GLOBAL IMPLICATIONS OF WORLD TRADE ORGANISATION

World Trade Organization (WTO) is the only international body dealing with rules of trade between nations. At its heart are the WTO agreements negotiated and signed by the bulk of the world's trading nations. These documents provide the legal ground rules for international commerce. They are essentially contracts, binding governments. To keep their trade policies within agreed limits. The goal is to help producers of goods and services exporters and importers conduct their business.

Main purpose

- To help trade flow as freely as possible by promoting multilateral trading system and by removing obstacles.
- To provide a forum for trade negotiations involving considerable debates and deliberations.
- To provide neutral procedure based on an agreed legal foundation for settlement of trade disputes.

India is a founder signatory with countries for establishing the General Agreement on Tariff and Trade (GATT) in 1948. This GATT is now transformed into permanent World Trade Organization (WTO), by signing of Multilateral World Trade Agreement (WTA) by India along 124 nations in April 1994. Agriculture on Agreement (AOA) came into force on 1st January 1995. The purpose of the agreement is to remove the trade barriers and help facilitating free and market oriented international trade in agricultural products. It has a 10-year implementation period from 1995 to 2004 for developing countries.

The need for liberalization in the world trade in agriculture was felt due to extensive use of subsidy and the protectionist measures practiced by the developed countries, which led to distortion in the prices of agricultural commodities throughout

the post World War period. As a result, the poor and developing countries like India were finding it difficult to have access to the markets of agricultural products in the developed and developing countries. Further given the intrinsic competitive advantage of the developing countries in agriculture, as well as their dependence on agro-exports for bulk of their export earnings, a restrictive global trade regime in agriculture has been one of the most effective barriers to sustained acceleration of agricultural production and export in the third world countries.

Table -1: Agriculture trade of India before and after WTO (US $ million)

India	**1991-94 Before WTO**	**1995-98 Start of WTO**	**1999-2000 After WTO**
Export	3,085	5,557	5,087
Import	1,336	2,711	3,699
Net trade	1,749	2,846	1,388

Source: FAOSTAT database

In case of India, agricultural exports as well as imports followed substantial increase till 1998 after which exports fell by about 10% and imports increased 37%.

Table - 2: Generalizes the summary impact of the WTO AOA on agricultural trade of South Asian countries

Country	**Impact on Import**	**Impact on Export**	**Net impact**
Bangladesh	Highly adverse	Highly adverse	Highly adverse
India	Highly address	Adverse	Adverse
Pakistan	Favorable	Slightly adverse	Slightly favorable
Sri Lanka	Slightly favorable	Slightly favorable	Slightly favorable
Nepal	Favorable	Favorable	Favorable

India's trade surplus, which increased from $ 1.7 billion in the early nineties to $ 2.8 billion by 1998, dropped to $ 1.388 billion in the post WTO period. Thus, India

also witnessed an almost similar impact of the WTO on agricultural trade as Bangladesh.

Table-3: India at WTO meeting

No.	Place of Meeting	Year	Outcome	India's Role
1	Singapore	1996	Information technology agreement was signed. In addition, four new issues were discussed. Trade and investment, competition policy, Transparency in Government procurement, and trade facilitation	Mere presence
2	Geneva	1998	Global E-commerce agreement was signed. Also the implementation issues were discussed.	Mere presence
3	Seattle	1999	The negotiations failed as several developed countries wanted to incorporate environmental and labour-standard related issues under the wings of WTO. The move was strongly opposed by the developing countries.	Was vocal against the introduction of environ-mental and labour standard related issued under WTO
4	Doha	2001	A new round was launched and the concerns of developing countries like India (e.g. TRIPS and Public health) were attended. Market access and implementation issues were also given due notice.	Mostly signed out in its protest. However, made its presence and position felt for the first time.
5	Cancun	2003	The members could not arrive at a common viewpoint even at the last date	Actively protested against

			of the conference. The Ministerial decided to take stock of progress in negotiations and other work under the Doha Development Agenda. The developing country solidarity at the Ministerial was formed for the first time.	EU-US draft on agriculture jointly with other developing countries.
6	Geneva	2004	Five member countries came forward to cease an atmosphere for initiating multilateral negotiations once again.	Played a constructive role in the process while protecting developing country interests.

Source: Complied from WTO Ministerial Declarations and other documents.

The trading of agricultural produces/farm produces at global trade organization is yet to be agreed by the WTO members. The meeting of delegates of the different member's countries was held at Geneva/Sao Paulo. Doha Round held the initial round of WTO talk. The suitable agreement of the WTO is to make sure adequate safe guard to protect the livelihood concern of its 650 million farmers besides food securities of the poor. The future of the farming of minor forest produces and medicinal plant produces of India are at present depended on outcome of WTO talk (At Geneva). Trade diplomats at Geneva are farming the principles based on which global farm trade would be opened.

1) Market access restriction

All measures, which restrict imports, are considered as market access restrictions. They can be in the form of tariff barriers or quantitative restrictions.

Simple import duties, variable import duties, quota system, tariff rate quota, requirement of license are examples of market access restrictions.

2) Domestic farm support

Agriculture has been a very important field of occupation and livelihood around the world. The farmers of the nations where greater domestic support is available can have an edge in the market by selling their products at lower prices. As such farmers have been supported by the governments through various support measures as market support price, subsidies on inputs like fertilizers and electricity, lower rate of interest on farm loans, government expenditure on agricultural research, providing extension services, etc.,

3) Export subsidies

Farmers are provided direct or indirect subsidies to export their products in many developed countries. The farmers are in a position to produce more domestic supports and hence there can be huge surpluses, which are required to be sold in the international markets. In order to encourage sales heavy export subsidies are given which leads to artificial suppression of prices at the disadvantage of other competitors, who may not have the benefit of high subsidies. The depressed international prices of agricultural products may conduce to raising of tariff levels in importing countries in order to protect their farmers. Thus the entire trade gets distorted, as export subsidies is considered a powerful trade barrier.

Thus, the proposed agreement is based on three pillars of which would be in main agenda of trade opening talks:

1) Lowering the Imports Duties

2) Cutting domestic farm support

3) Phasing out Export subsidies.

The countries are required to reduce their tariff and non-tariff barriers in a time bound program. Different types of support provided to the farmers are classified in three Boxes.

1. Amber Box
2. Green Box
3. Blue Box

Amber Box

All the subsidies in this box are considered as trade distortion, as they directly influence the market prices. They also create an impact on farmer's decision about choice of crop to be produced and quantity to be produced by them. It is assumed that farmers enjoying such subsidies have edge by quoting lower prices in the market. Input subsidies for fertilizers, electricity, lower rate of interest on loans, market price support are taken into account in calculating Aggregate Measure of Support (AMS).

Green Box

Subsidies which are supposed to have no or minimum trade- distorting effects are exempt from reduction commitments and they are not subjected to any upper limit.

Blue Box

Under this box, include direct payment given to the farmers in the form of deficiency payment. In countries like USA, the difference in the government's minimum price support and the market price is paid directly to the farmers. Direct payments to farmers for limiting their production.

The provisions of Blue box has been criticized recently by many developing countries and also by developed countries like Australia and New Zealand.

Table-4: Reduction commitments under AOA

	Developed countries	**Developing countries**	**Least Developed countries**
Market access restriction	Reduction in 6 years by an average of 36%. Minimum reduction in each product should be 15%	Reduction in 10 years by an average of 24%. Minimum reduction in each product should be 10%	No reduction commitments
Domestic farm support	Reduction in 6 years by an average of 20%	Reduction in 10 years by an average of 13%	
Export subsidies	Reduction in 6 years by an average of 36%	Reduction in 10 years by an average of 24%	
	The quantity of subsidized exports to be reduced by 21%	The quantity of subsidized exports to be reduced by 14%	

The last meeting of UNCTAD was held at Sao Paulo. It is true that Indian farmers can compete western farmers but Indian farmers cannot compete against the Western Governments, related to WTO.

Agriculture: Fairer markets for farmers

- The Agreement on agriculture would help to reform trade in the sector and make policies more market oriented

- The new rules and commitments apply to market access through removal of various trade restrictions pertaining to imports. Domestic support in the form of subsidies and other methods used to make exports artificially competitive.
- The agreement does allow governments to support their rural economies but preferably through policies that cause less distortion to trade.
- Developing countries do not have to cut their subsidies on lower tariffs as much as the developed countries.
- Interests of the least developed net importing countries are also given due consideration.
- Interests of the least developed net importing countries are also given due consideration.
- Developing countries world reduce the tariff by an average of 36% in equal steps over six years. Developing countries would do so by 20% over 10 years. Least developed ones have not make any tariff cut.
- For producers who's non-tariff restrictions have been converted to tariffs, governments are allowed to take special emergency actions (safeguards) for preventing failing prices or surges in imports form hurting their farmers.
- Four countries, used "special treatment" provisions to restrict imports of sensitive products mainly rice, during the implementation period but with minimum excess for overseas suppliers. These countries are Japan, Korea and Philippines for rice and Israel for meat, whole milk powder and cheese.

Recommendations

WTO : Challenges and Opportunities

- Easy transfer of technology – transfer of better technology
- Facilitate shift from technology seeker to technology provider
- Membership of China will help to reduce dumping
- New market accessibility
- Indian agricultural producers can become major force
- Export market will open up for milk and dairy based industry
- Indian software firms can move up the value chain
- Positive environmental impact
- Further impetus for FDI
- Indian technical manpower will have better market value.
- Traditional knowledge, bio-plasms and livestock can be protected.

Overall impacts on Agriculture and farm sector (Medicinal Plants)

- Indian manufacturers capabilities can be better utilized
- Protection for traditional knowledge
- Plant varieties also protection
- Indian scientists can now develop and market new strains of crops
- Better prices for Indian plant produce (seeds)
- Can boost Indian plant breeders, farmers and agri scientist and may receive adequate recognition and awards
- Better market access- better prices for farmers- developing countries do not have to cut subsides
- Indian competitiveness will rise

- Indian companies have to become global majors. Faster technology developments and adoption would be needed in order to compete effectively in the international market

It seems to be the poor countries economies rely on agriculture and rich countries, though fully industrialized, still cherish it. None of them wants to make sustainable, unilateral cuts to their systems of protection. Concerns about hurting cancun by hampering trade have long taken a back seat to the wist of the vocal domestic farm lobby.

"A human being cannot own its own mother. Humankind is part of Mother Nature, we have created nothing and so we can in no way claim to be owners of what does not belong to us". This has been purposed by one of the groups around the world that nobody can own what exists in nature except nature herself. No patenting for the life forms has become the major issue to be amended carefully in the article 27.3b1 of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) of the World Trade Organization (WTO) Agreements.

According to them knowledge-rich companies and researchers from the developed world have been attracted to the wealth, the poorer countries have in their biodiversity and the traditional knowledge systems. The group believes that the western legal property regimes would be imposed and contradicting their own cosmologies and values. They regretfully addressed that Article 27.3b1 of TRIPS of WTO Agreements would denigrate and undermine their rights to their cultural and intellectual heritage, plant, animal, and even human genetic resources and discriminate against their indigenous ways of thinking and behaving.

Article 27.3b1 of TRIPS

- As this Article makes an artificial distinction between plants, animals, and micro-organisms and between "essentially biological" and "microbiological processes" for making plants and animals. The group has the concerned that all these are life forms and life creating processes which are sacred and which should not become the subject of proprietary ownership.
- The various implications of TRIPS Agreement are to lead to the appropriation of the traditional medicinal plants and seeds and the indigenous knowledge on health, agriculture and biodiversity conservation. But doing so it would undermine food security, since the diversity and agricultural production on which the communities depend would be eroded and would be controlled by individual, private and foreign interests.
- Further, it would substantially weaken the access to lands and control over genetic and biological resources; plunder the resources and territories; and contribute to the deterioration of the quality of life.

The group proposes that revised article 27.3 (b) of the TRIPS Agreement should be amended to categorically disallow the patenting of life forms.

- It should clearly prohibit the patenting of plants and animals including all their parts, meaning, genes, gene sequences, cells, proteins, seeds, etc.
- It should also prohibit the patenting of natural processes involving the use of plants, animals and other living organisms and their parts and processes used in producing variations of plants, animals, and micro-organisms.

- The provision for the protection of plant varieties by either a patent, a *sui generis* system, or a combination of both should amended and elaborated further disallow the use of patents to protect plant varieties.
- Ensure that the *sui generis* system which may be created will protect the knowledge and innovations and practices in farming, agriculture, health and medical care, and conservation of biodiversity of indigenous peoples and farmers.
- Build upon the indigenous methods and customary laws protecting knowledge and heritage and biological resources.
- Ensure that the protection offered to the indigenous and traditional innovation, knowledge, and practices are consistent with the Convention of Biological Diversity (i.e. Articles 8j, 10c, 17.2, and 18.4) and the International Undertaking on Plant Genetic Resources.
- Allow for the right of indigenous peoples and farmers to continue their traditional practices of saving, sharing, and exchanging seeds; and harvesting, cultivating, and using medicinal plants;
- Prevent the appropriation, theft, and piracy of indigenous seeds, medicinal plants, and the knowledge around the use of these by researchers, academic institutions, and corporations, etc.
- Integrate the principle and practice of prior informed consent, which means that the consent of indigenous people as communities or as collectivities should be obtained before any research or collection of plants will be undertaken. The right of indigenous peoples to veto any

bioprospecting activity should be guaranteed. Mechanisms to enforce prior informed consent should be installed.

- Prevent the destruction and conversion of indigenous peoples' lands which are rich in biodiversity through projects like mines, monocrop commercial plantations, dams, etc. and recognize the rights of indigenous peoples to these lands and territories.

Thus, the group urges to put the amendment of the TRIPS Agreement as a priority item in agenda in the ministerial conference otherwise the implementation of the TRIPS Agreement in its present form will have devastating social and environmental consequences which will be irreversible. It is an imperative, therefore, that this Agreement be amended to prohibit the patenting of life forms and the piracy of indigenous peoples knowledge and resources.

Intelluctual Property Rights in TRIPS agreement:

- The existing Intellectual property rights systems are oriented around the concept of private ownership and individual invention. IPR as defined in the TRIPS Agreement are monopoly rights given to individual or legal persons (e.g. transnational corporations) who can prove that the inventions or innovations they made are novel, involve an innovative step and are capable of industrial application. The application of this form of property rights over living things as if they are mechanical or industrial inventions is inappropriate. There is a concern that IPR systems encourage the appropriation of traditional knowledge for commercial use without the fair sharing of benefits, or that they violate indigenous cultural percepts by encouraging the commodification of such knowledge.

Indigenous knowledge and cultural heritage are collectively and accretionally evolved through generations. Thus, no single person can claim invention or discovery of medicinal plants, seeds or other living things.

Finally, the group reiterates their commitment to sustain their struggle to have their rights to their intellectual and cultural heritage and lands and resources promoted and protected. They suggests WTO to become an instrument in promoting the rights instead of enacting and imposing Agreements which are violate or undermining the rights as distinct peoples.

While other group argued that the access to such biodiversity and community knowledge by the industrially developed nations is necessary for the larger welfare of mankind as this advances knowledge and leads to new products which contribute to the well being of global consumers.

In Indian scenario:

Medicinal plants represent not only a valuable part of India's biodiversity but also a source of great traditional knowledge. The local communities or individuals do not have the knowledge or the means to safeguard their property in a system, which has its origin in very different cultural values and attitudes. In addition, there are power divisions as well as knowledge divisions among people in many communities, and sharing of benefits with community, as a whole is no guarantee that the people who are really conserving traditional knowledge and associated bio-diversity will gain the rewards they deserve for their efforts. India is behind the rest of the world in patents both quantitatively and qualitatively. The continued illiteracy and confusion

about patents is a serious matter. Our pool of knowledge that is protected by patents, even in areas which we have a competitive advantage, is rather poor.

The need of the hour is:

- A policy that does not obstruct the advancement of knowledge, and provides for valid and sustainable uses and intellectual property protection with just benefits sharing.
- Geographical indications and trademarks, or *sui generis* analogies, could be alternative tools for indigenous and local communities seeking to gain economic benefits from their traditional knowledge.
- It is generally difficult to attribute an objective economic value to the knowledge of local and indigenous communities, and associated resources for a number of reasons. One could be the absence of a market for genetic resources, and the complexity of inputs into creation, new crop varieties. It will be more pragmatic to focus on the costs of conservation to indigenous and local communities as a guide to designing economic incentives that will help them gain adequate rewards. Different interest groups such as industry intellectual property experts and indigenous and local peoples' organisations need to cooperate in order to define mechanisms for more effective sharing benefits with the providers of traditional knowledge and genetic resources.
- Many times, wrong patents are given in the area of medicinal plants the recent case of Jamun/Karela linked patent on diabetes is a point. Firstly, it must be understood that patent offices do make mistakes in checking the novelty of an invention because these usually look at their own databases. Therefore, the

chances of issuing wrong patent are quite finite especially when an application based on the indigenous knowledge is being examined in a foreign country. The knowledge, which may be in public domain in one country, may be a new knowledge in another country. An identical situation had existed in the famous turmeric patent. Therefore, it is expected that foreign patent offices would make mistakes in granting patents for the inventions based on the traditional knowledge in India and such numbers are to increase with time.

- Need to cooperate in order to define mechanisms for more effective sharing benefits with the providers of traditional knowledge and genetic sources.
- Document the indigenous knowledge related to Indian herbs and plants and their medicinal and other uses and convert it into easily navigable computerized databases for easy access. Once such databases are available, these can be put on to the proposed WIPONET for the benefit of IPR offices of many member countries. Urgent steps are required to be taken in this direction.
- The case studies related to turmeric, Jamun, Karela, etc. prove the basic point that sovereign rights as enshrined in the Convention on Biological Diversity are passing into private hands through patents.

Thus, Incorporating strong system of generation of IPR, documentation valuation, protection and its gainful use will need a massive trust. A weak physical infrastructure, inadequate documentation, poor public awareness and delay in framing and implementing policies would hurt India.

Internally in India the single and most important factor, which stands in the way of wider acceptance of herbal drugs, is the non-availability or inadequacy of

standards of checking and assuring their quality. This also prevents modernization or modifications of the methods of their preparation or production, as there is no way to establish the equivalence of the product made by the modified method with that of the original product. The main reason advanced for the difficulty in developing quality control standards is that most of these products use whole herbs, or parts of plants or their total extracts, and in some cases even a mixture of a number of plants. These drugs thus contains quite often a varied number and quantity of chemical constituents. It is challenging to develop suitable standards as a herbal drug or a preparation thereof is regarded as one active entity in its entirely, whether or not the constituents with therapeutic activity are known.

Quality assurance of a herbal drug and of a preparation thereof is not just an analytical operation, it does not end with the identification and assay of an active principle, rather it embodies total information and controls including documentation which are necessary to guarantee consistency of composition. Quality assurance includes quality standardization, quality production, quality testing and quality monitoring of a herbal medicinal product.

International agencies like WHO, the United Nations Industrial Development Organization (UNIDO), the International Center for Science and High Technology (ICS) and the Asia Pacific Centre for Transfer of Technology (APCTT) have emphasized on the need of ensuring quality control of medicinal plant drugs by applying suitable standards including modern techniques.

Variable situations exist in different countries with respect to regulatory aspects of herbal drugs, eg. In India and China with strong foundation of traditional medicines having nationally recognized parallel traditional systems along with

western medicines, countries, there is a move to give legitimacy to traditional healers whose medical practice has been the mainstay of local people, even after western medicine made its appearance and took firm roots.

In Europe and the USA, a new and growing consumer interest in the use of natural medicine opening burgeoning markets for health promotion products aimed at improvement of physical well being but not fully recognized by the drug authorities.

Quality control and standardization of herbal medicinal products involve several steps. However, the source and the quality of raw material as well as process of herbal medicinal plant products' production play a pivotal role in guaranteeing the quality and stability of herbal medicinal products.

The legal process of regulation and legislation of herbal medicines changes from country to country. In Indian scenario, Government of India has implemented Good Manufacturing Practices (GMP) under Schedule T of the Drugs and Cosmetics Act with effect from June 2000, which is mandatory for the manufacturing of Ayurvedic medicines for sale. GMP specify:

- Receiving /storing of raw material of plant, minerals, metals, animal and marine origin
- Specifications of the manufacturing process and factory areas
- Quality control section
- Finished goods store
- Rejected goods/drugs store
- Management office
- Working conditions of the workers

- Proper maintenance of machinery and equipment and related SOPs for manufacturing of Ayurvedic drugs is mandatory under GMP.

Several regulatory models for herbal drugs to the participants may further help in strengthening the regulatory mechanisms in their respective countries.

So there is a need to train drug regulatory personnel, faculty members from the institutes of Pharmacognosy, traditional medicines to acquire knowledge, skill and information for improving their medicinal plant product compliance to quality parameters and generating awareness about regulatory aspects to herbal drugs.