potato imports.	Leading
Spices	Except Fresh Ginger & some other spices all most all the restrictions on spices were removed by the late 2000.	5th
Rubber	In case of Rubber, the imports were canalized particularly in case of private sector and exports were made Free.	Leading
Cotton	The Import and Export of Cotton imports were freed from licensing in the mid 90s as Indian cotton trading has been competitive in nature.	2nd
Jute	Exports of jute and jute products were freed from any restrictions in the mid 90s.	1st
Tobacco	The restriction on the import and export of Tobacco was removed in the early 2000 and it is a commodity of competitive character now.	Important

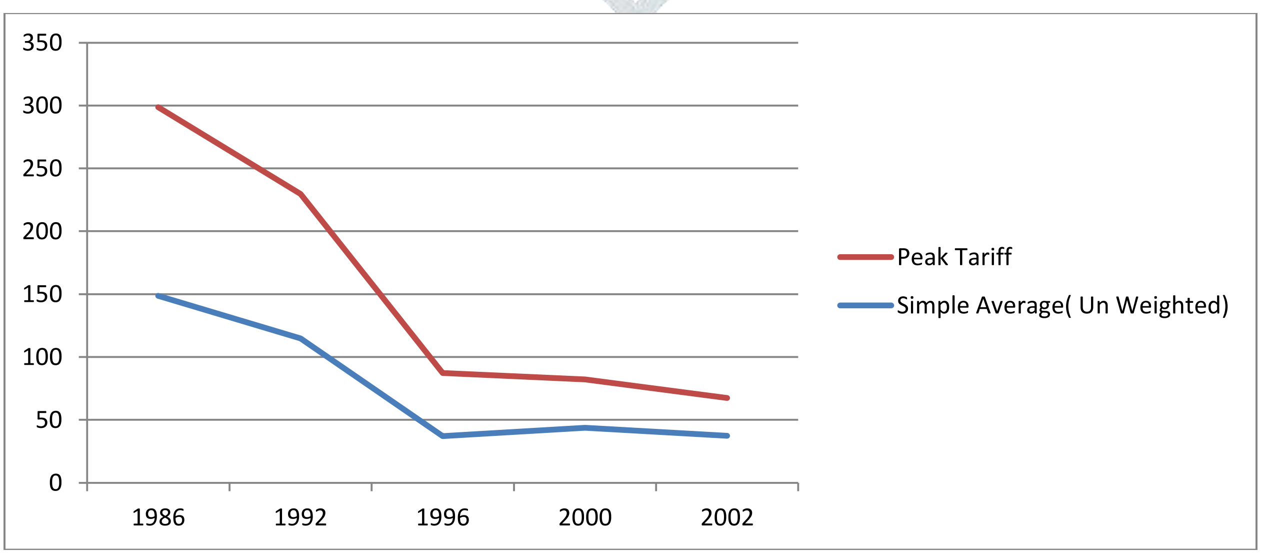
Source: FAO statistics.

Table 3 presents the current status of Agricultural trade policy of India in Indian Agricultural Commodity trading of various agricultural commodities after removal of quantitative restrictions of tariff and non tariff barriers gradually independently. It also shows the current position of production of these commodities in the world level.

Percentage of Tariff levied on Gradual Reduction on Indian Agricultural Commodities.
Table 4

Year	**Simple Average (Un weighted)**	**Peak Tariff**
1986	**148.58**	**150**
1992	**114.73**	**115**
1996	**37.2**	**50**
2000	**43.72**	**38.5**
2002	**37.43**	**30**

Source: Directorate of Publications. Customs and Central Excise, New Delhi (J 986.
1992, 1996), Goyal Anm (2000- 2002).



As per the WTO and AOA norms India gradually tapered the tariff rates. Some time India has drastically reduced (77% in1996, 70% in 2000, 74% in 2002) the tariff. Study by Gulati & others show that India has not only reduced the tariff barriers but non tariff barriers were also reduced by converting it into tariff barrier first.

Changes in the Composition of Market Share in Indian agricultural Commodity trade with Liberalisation of Export in the Pre and post WTO regime:

Table 5

Agricultural Commodities	Year	Market share of India in world Export (Average)
Rice	1981-1994	4.22
Sugar	1981-1994	1.16
Ground Nuts	1981-1994	3.50
Rice	1995-2004	17.25
Sugar	1995-2004	1.68
Ground Nuts	1995-2004	15.21

Source: FAO statistics

In the above table the data itself reflects that market share of India in the world export has increased by multiple times after liberalization and WTO.

Percentage Change in the composition of Market Share in Indian Agricultural Commodity trade with Liberalization of Import in the Pre & Post WTO regime:

Table 6

Agricultural Commodities	Year	Market share of India in world Imports (Average)	Year	Market share of India in world Imports (Average)
Sugar	1981-1994	3.81	1995-2004	2.28
Rapeseed Oil	1981-1994	0.65	1995-2004	8.83
Linseed Oil	1981-1994	0.49	1995-2004	0.43
Cotton	1981-1994	0.14	1995-2004	1.12
Rubber	1981-1994	0.95	1995-2004	0.40
Jute	1981-1994	5.74	1995-2004	17.12

Source: FAO statistics

In the above tables (table 5 & 6) shows how export and Import of major Indian agricultural commodities were in pre & post WTO era. Table 5 shows notable changes has happened in case of Rice and Ground nuts in share of Export of India in the world level. Where in Table 6 we see import share of India in the World has gone up in rapeseed Oil, Cotton and jute other commodities declined (Sugar, Linseed Oil, and Rubber etc) in import share in the world level. Impact of direct policy changes is visible in case of some major export items including Rice Sugar, Ground Nuts and Cotton, Edible Oils, Rubber and Jute in case of import items.

Percentage Change in Share of Imports & Export (Average) of Indian Agricultural commodity Trade in the World Before and after the WTO: A Comparison

Table 7

Agricultural Commodities	Export		Import	
	1985-1994	1995-2004	1985-1994	1995-2004
Rice	0.87	9.15	1.51	0.19
Wheat	0.08	0.28	5.38	4.25
Coffee	2.03	2.83	00	0.02
Tea	19.47	13.98	00	0.18
Sugar	1.16	1.08	4.28	2.63
Cashew nuts	51.42	53.64	00	18.63
Ground Nuts	3.57	7.91	00	00
Cake of Ground Nuts	39.12	36.36	00	00
Oil of Linseed	00	00	0.42	0.38
Cake of Rapeseed	11.68	20.28	00	00
Oil of Rapeseed	00	00	0.25	8.53
Sesame Seed	5.46	12.29	00	00
Cake of Coconuts	0.15	0.02	00	00
Onion	10.73	10.36	00	00

Potato	**0.07**	**0.23**	**00**	**00**
Apple	**0.13**	**0.17**	**00**	**00**
Banana	**00**	**00**	**00**	**00**
Paper	**6.56**	**6.99**	**0.44**	**1.02**
Rubber	**00**	**0.01**	**1.21**	**0.44**
Cotton	**1.86**	**2.27**	**0.14**	**0.92**
Jute	**3.59**	**1.94**	**5.74**	**16.82**
Tobacco	**5.22**	**4.65**	**0.01**	**0.03**
Ginger	**83.27**	**67.27**	**1.96**	**4.64**

Source: FAO Statistics

In the above Table 7 we can see some notable changes are seen in the case of exports of rice, Paper, jute, Ginger, groundnuts, cake of rapeseed, sesame seed and cotton. In case of Rice, the growth of it rose in export in the post WTO period. The NPC (Nominal protection Coefficient) of these agricultural commodities (NPC= $\mathbf{P\,i^{d} / P\,i^{w}}$) did not move toward 1 in values in the Post WTO era which was expected to move in the Post WTO era as compare to Pre WTO era.

NPC (Nominal Protection Coefficient) results of Indian major agricultural commodity trade estimated to compare before and after the WTO.

Table 8

Agricultural Commodities	**1985-94**		**1995-2004**	
	Average	**Standard Deviation**	**Average**	**Standard Deviation**
Rice	**1.18**	**0.30**	**1.04**	**0.12**
Wheat	**1.81**	**0.33**	**1.24**	**0.33**
Coffee	**1.46**	**0.99**	**2.06**	**1.03**
Tea	**1.67**	**0.96**	**1.14**	**0.16**
Sugar	**2.78**	**0.95**	**1.53**	**0.27**
Cashew nuts	**1.15**	**0.12**	**1.10**	**0.10**
Ground Nuts	**0.63**	**0.21**	**0.56**	**0.08**
Cake of Ground Nuts	**1.58**	**0.43**	**1.12**	**0.19**
Oil of Ground Nuts	**2.19**	**0.77**	**1.42**	**0.38**
Linseeds	**4.37**	**1.69**	**3.05**	**0.56**
Oil Of Linseeds	**2.14**	**0.42**	**1.63**	**0.38**
Cake of Rapeseeds	**1.27**	**0.39**	**0.96**	**0.26**
Oil of Rapeseeds	**2.96**	**0.83**	**1.95**	**0.55**
Sesame Seeds	**0.84**	**0.14**	**0.66**	**0.09**
Oil of Sesame seeds	**0.77**	**0.14**	**0.41**	**0.09**
Cake of Coconuts	**3.87**	**0.74**	**2.54**	**0.86**
Onion	**0.84**	**0.09**	**0.78**	**0.33**
Potato	**0.93**	**0.33**	**0.45**	**0.13**
Apple	**2.03**	**0.36**	**1.63**	**0.25**
Banana	**0.51**	**0.44**	**0.33**	**0.10**
Pepper	**1.04**	**0.08**	**1.03**	**0.11**
Rubber	**1.28**	**0.34**	**1.34**	**0.58**
Cotton	**0.77**	**0.18**	**0.77**	**0.18**
Jute	**1.81**	**1.67**	**1.14**	**0.31**
Tobacco	**0.30**	**0.06**	**0.40**	**0.04**
Soya bean	**0.92**	**0.15**	**1.27**	**0.36**
Cake of Soya bean	**0.97**	**0.06**	**1.19**	**0.34**
Oil Of Soya bean	**1.33**	**0.62**	**2.50**	**0.42**

Source: FAO Data interpretation.

The NPC is a ratio shows the trading agri-commodity is exportable or Importable (NPC= $\mathbf{P\,i^{d} / P\,i^{w}}$)

$\mathbf{P}_{\mathbf{i}}^{\ \mathbf{d}}$ = Domestic price of commodity i. $\mathbf{P}_{\mathbf{i}}^{\ \mathbf{w}}$ = World reference price of commodity i, adjusted for transportation, handling and marketing expenses.

Here, **NPC < 1** indicates the commodity is exportable and **NPC > 1** indicates that the commodity is importable. Other than some notable cases like Ground Nut, Sesame Seeds, Onion, Potato, Banana, Cotton, tobacco and Soya bean most other agricultural trading commodities remained in higher than unity value in the Post WTO period. The value of NPCs of mostly all commodities has gone down in Post WTO period comparing to the Pre WTO era.

Yearly average Growth Rates of Yield per Hectare of Major Agricultural Commodities.
Table 10

Agricultural Commodities	Pre Liberalisation Period		Liberalisation & Post liberalization Period			
	1968-1981	1981-1991	1991-1998	1998-2004	2004-2008	2008-2012
Wheat	3.3	3.6	2.8	0.7	-0.3	3.0
Rice	2.7	3.0	1.4	2.1	1.2	2.2
Jowar	2.9	3.2	1.3	0.2	2.1	3.1
Bajra	6.3	8.8	6.2	4.9	7.3	8.4
Maize	1.7	4.1	2.6	3.1	-0.2	6.5
Coarse Cereals	1.5	3.1	4.3	1.3	1.7	7.3
Pulses	-0.2	2.3	1.9	-0.3	0.6	2.7
Oil Seeds	0.8	4.8	3.3	0.4	3.5	5.4
Cotton	2.6	5.3	3.1	-6.3	19.4	3.9
Sugarcane	3.1	1.3	0.4	0.3	0.7	0.5

Source: Ministry Of Agriculture, Govt. of India 2011-12.

From the above table we can see other than Wheat, rice and sugar growth rates of other major agricultural commodities has shown positive trends including jawar, Bajra, Maize, Coarse Cereals, Pulses, Oil Seeds, Cotton etc in the Post WTO period.

Compound Growth Rates of Imports & Exports of major agricultural trading Commodities in India.
Table 11 **(Exports)** **(Imports)**

Exports of Major Agricultural Commodities	Year Wise Data		Imports of major Agricultural Commodities	Year Wise Data	
	1985-1994	1995-2004		1985-1994	1995-2004
Rice	12.5	60.32	Rice	36.5	-28.02
Wheat	48.60	-62.96	Wheat	-24.84	119.45
Coffee	2.5	8.78	Sugar	1.72	200.03
Tea	-1.24	-0.6	Linseed	0.42	-19.49
Sugar	-37.62	-12.55	Linseed oil	18.99	-18.72
Cashew	4.48	5.32	Rapeseed/Mustard Oil	-33.25	55.58
Ground Nuts	-2.67	36.70	Soya bean oil	-25.81	89.15
Cake Of Ground Nuts	-6.78	-21.80	Cotton	35.52	65.81
Cake Of Rapeseeds	33.9	-8.18	Jute	-1.80	22.10
Sesame Seeds	24.92	5.45	Rubber	25.51	-4.72
Cake Of Sesame	-4.6	-59.15	Ginger	-20.51	15.51
Cake Of Soya bean	24.21	10.03	Tobacco	13.74	43.56
Cake Of Sunflower	21.24	-50.21			
Tobacco	-5.49	6.04			
Cotton	-6.57	-20.69			
Jute	-8.06	2.65			
Onion	4.53	-0.99			
Potato	-10.25	26.49			
Apple	3.07	4.21			
Banana	22.93	35.63			
Rubber	-12.03	63.57			
Pepper	5.18	4.53			
Ginger	0.63	3.99			

Source: FAO Statistics

From the above table it is visible that Compound Growth Rates of Exports of major Indian Agricultural trading Commodities including Rice, Sugar, Ground Nuts, Apple, Banana, and Rubber & Ginger has gone up, where of cake of Rapeseeds, Cake Of Sesame, Wheat, cakes of Soya bean, cake of Sun flower, Cotton & onion has gone down during this period. In case of compound growth rate of Import has gone up for Sugar, Wheat, Rapeseeds, mustard Oil, Soya bean Oil, Cotton, Jute, Ginger and Tobacco considerably.

Major findings

Compound annual Growth Rates of Exports of major agricultural trading Commodities in India.

Table 13

Major agricultural Commodities	Pre WTO	Post WTO	Major Change
	1981-1994	1995-2012-13	
Coffee	12.9	6.1	Negative
Tea	9.1	6.4	Negative
Tobacco	7.4	13.1	positive
Cashew	12.3	6.3	Negative
Spices	11.8	16.3	Positive
Sugar	-0.6	22.4	Positive
Fish	18	8.3	Negative
Fruits & Vegetables	6.5	18.5	Positive
Rice	-7.1	8.5	Positive
Wheat	24.9	4.2	Negative

Source: Ministry Of Agriculture, G.O.I.

In table 13 we can see the major Indian agricultural trading commodities like Tobacco, Spices, Sugar, Rice, Fruits & vegetables have shown much higher growth rates in Post WTO period and Tea, Coffee, Cashew nuts, Fish, Wheat have shown lower growth momentum in post WTO period as compared to Pre WTO period.

Comparison of Pre & Post WTO period in Average Annual Growth Rates of Major Indian Agricultural Commodities in Yields per Hectare:

Table 14

Agricultural Commodities	Pre Liberalisation Period 1981-1991	Early Liberalisation Period 1991-1997	Post 1997-2002	Liberalisation 2002-2007	Period 2007-2012
Wheat	3.6	2.8	0.7	-0.3	3.0
Rice	3.0	1.4	2.1	1.2	2.2
Jowar	3.2	1.3	0.2	2.1	3.1
Bajra	8.8	6.2	4.9	7.3	8.4
Maize	4.1	2.6	3.1	-0.2	6.5
Coarse Cereals	3.1	4.3	1.3	1.7	7.3
Pulses	2.3	1.9	-0.3	0.6	2.7
Oilseeds	4.8	3.3	0.4	3.5	5.4
Cotton	5.3	3.1	-6.2	19.4	3.9
Sugarcane	1.3	0.4	0.3	0.7	0.5
Crops & Livestocks	3.3	3.3	2.6	2.5	3.8

Source: Ministry Of Agriculture, G.O.I.

In table 14 growth rates in (gross value of output) yield per hector of major Indian agricultural commodities has been forecasted with Comparison has been made between Pre & Post WTO eras. The major finding is 1. Growth of output in Crops & livestock's has been found much higher in Post WTO period as compare to Pre WTO period (example- Particularly 11th five year plan the growth rate was 3.8 % average per annum). 2. Food grains, Oil seeds, Fibers grew much faster than expectation in the post WTO period from Pre WTO period. But Growth of Forestry was much slower.

Export Performance of Indian Major Agricultural Commodities in the Last Few Years

Table 15 Quantity: in Million Tones

Year Wise Export Performance Of Major Indian Agricultural Trading Commodities	Total Quantity	Money Value ((Rupees in Crores)
2010-11	1,15,67,563.11	42,437.45
2011-12	1,98,10,216.80	83,485.29
2012-13	3,01,72,968.00	1,18,254.78
2013-14	3,00,01,358.04	1,36,920.07
2014-15	2,71,32,966.78	1,31,333.48

Source: Ministry of Commerce & Industry, G.O.I.

General Findings:

Agricultural Commodities with High/Moderate Export Growth taken place during the last two decades	Agricultural Commodities with High/Moderate Import Growth taken place during the last two decades	Agricultural Commodities with reducing Export Growth taken place during the last two decades	Agricultural Commodities with declining Import Growth taken place during the last two decades
Rice, Groundnuts, Tobacco, Cake of Soyabean, Potato, Banana, Ginger, Cashew and Pepper	Wheat, Sugar, Edible oils, Jute, Ginger, Tobacco	Onions, Tea, Wheat, Cake of Groundnuts, Cake of rapeseed, Cake of sesame, Cotton	Rice, Rubber and Linseed oil

Table 15 shows that Export in agricultural commodities in India during the year 2010-11 to 2014-15.The agricultural commodities exports of India were increased to Rs 1, 36,920.07 crore in 2013-14 from Rs 42,437.45 crore in the year 2010-11.Which shows Export Growth rates of agricultural commodities were high in India after 2012-13. India has become a good food grain exporter today as compare to pre WTO period.

A Comparison of Indian agricultural Export Performance in all Agricultural Commodities

Table16 (Money Value is Expressed in US Dollar in millions)

Year Wise Comparison Of Indian Agricultural Export.	Total Agricultural Export of all Agricultural trading Commodities	Unit value Based index (1993-94)	Export Of Agricultural Commodities		Index of Export (Base 1994-95)
Pre WTO					
1980-81	7885	23	34283		31
1984-85	9645	36	26793		38
1987-88	9883	41	24104		95
1990-91	18145	62	29266		116
1992-93	18537	89	20828		82
1994-95	26331	104	25318		100
Post WTO					
1996-97	33470	106	31575		125
1999-2000	36822	127	28994		115
2002-2003	52719	131	40244		159
2005-2006	103091	165	61363		242
2008-2009	185295	194.05	95488		377
2009-2010	178751	195.95	91223		360
2012-2013	2,30,141	231	98567		384

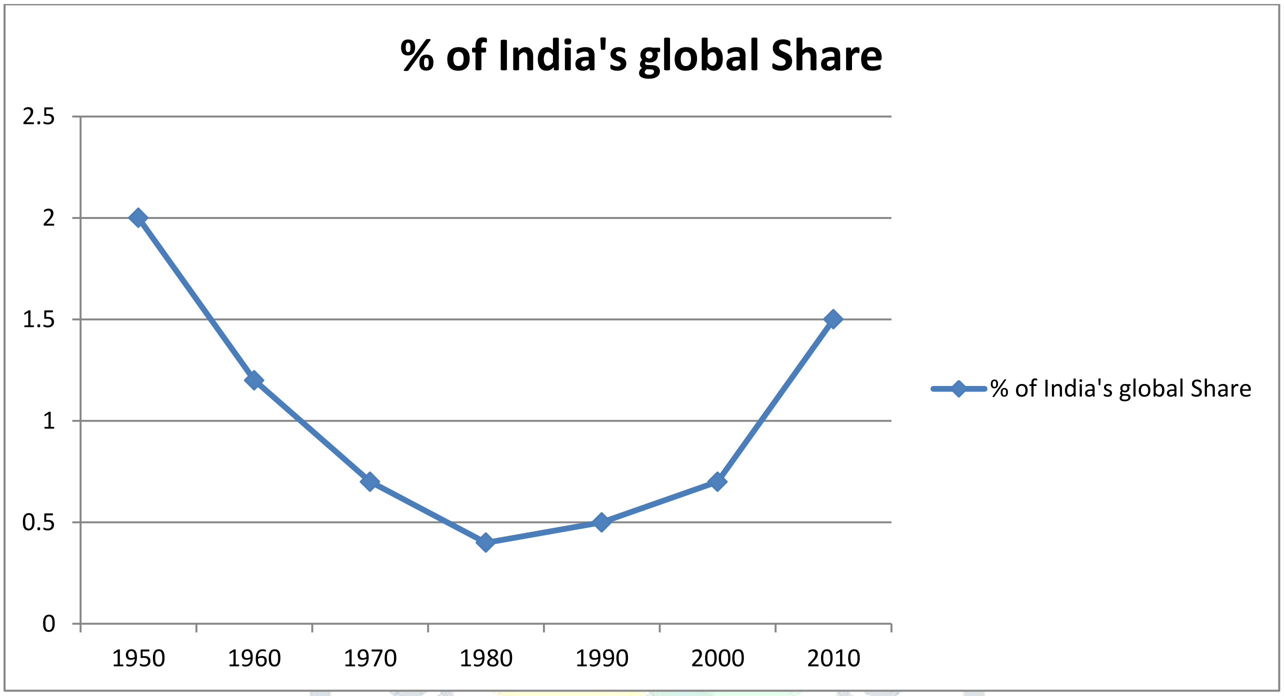
Source: Government of India, Economic Survey.

The above table explains that the annual growth of exports has increased to **9.5** % in the post-WTO period from on an average of **-2.8** per cent during pre-WTO period. The total Indian Export had increased to US $ 50163 million as compared to US $ 27242 million during pre WTO period. So from the above table it is clear that the impact of WTO on export of agricultural commodity is positive.

Table 17 **Percentage of India's Share in agricultural export Globally**

Year	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**2005**	**2009**
% of India's Share	**2.0**	**1.2**	**0.7**	**0.4**	**0.5**	**0.7**	**0.8**	**1.5**

Source: Agricultural Data, Indian Five year plan book.



The above graph shows Percentage of India's Share in agricultural export Globally

If we compare Pre & Post WTO era on percentage share of Indian Agricultural export on decadal basis we can see from the above table 17 that though initially after independence India's share was 2% in the global export but gradually it declined and became less than 0.5% in the pre WTO period but it rose sharply in the Post WTO regime to 1.5 % in the 11th five years plan.

Conclusion:

The world average GDP ratio of agriculture is around 6.1 % where India has 17.8 % share of agriculture of its big GDP and around 50% of its population is employed directly or indirectly in it. Total of India's 70 % land is used in agriculture and about 13.2% of India's Export out of its total export is from agriculture. So the studies of Impact of WTO, AOA and post liberlisation phase on Indian agriculture & agricultural trade is enormously important today. What we have came to notice of a small study on comparison of Indian agricultural trade in pre & post WTO is more or less positive in both domestic annual or decadal average in growth of agricultural production and annual compound growth in export in agricultural commodity trade.After comparing Pre & Post WTO regime's impact on Indian agricultural trade we can say that certain Agricultural Export Commodities like **Different Spices, Tobacco, Fruits & Vegetables, Sugar, Rice, Ground Nuts, Cake of Soya bean, Potato, Banana, Ginger, Cashew & Paper** have shown good rise in Export, while Commodities like **Wheat, Coffee, Tea, Onion, Fish, Cake of Rapeseeds, Cotton** showed declining or negative annual compound Export growth. The Indian Agricultural sector is expected generate job or employment opportunities for millions of people and export opportunities for traders as it becomes sustainable and globally competitive. The role of the government is very important in doing so.

Recommendations:

The Indian agricultural sector after WTO and post liberalization period has been changing structurally, which poses both risks & opportunities for India in many ways. So India Should carefully make Economic and developmental strategies for Agricultural sector in order to take advantage fully out of this Liberalized World market where it has comparative advantage in many sectors. These strategies may involve **Structural reform in Agricultural Infrastructure by making it more competitive in the world level, rapid agricultural growth momentum, development of Marketing strategies , Domestic Support, & most importantly huge public investment in agricultural sector and Social support schemes which may induce private investment too.** The private sector investments will supplement public investments and together may help growth of this sector and make it competitive globally.

References:

[1] Alagh, Yoginder. K., 1994, Macro Policies for Indian Agriculture, in FAO**,** *Economic Liberalization and Indian Agriculture,* New Delhi, ISID, pp 23-54

[2] Aleandros, Nicos, 1993. Agriculture: Towards 2010, Rome: Food and Agriculture Organization of United Nations.

[3] Anderson, K. and R. Tyres (1993): “More on Welfare Gains to Developing Countries from Liberalising World Food Trade,” *J. of Agr. Econ.*, Vol. 44, No. 2, May, pp: 189-204.

[4] Bansil, P.C 1999. Demand for Food Grains by 2020 A.D,Observe Research Foundation, New Delhi.

[5] Deepika, M.G. and R.S.Deshpande, 2003. Trade Policy and Determinants of Trade in Agriculture. Working Paper No.18,

[6] Deshpande R.S. 2003a. AOA: Inertia from Uruguay to Cancum via Doha,Monthly Economic Digest, Vol. 32(8).

[7] Gill, S.S. and J.S. Brar (1996): “Global Market and Competitiveness of Indian Agriculture: Some
[8] Issues,” *Economic and Political Weekly*, August 10, p. 2175.

[9] GOI (www.goidirectory.nic.in)

[10] Government of India, Planning Commission, 2011, *Issues for Approach to the 12th Five Year Plan,* Power
[11] Point, 21 April 2011.

[12] Gulti, Ashok and Anil Sharma, 1994. Agriculture under GATT: What it holds for India”, *Economic and Political Weekly*, Vol. 39, No, July 16, pp.1857-1863.

[13] Kurvila, Anil (200I), Freer Agricultural Trade in India - Impact on Agricultural Growth Poverty and Prices, Ph. D Dissertation submitted to the Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbotore.

[14] Ministry of Commerce (www.commerce.nic.in)

[15] Nilotpal, Pratyush (2000), “India and WTO-A Study of the Impact on Indian Economy, “New Delhi, Cipra Books.

[16] Ruddar Dutt, Sundaram K.P.M, 1999. Indian Economy”, S.Chand and Company Ltd, New Delhi.

[17] Rao, C.H.Hanumantha, 1994. Agricultural Growth, Rural Poverty and Environmental Degradation in India. *Oxford & IBH Publishing Co*. Pvt. Ltd. New Delhi.

[18] Rao,C.H. Hanumanth and Ashok Gulti, 1994. Indian Agriculture: Emerging Perspective and Major Policy Issues, *International Food Policy Research Institute (IFPRI),* Washington, D.C., U.S.A. (mimeo).

[19] Ranjendran, R. A. (2013),“WTO Agreements and Dimensions of India's Foreign Trade: Food Security, Water and Environment”, International Journal of Current Research, 26.

[20] Vyas, V.S. 1994. Agricultural Price Policy: Need for Reformulation”, in G.S.Bhalla (Ed.) (1994),Economic Liberalization and Indian Agriculture, Institute *for studies in Industrial Development*, New Delhi.

[21] World Bank (2013) “World Development Report”

[22] World Trade Organization 1998. India should keep up with its Trade Reforms to Ensure Strong Economic Growth, Press Release, April.

[23] World Trade and Development Report 2013: Cancun and Beyond. New Delhi

[24] WTO (1995): *The Results of the Uruguay Round of Multilateral Trade Negotiations - The*
[25] *Legal Texts*, http://www.wto.org/wto/legal/