CHAPTER-V

WTO AND INDIAN AGRICULTURE

5.1 BACKDROPS

The Uruguay Round Agreement on Agriculture (URAA) had an in-built provision to review the experience of various countries in its implementation, and start fresh negotiations for further liberalization of agricultural markets. The committee on agriculture under the auspices of world Trade Organization (WTO) has already started work in this direction since March 2000.

The three pillars of the URAA, namely market access (tariffication), domestic support and export competition, are well known. It is also well known that during the negotiations of the URAA several nations went in for 'dirty ratification' or even 'dirty AMS ification' in spelling out the initial conditions of agriculture in their countries with respect to tariffication or domestic support (Hathanay, 1995; Pursell, 1999). As a result, it was widely recognised that during the first six years of its implementation, 1995; -2000, not much change can be brought about in world agriculture as far as the degree of real 'distortions' in support policies are concerned. The only success of the URA with respect to agriculture, perhaps, was to bring within its fold certain rules and regulations. The hope of streamlining the distortions in agriculture lies in negotiations that will follow now from March 2001 onwards. But to ensure that the world really moves on to a 'free and fair
trade' in agriculture, the developing countries like India have to engage themselves actively in these negotiations, spend time and resources to understand what is happening in world agricultural policies, especially in the developed countries. This would enable them to have better understanding of what should be their negotiating stand that can ensure prosperity for their agriculture and is also in line with the basic spirit of WTO for further opening up of world agricultural markets and reducing distortions.

5.2 INDIAN EXPERIENCE WITH IMPLEMENTATION OF URAA

1. Tariffication (Market Access)

Tariffication under the URAA implied conversion of all non-tariff barriers (NTBs) into equivalent tariff barriers. Once NTBs were tariffied a reduction in the base tariff structure was envisaged under a time bound programme-by 24 per cent over ten years in the case of developing countries and by 36 per cent over 6 years for the developed countries. The least developed countries were exempt for these reductions. In cases, where the bound tariffs were either too high, or tariffication was not done completely; there was a call to maintain current market access by domestic consumption of a particular product in the base year 1986-88. This minimum access was to be gradually increased to 5 per cent of base period consumption. Lower in-quota tariffs were to facilitate this access; and these tariff-quotas were to be established on a tariff line-by-line basis.
India committed for tariffication of 686 lines under the URAA at 6-digit, or sub-group of 6-digit, of HS classification. The bound commodities (HS codes 080211, 080212) whose bound rates were committed in the form of specific amount n Rs./Kg.

**QR Commitments**

In the Uruguay Round, it was decided to remove all types of QRs or prohibitions (other than tariff), whether maintained through quotas or import-export licenses. India had also agreed to phase out QRs on all commodities (agricultural and nonagricultural) except for around 632 commodities for reasons related to security, religion, etc. However, India maintained QRs on import of some more items (around 1429 tariff lines) under provisions of Article XVII: B of the URA until February 2000. In a recent report of the Appellate Body, it was recommended that 'India should bring its balance-of-payment restrictions, which the panel found to be inconsistent with Articles XI:1 and XVIII: 11 of the GATT 1994, and with Article 4.2 of the Agreements." As a result, GOI agreed to phase out QRs on the remaining 1429 lines in the budget for the FY 2000-01, and the remaining (715) were to by March 2001.

One another note, it is important to know that India having initial negotiating rights has renegotiated bound tariffs on 15 tariff lines with its major trading partners. These commodities range from rice, skimmed milk powder to coarse cereals like maize, sorghum, millet, and so on. These were major agro-commodities, and India was worried about the impact of lifting QRs on imports of
these commodities at zero import duty. Most of these commodities were bound at zero import duty earlier when agriculture was not under any strict discipline. But now, with the elimination of QRs, it was important to have some protective cover through import duties. It is worth noting here that in case of rice in its different forms and the renegotiated rate of other coarse cereals, the renegotiated rate is fairly high. For example, sorghum has 80 per cent, millet 70 per cent and maize 60 per cent (maize seed 0 per cent). In the case of maize, it is important to note that India has gone in for tariff rate quota (TRQ) system whereby a quota of maize ranging from 350000 MT in the first year to 500,000 MT in the fourth year, would be imported at a duty of just 15 per cent. TRQs have also been agreed in the case of two tariff lines of milk and cream powder whereby 10,000 MT of each of these lines would be importable at 15 per cent duty. After that, the duty can go up to 60 per cent. One wonders why India had to deviate from its early policy of going in for direct tariffication. Perhaps it was not in India's best interest.

The upshot of the discussion on tariffication is that, leaving apart some of the restrictive tariff lines, India has gone ahead unilaterally to reduce tariff barriers much below the bound rates selected edible oils whereas the bound rates of duty stipulated under URA.

2. **Domestic Support**

The domestic support to agriculture under the URRAA was quantified through a measure called the Aggregate Measure of
Support (AMS). The AMS is calculated on a product-specific basis for each basic agricultural product receiving market price support, non-exempt direct payments, or any other subsidy that is non-exempted from the reduction commitment ('other non-exempt policies'). Market price support is computed as gap between a fixed external reference price (based on years 1986-88, it is c.i.f. unit value in a net importing country adjusted for quality differences) and the applied administered price multiplied by the quantity of production eligible to receive the applied administered price. Budgetary payments made to maintain this gap, such as buying-in or storage costs are not to be included in the AMS.

A country whose product-specific and non-product specific AMS does not exceed 10 per cent of the total of agricultural product for a developing country (5 per cent for developed countries), is not subject to any reduction commitments. Country is committed to reduce domestic support; by 13.3 per cent in the case of a developing country over 10 years and 20 per cent in the case of a developed country over 6 years. It may be noted that the obligation is on total AMS and within that there is flexibility to choose products covered and extent of support measure and quantity of products that benefit from them.

It is important to observe that the procedure for estimating AMS is not fool proof. It has a lot of inbuilt ambiguity. As a result, the estimates of AMS can very widely depending upon which
reference prices and domestic prices one by production or only marketed surplus of the produce, and so on.

It may be noted that the estimates of domestic support to Indian agriculture have been negative in all the years, ranging from -28 per cent in 1997 to -65.8 per cent in 1992. Also, the estimates given here are different from the ones that are submitted by GOI to WTO, although both show negative AMS. The reasons for this difference are many. But the important ones are: one, the commodity coverage in GOI's estimates is different than what we have here; second, there are some major mistakes in Gol's estimates of AMS.

3. **Export Competition (Subsidies)**

India hardly provides any export subsidies in agriculture, except for a very small sum as freight subsidy for some horticultural products. However, there is a general exemption of export income from income tax, irrespective of whether the income is from exports of agriculture or non-agricultural commodities. Sooner or later, it would come under focus of WTO negotiations, which has escaped so far.

5.3 **INDIA'S PROPOSED NEGOTIATING AGENDA**

Given the above analysis, one could venture to spell out what could be India's agenda in forthcoming negotiations, which is rational and also protects its interests.
First, on the market access, India should propose the following:

- Abolition of tariff rate quotas (TRQs), and replacement of these TRQs by tariffs;
- Replacement of specific custom duties by ad-valorem duties;
- Cap all tariffs at a peak of, say, not more than 50 per cent right across the board, at 10 digit level;
- Replace the measure of support from AMS to PSEs; the negative product-specific support should be added to positive non-product specific support to get overall PSE;
- 'De-coupled' income payments must be counted as a part of support to agriculture subject to reduction commitments;
- Put a cap on the maximum PSE of, say, 40 per cent; the ceiling on product-specific support may be 320 per cent and on non-product specific support at 10 per cent;
- Reduction commitments should be on each product line and not on aggregate;
- Developing countries with a de-nims of 10 per cent PSE should have a right to impose countervailing duty on cent (to have a 'level playing field').
- Total elimination of export subsidy, within three years, failing which;
• Potential exporters like India should have the right to ask for compensation from subsidy giving exporting countries for the potential loss of their markets; non-subsidizing countries should also have the right to impose countervailing duty equivalent to the export subsidy by exporting nations.

All this agenda would be in the interest of developing countries like India, and would also be in line with the spirit of WTO, most ostensible in the name of reduction of distortions in world agriculture. If India can align with Cairns group and/or US, there are reasonable chances that export subsidies could be eliminated soon, and greater market excess provided by straightening out TRQs. The US stand may not be clear on the domestic support issue, especially in counting the 'de-coupled' income support as a part of reduction commitments. For this, India would have to work hard with the Cairns group, and may be incoming members like China. But that is definitely going to be a hard nut to crack, failing which India should bargain for the right to impose countervailing duties to protect its own agriculture from unfair competition. It needs to be re-iterated that it should be called countervailing duty (and not basic duty) to neutralise the distortions by the developed world.

5.4 IMPACT ON SEED INDUSTRY

The history of agricultural progress from the early days of man has been the history of new crops and varieties brought under cultivation. In the early days, this was achieved, through the
cultivation of indigenous but useful plants and those brought from foreign countries. Selection of superior types from cultivated plants constituted the next stage of progress. It was, however, with the advent were opened up and it became possible for man to manipulate the genetic composition of varieties to his advantage. Through the well-known techniques of selection, hybridization and polypolidisation, the scientist now make available new and better varieties to the farmers.

**TRIPS Agreement**

Soon after the WTO came into existence, the accord on Trade Related Intellectual properly Rights (TRIPS) had raised a whole range of apprehensions in the country. In particular, the patenting of seeds and genes generated a lot of controversy. Farmers were told that they would have to buy their seeds every year from the multinational seed companies like Pioneer, Sandoz, Cargill, etc. and that they could not exchange seeds with the fellow farmers. But a careful perusal of the GATT (1994) would reveal that some of these apprehensions are unfounded.

The TRIPS agreement covered eight types of intellectual property, viz., patent, trade mark, copy rights, industrial designs, integrated circuits, geographical indication, protection of undisclosed information and control of anti-competition practices in contractual licenses. Of these, it is only in the area of patents that the most serious controversy is going around in India, that the advanced countries have a distinct advantage and a decisive lead.
over the developing and the least developed countries and that the subject of TRIPS has been brought under the ambit of GATT on the insistence of the industrial world led by the USA, are good reasons for fuelling these apprehensions and controversies.

A patent is given for an invention. To qualify for a patent, an invention must satisfy three fundamental criteria, viz., it must be new, must involve an inventive step and be useful in industry or agriculture. An invention would be regarded as new only if it is not known or used or made public anywhere in the world before the filing of the patent application.

The TRIPS agreement did not require us to patent seeds. However, we would have to establish an effective system for the protection of 'plant varieties' seeds and other form of propagation material as obligated under the WTO's Plant Breeders's Rights (PBR) system. Under PBR, a plant variety would qualify for protection only if it fulfills definite criteria: 'novelty' (i.e., it must be new, not known or sold or used previously), 'distinctiveness' variety) and 'uniformity' (i.e., it must breed true to its essential characteristics through every generation).

We have to establish a PBR system by the year 2000 A.D. All the existing varieties of seeds and all new varieties of seeds that would come into the market till the PBR system is established, as well as all varieties of seeds for which protection is not ought or given under the new PBR system, would not be affected. In what is known as 'farmer's privilege.', a farmer is completely free to use the
farm-saved seed of a protected variety, for growing subsequent crops, either on his own land or on leased-in land or for traditional exchanges in the village community.

**Farmers' Sources of Seed**

Cereal farmers in developing countries often have three major sources of seed: seed purchases from a formal seed industry, seed obtained from other farmers and seed retained from the previous year's grain crop (Tetlay, et al., 1991). More than 85 per cent of the seed used in India is produced by the farmer himself (Banerjee, 1984). According to some estimates, the farmers in the agriculturally developed state of Punjab, use self-retained seed, to the extent of about 80 per cent, 62 per cent, 55 per cent, 59 per cent and 91 per cent in the case of wheat, paddy, cotton (A), rapeseed and mustard and potato, respectively. The next important source is fellow farmers. The quality of seed obtained this way was assuring because farmers often resort to barter exchange system (Sidhu, 1996). Moreover, it involves no transportation cost and fellow farmers also do not insist on immediate cash payment. The share of organized seed sector is meager on account of high price of certified seed and their non-availability in terms of proper place and time. The farmers also report that there is insignificant yield difference between certified and self-retained seeds of various crops (ibid). Keeping in view these facts, the Indian framers would continue to use self-retained seeds even under the W.T.O. regime both because Indian seed industry is basically a cereal based
industry and because in the case of self-pollinated crops like wheat, paddy etc., there is very slow degeneration in the quality of seed.

**Global Seed Sales**

The global seed trade is highly concentrated in the western industrialized countries. The global sales of improved seed was estimated at US$ 18 billion (excluding socialist countries) during the year 1986-87. A major share of the trade is in the hands of 26 multinational seed companies out of which five each are from the USA and Netherlands, seven from Japan, two each from Switzerland, Germany and Japan and three from England: None of these companies belong to the developing countries like India. In the exports from the USA, the most important exported seeds to developing countries are hybrid corn and sorghum, fodder crop seeds, seeds of soybean and vegetables. The exports from Europe consist of almost 50 per cent of vegetable seeds. The exports of seeds of basic food crops (rice, wheat, and pulses) from the industrialized countries are still very low, less than two per cent of the total seed exports to developing countries (Grooseman, 1993).

It may be mentioned here that Indian seed industry, is cereal based with a turnover of about Rs. 1000 crores, comprising mainly wheat and paddy seeds. The total certified/quality seed distributed in India during 1996-97 was 73.27 lakh quintals. Of this, the share of wheat seed was about 32 per cent, paddy about 23 per cent, other cereals' 9 per cent, pulses' 6 per cent, oil seeds 17 per cent,
cotton 4 per cent and potato seed 9 per cent. The multinational seed companies have little interest in these corps due to large volume and low value. In total terms, in all likelihood, TRIPS regime may have little impact on the Indian seed industry, which is predominantly cereal-based.

**Gap between Requirement and Supply**

There was a gap between the seed requirement and its supply to Indian farmers for the years 1995-96 to 1997-98 in the case of wheat, paddy, cotton, rapeseed and mustard and potato crops. The SMR is only 1:4 for potato in comparison to 1:100 for rapeseed and mustard, 1:80 for paddy, 1:50 for cotton and 1:70 for wheat (Govt. of India, 1989). The SMR of potato was the lowest and the gap was 91.77, 92.86 and 92.73 per cent during 1995-96, 1996-97 and 1997-98 respectively. Similarly, for wheat, which has a low SMR, the gap was 64.16, 66.38 and 67.58 per cent during these three years, respectively.

**Legislative Measures vis-a-vis W.T.O.**

The Government of India has initiated suitable steps to bring about legislation on the controversial issues of plant variety protection to safeguard the interest of farmers with regard to use and availability of seeds in the wake of the TRIPS. The five important features of the proposed legislation are:

- The farmer can choose the best seeds he likes;
• The farmer can save seed from one season/crop and use it for replanting in the next;
• The farmer can sell his surplus seed but not as branded seed as it is in case of protected variety;
• The farmer can also become whole time seed producer and sell protected seed as a commercial enterprise with the consent of the right holder; and
• Our scientists will be free to use all seed varieties, including protected varieties, for experiment and research for developing new varieties.

It is expected that under the proposed legislation, the Government of India will constitute a national authority for plant variety protection and protection of the rights of the breeders, farmers and researcher. The authority will be a purely professional body (Chawla, 1995). Seven ex-officio members of the authority will include the Chairman, Agriculture Commissioner, Horticulture Commissioner, Director, NBPGR, Director, Botanical Survey of India, etc. The authority will ensure proper maintenance of the national register of plant varieties (NRPV).

The fundamental issue in the entire debate on TRIPS is whether it is in India's interest to establish a system for the protection of plant breeder's right. The answer, clearly, is YES.

India has abundant plant breeding skills and it will be possible to develop a vibrant seed industry that not only meets
domestic demand but also makes India a player in the world seed trade. India's agricultural production can increase by 15 per cent to 20 per cent if high quality seeds are more widely available. Besides, India can, then, capture 25 per cent of the world seed market (Ganesan, 1994b).

However, right now, in the absence of a system for investment in plant breeding, investment in the seed industry is confined to hybrid seeds, high yielding varieties of ornamental and horticultural plants. Without a good and sound PSR system, private investment cannot be attracted to cereal crops. A plant breeder and a farmer are not adversaries and the former cannot succeed without ensuring the latter's success.

Above all, the slow-down in foodgrain production, particularly, during a large part of the 1990s, has serious implications for the Indian economy, particularly the agricultural sector. In the first seven years of this decade, the annual growth in foodgrain production was just 1.7 per cent, even lower than the population growth of 1.8 per cent during the same period. A number of measures are required to be taken to impart sustainable growth in Indian agriculture. The supply of high yielding quality seeds is the most crucial pre-requisite in this regard. The TRIPS regime will provide an opportunity to Indian agriculture in general, and seed industry, in particular.

In India, a preponderant majority of farmers use self-retained seed for most of the crops. The other important source is
exchanges with fellow farmers and relatives. Even under the TRIPS regime, the Indian farmers can continue to avail of this facility. In India, there is a well organised government seed research and distribution system, and a new entrant has to offer reasonably priced seed of proven quality to break into the India seed market. We have excellent plant breeding capabilities in the country. The ICAR is the apex organization for sponsoring, coordinating and promoting plant-breeding research in India. Our crop improvement programmes have been acknowledged not only in India but in many of the developed and developing countries, as evidenced by the utilization of some of our high yielding varieties and hybrids at the global level.

The TRIPS regime will provide an opportunity to the Indian farmers to get first rate seed technology, although, at a little higher price. This will give a boost to agricultural production in the country which has somehow shown a slow-down in recent years.

5.5 PROSPECTS OF INDIAN AGRICULTURE

Agreement on Agriculture (AOA)

The long term objective of establishing a fair and market oriented trading system in agriculture was sought to be achieved by the GAT agreement by bringing within its discipline the domestic support to farm sector, export subsidies, removal of non tariff barriers, conduct of trade relations under a system of transparent tariffs and minimum market access for agricultural commodity and sanitary and phyto-sanitary measures.
Implementation of AOA in India and its impact on wheat production and imports:

Studies conducted in India to evaluate support provided to farmers have concluded that Indian farm sector is net taxed. In particular, estimates of the Government of India, Bhalla and Singh (1996) and, Gulati and Sharma (1997) show that product specific support for wheat is negative. The minimum support price (MSP) for wheat has remained below the international price. During the years when India has been a net importer in wheat the extent of negative protection has been even greater. In the recent past with declining international wheat prices and sustained increases in MSP for wheat the price wedge has narrowed down. It is unlikely however that the MSP for wheat exceed the international wheat prices in the near future as any increase in MSP is likely to be offset by depreciation of the Indian rupee. Even at the current wheat price of around US $ 130 per tonne, India is not required to reduce product specific support for wheat as MSP is lower than the import parity price.

Non-product specific support in India has been positive and rising. The levels of support are considerably lower than these permissible under the WTO rules, while reduced expenditure on subsidies could release resources for capital formation in the agricultural sector, India's commitment under WTO does not require reduction in non-product specific support to agriculture.
As a developing member country India has bound, its tariffs for wheat at 100 percent and wheat flour at 150 per cent. It did not give any market access commitments on balance of payments (BOP) considerations. This was challenged in WTO. The dispute settlement body (DSB) of WTO had ruled that quantitative restrictions have to be removed, as India's BOP position was comfortable. Wheat is one of the commodities still subject to quantitative restrictions. The imports of wheat in India in the last five years on an average have been around one million tonne. These imports have been effected by the Government on considerations for food security and not because of the AOA. Even for "in quota imports" custom duty can be imposed upto the level committed by India in its schedule.

In view of the very clear enunciation of farmers rights in the Indian Plant variety legislation the existing system of seed procurement which largely depends on the seeds produced by the farmers themselves is unlikely to be effected. In a study of Punjab wheat seed system, Sidhu et. al. (1998) has found that even for a state like Punjab over 92% of total seed requirements were met by the farmers themselves. The commercial seed sources supplied only 8% of the required seeds. The seed replacement rates for wheat are also extremely low. As against a norm of seed replacement of 25% per annum the replacement rates achieved were less than 7% in 1992. The importance of price factor in small share of commercial seeds in total seeds and low seed replacement rates is not very significant. The seed cost in total variable cost of production for
major wheat growing sales of Haryana, Punjab and Uttar Pradesh was less than 10% as a proportion of total cost of production. It was less than 5% studies on appropriable benefits from newly developed seeds conducted outside India indicate that for self pollinating crops like wheat farmers were passed on over 90% of the incremental benefits to induce them to adopt the variety. The passage of plant variety protection bill in India therefore is unlikely to adversely affect the wheat production in the country. On the contrary it might lead to higher investment by private sector companies in research, distribution and marketing networks which might ultimately lead to availability of quality seeds on time and contribute to higher production.

5.6 IMPACT ON INDIAN AGRICULTURE AND INDUSTRY

WTO And Indian Agriculture

According to the AoA, the member countries have to lower the tariff rate on imports and subsidy offered to the domestic producers. In addition, they have to provide increased market access for their trade partners. The extent of reduction will depend on the economic status of the country. Regarding other forms of protection, it was stated that no country was allowed to impose non-tariff barriers (NTBs), except in few situations. They must calculate the tariff equivalent of the presently prevailing NTBs and gradually phase out these impediments to trade. Studies in the followed fields are authorized by WTO:
• Research; including general research, research in connection with environmental programme, and research programmes related with particular products.

• Pest and disease control; including general and product specific pest and disease control measures, early warning systems, quarantine and eradication.

• Training services; including both general and specialist training facilities.

• Extension and advisory services; including provisions of means to facilitate the transfer of information and results of research to producers and consumers.

• Inspection services; including general inspection services and inspection of particular products for health, safety, grading or standardization purposes.

• Marketing and promotion services; including market information, advice and promotion relating to particular produces but excluding expenditures for unspecified purposes that could be used by sellers to reduce their selling price or confer a direct economic benefit to purchasers.

• Infrastructural services; including electricity, roads and other means of transport, market and port facilities, water supply facilities, dams and drainage schemes, infrastructural works associated with environmental programmes.
In all cases, the expenditure shall be directed to the provision or construction of capital works only, and shall exclude the subsidized provisions of on-farm facilities other than the reticulation of the generally available public utilities. It shall not include subsidies to inputs or operating costs, or preferential user charges. Thus, the government can help the agricultural sector through several channels.

The export growth of India is possible owing to the fact that the tariff rates of different countries on primary products are falling.

India's conventional agricultural and primary export basket deserves attention. The main items among live animals and animal products are meat of bovine animals, aciced bones, and fish and related products. Among agricultural commodities, the noticeable items are onions, mango, pulp, cashew nuts, walnuts, tea, coffee, pepper, groundnuts, rice, castor oil and its fractions, sesamum seeds, and guar. And finally, among the prepared products, instant coffee, unmanufactured tobacco, oil cakes and raw cotton are the countable.

And now, the emerging export items of India include poultry products, honey, milk and milk products, live plants and cut flowers, vegetables and vegetable preparations, cereals, seeds, lac, natural gums, resins, prepared meat and fish, sugar, animal feeds, manufactured tobacco etc.
So far the Indian scenario has been considered from the exporters point of view. But there is need to analyze the situation from the domestic angle as well. Up to 1991, India has protected its domestic agricultural market by high tariff barriers and quantitative restrictions for most agricultural products. The liberalizing initiatives takes since 1991 include the abolition of some export controls and minimum export prices and removal of some products from the list of restricted imports. Of these measures, the most important one in terms of the size of the domestic producers affected and the potential for increased trade are:

- removal of import control from sugar, cotton, and edible oils, and
- lifting of bans and other controls from exports of drum and common wheat varieties and common rice.

It is clear that India is providing no support to the farmers, rather it is taxing agriculture; so India is unlikely to be affected by the Uruguay Round agreements on market access and export subsidies. A recent study agreements on market access and export subsidies. A recent study (upto 1998-99) in this regard shows that the product-specific AMS has been fluctuating over the last three years, but it is negative in sign. On the other hand, the non-product specific AMS registered an increase, but the total AMS (product specific plus non-product specific) provided is still considerably negative. So, Indian agriculture is a potential beneficiary to the extent that some liberalization of the world
agricultural trade occurs as a result of the Uruguay Round. India possesses export competitiveness in cereals rice and processed vegetable (mushroom and tomato paste). So, as a result of agricultural liberalization the returns to this sector is likely to rise. It is likely to raise investment in agriculture, which is likely to rise. It is likely to raise investment in agriculture, which remained stagnant during the 1980s and a good part of the 1990s.

The Government can help the domestic agricultural sector through some safety net programmes, which are exempted from the AMS calculations. These areas includes relief from natural disaster, structural adjustment assistance, environmental programmes, regional assistance programmes, and so on.

India is going to benefit by exporting an array of commodities, where, its comparative advantages lie. The problem in this regard is that Indian agriculture is still weather driven; hence, buffer stock or exportable surplus is not uniform over the years. It is already stated that the government is free to provide certain infrastructural and research facilities to the agricultural sector, which will not come under AMS calculation. Thus, the main target of the government should be to build up co-ordination and research institutes and farmers (creation of high-yielding variety seeds), build up storehouses, improve irrigation facilities and transportation.

**WTO And Indian Industry**

The WTO agreement also provides an opportunity for the industry sector as the member countries have to lower their tariff rate on imports.
The increased market access for products along with lower tariff rate ensure that the products will reach foreign market without problems. But the reduced tariff commitments are not enough to guarantee an Indian export boost, for example, the anti-dumping (AD) agreement provides certain loopholes through which trade-distorting policies can be practiced. Basically AD duties should be imposed when a member is selling its products below the normal prices. But, in many instances, it is seen that these policies are being imposed with the sole objective of safeguarding the interest of the domestic industry. It is seen that the rules for calculating the extent of dumping are not properly followed in many instances. The government of the imposing country often manipulates the price comparison process. The worst victim among the industry sector is the stainless steel sector, which faced several AD investigations in EU. A Ministry of Commerce study reveals that over the period 1997-2000 (April), 77 anti-dumping cases have been filed against India. In 47 cases, definitive duties were recommended. A few other sectors have also faced these proceedings in EU. India should be more active in the international foray to combat these disguised NTBs.

The growing environmental concerns in the developed countries may turn out to be injurious for India. Countries generally urge that the production process should be environment-friendly. The programmes in different countries to ensure environment-friendly imports.
The attitude of European countries to Indian textile, garment and leather industry will make the point clear. The ban on several chemicals and synthetic dyes incurred a huge cost on the Indian exporters. Hence, there is need for the producers to follow an internationally acceptable production process. However, the prevalence of different standards in various countries makes the process cumbersome for them. Often, information on the regulations in importing countries is not readily available for the producers, which add up to the problem. The Government should provide these information to the needy exporters.

The analysis of import tariff rate on the manufactured products in India provides a mixed feeding. For a number of products, the existing tariff rate is within the bound rate, but the reverse case is also not uncommon. Table 8 provides the tariff rates for a number of commodities. On a average, serious problem due to lowering of industrial tariff is not expected.

5.7 **WTO REGIME – SOME CHALLENGES TO INDIAN AGRICULTURE**

The global agri-business governed by the WTO regime would have for reaching implications for Indian agriculture. Its full effect would be realised with effect from January 1, 2005 when GATT Agreement 1994 would stand fully implemented. In fact this Agreement has brought for the first time agricultural sector and international trade of agricultural commodities within the purview of GATT and WTO, thus integrating agriculture fully with the global market. The Agreement on Agriculture (AOA) under WTO pertaining
to subsidies, market access and sanitary and phytosanitary measures would have a direct bearing on Indian Agriculture. The bringing of intellectual property rights (TRIPS) in the preview of WTO also have serious effect on Indian agriculture through patenting of seeds and the upcoming sui-generis system. Changing the period of patent from 7 (as per India's Patent Act 1970) to 20 (under WTO) years would make the situation from bad to worse. There is thus an urgent need to evolve appropriate policy measures and undertake a serious research so that ways and means could be found to prepare Indian agriculture for the fast changing domestic and global scenarios.

India continues to be predominantly an agrarian economy in terms of population dependency and labour force proportion even after more than five decades of independence. Though the primary sector's contribution to GDP has witnessed a substantial fall, yet, the desired structural change with respect to the proportion of labour force has not taken place during the first two decades of the planned economic development the proportion of labour force in agriculture remained constant close to 70%. Thus there has been a mere 5% labour shift from agriculture to non-agricultural activities over the period of four decades and only 1.7% during eighties. In net terms about 65% of the workforce engaged in agriculture contributes (consumes) 32% of GDP (1991). The share of primary sector in GDP declined from 56% in 1951-52 to about 28% in 1995-96. The share of agriculture in GDP declined from 48.6% in 1950-51 to about 26% in 1995-95. Clearly the share of agriculture
in the primary sector decreased only marginally. Contrary to it the share of agriculture in gross capital formation witnessed a serious decline. This brings out the fact that Indian agriculture with 65% labour force contributes only 28% to GDP and about 10% to GCF. This has made rural urban gaps sharper outride and the persistence of made-spread poverty, especially in rural India. In fact agriculture has certain upper limit beyond which it cannot help the development of the economy. But the problem with Indian agricultures that it has diversified in term of pectoral share in GDP but not in terms of the proportion of work force. Moreover low productivity of labour has also been one of Indian agriculture's weaknesses.

The rural-urban or farm non-farm hiatus would be rather large if we look at the break up of labour proportion of agricultural labourers went upto 26.3% in 1971 from 19.7% in 1951 and remained close to 28% in 2001. Thus while the global economy has achieved a remarkable level of diversification and structural change during the past few days rural India has been seeing through the proliferation of the landless agricultural labour households.

According to an estimate India's populations would rise to 1329.1 million by 2020. The food and feed requirements for cereals projected for 2020 under three different scenarios is 257, 296 and 375 million tones respectively at 2,3.7 and 6% cereals in 2020 is projected to be between 219 and 321 million tones under eight different scenarios. Comparing the requirements and availability it
seems that India would hardly have any export surplus in cereals in future keeping in view the present state of technology and rural infrastructure it is not an easy task that the cereals production would be raised to the required projected levels. In case we fail to achieve it there can be a series threat to India's food security.

As a founder member of WTO India is committed to implement various agreements and provisions pertaining to Agreement on Agriculture (AOA). These include commitments on market access, domestic support and export subsidies the agreement on sanitary and phyto-sanitary measures etc. As a result of the Agreement all the quantitative restrictions are to be abolished and non-tariff measures are to be replaced by the tariff measures during the implementation period, i.e. from January 1, 1995 to 31st December 2004. The minimum market access quota is to be expanded to 3% of total domestic consumption by 31st Dec. 2004. However there are certain protection provision the form of 'safety trigger' custom duties, anti dumping clauses and countervailing duty rights etc. available to India alto other members of the WTO family.

The factor which adversely affects the global competitiveness of Indian agriculture is the comparatively low. For example :- china's average yield of paddy is 117 percent higher than 181 percent higher than in India. India's average yield of sugarcane and cotton too is much behind that of china and USA.
India was committed to remove quantitative restriction for 1429 items on March 31, 2001. Out of these 825 related to agriculture and dairying. Already the 2000-01 Exim policy has removed quantitative Restrictions (QRs) for 714 items including 208 agricultural items.

According to an estimate, India's import is likely to increase by 8.7 percent of her imports as a consequence of the removal of QRs. Indian producers of all these items would have to face global competition in their own home market.

The removal of QRs on 825 agricultural items would certainly create a tough competition for Indian agriculture and allied activities. In the allied agriculture activities, dairy, livestock and poultry are the major activities. The dairying and livestock has not developed as an independent acception in India. All categories of farmers (mainly small, marginal and meddle farmers) and the landless agricultural workers are engaged in dairying manly as a part-time cooptation. It is not only generates employment but is a formidable source of regular income throughout the year certainly removal of QRs on dairy products would hit hard the dairy activity in India. It would adversely affect a very large number of workers; most ostensibly, the rural female workers and a very significant proportion of income and thereby the entire agriculture economy of India.

To cope with the onslaught of cheap foreign goods the government of India must impose tariff duties removed. It would
not go century to the spirit of WTO. Another way out is to prepare our agricultural and allied activities for the global competition with cost-effective production and efficient management still another way out for Indian agriculture is to normalize Indo-pak relations, open wagah border for land route to Pakistan and onward trade to central Asia and newly independent countries from the formerly society Union. It would give a big push to development in agricultural sector besides generating a large amount of employment, thus, shifting a sizeable proportion of labour force from primary sector to secondary and tertiary sectors which is of paramount importance to Indian economy the generation of employment would be the most difficult task under the globalised regime governed by WTO and MNCs. According to one study (Korten 1998) the world's 500 largest Industrial Corporation control 25 percent of the world's economic output by employing only 0.05 to 1 percent to the world's population.

Indian Agriculture would be facing a serious challenge both internal and external under the WTO regime. It is characterized by stagnating low level yields, a way large proportion of marginal, small and semi- medium holdings (90 percent burdened with a high proportion of landless labour households and a highly concentrated and food oriented cropping pattern. overtime the share of agriculture in GDP decreased to 24.7 percent in 2000-01 from 48.6 percent in 1950-51. However the desired sift of labour force from agriculture to other sectors could not take place as nearly 65 percent of the total workforce is still employed in
agriculture. Out of this, about 40 percent are the landless agricultural labourers. All this, together with the ever-increasing pressure of population have resulted in low exportable surplus. These limitations have also adversely affected its capacity to compete in the global market.

In the liberalized trade sceneries backed by WTO-regime, Indian agriculture would be fully integrated with the global trading system. Aggregate measurement of support and sanitary and phyto-sanitary measures, patenting of seeds and technology and food security etc. are the areas of real context. In fact WTO regime has many safeguards, relaxations and exemption for the developing countries, which India must exploit to its favour. The new regime would have far-reaching implications for Indian agriculture both positive and negative. India should try to maximize its gain and minimize its losses in the changing scenario.

The Government of India should take advantage of the safeguards laid down within the WTO framework to protect Indian agriculture and proximate its global competitiveness.

Thus, Indian agriculture faces serious challenges both from within and from outside. From with it would have to shift a sizeable proportion of work force to non-agricultural sectors along with it Indian agriculture must be diversified. Another important challenge to Indian agriculture is to raise per hectare yield to the global level. Protecting its dairy and poultry sectors from the removal of quantitative restrictions, is stuff another great challenge. In order
to meet this challenge the Indian Government would have to take serious and bold steps at the policy level. This is imperative to prepare Indian Agriculture to face the internal and goal challenge.

5.8 INDIAN AGRICULTURE UNDER WTO REGIME

The Uruguay Round was scheduled to conclude in 1990 but since agreement could be reached especially regarding agriculture, the round extended its life. Primarily the debate was between the developed and developing blocks. The demand of the developed block was the abolition of quota-bound trade in agricultural commodities while the developing block had opposed the demand. But soon after this issue had been resolved conflict arouse within the developed block itself especially between the E.V. Since the cost of agricultural production in the couriers of the E.U. is much higher than that of in the U.S., These countries grant huge amount of subsidies to their producers and exporters. Owing to this practice in the export market. The U.S. thus, asked for abolition of any such grant and support. Finally a general agreement among all the member centuries was reached in 1994. The Agreement on Agriculture (AOA) has same basic classes like market access, domestic support, export competition and farmers right. In 1994 at the end of Uruguay Round aurous other agreements were reached out by one of them would world trade organization (WTO), replaced, GATT. The functioning of WTO is now governed by the final GATT agreements. It was however decided at the time of 1994 agreement that if need be these agreements can be revived from time to time.
at the ministerial-level-conferences. Accordingly in the third ministerial level conference of the WTO at Seattle in 1999, agricultural issues were revived again.

i) **Market Access**

On the issue of market access it was decided in the AOA that member countries have to withdraw all quantitative restrictions eg. Restrictions through discretionary import licensing, voluntary export restraints, non-tariff measures maintained through state trading enterprises, import via canalized agencies etc. on their imports on a time bound basis. India had also agreed to phase out its QRs on all commodities except for around 600 commodities for reasons related to security etc. However India retained QRs on same more items even in 1999-2000. Export-Import (Exim) Policy in the ground of her poor balance of payment (BOP) position. In fact India could consume this privilege using Article XVIII; B of Uruguay Round Agreement (URA), which states that a country which is in the stage of development may opt for retaining QRs if its BOP situation is not good enough.

Article XVIII: B of the URA, while providing exemption from QR-removal programme, states that the country seeking this situation must be in its initial stage of development and its BOP situation must be poor. The article also applied a condition that such a country has to make public announcement regarding the time schedule for the elimination of QRs which implies that this exemption in no case should be endless. Accordingly India
announced a time schedule of nine years. This schedule was accepted by the developing countries but apportion came from the developed countries led by the U.S.

India initially offered a seven-year term but the offer was turned down. The WTO suggested a six-year phase-out period, which was accepted by all the developed countries such as the EU, Australia, Canada, New Zealand and Japan, except the US. The U.S. Disapproved India's demand on the ground of a IMF report which stated that India's balance of payment was satisfactory. Finally a bilateral agreement was reached between the U.S. and India, where the U.S. forced India to accept her demand regarding removal of QRs before March 31, 2001. Thus there had been an advancement by two years in the what is more, the agreement was several months Ahead of even the time table that the U.S. has reached with the EU and Japan. Thus by the bilateral agreement, India has to withdraw quota restrictions from all her 1429 tariff lines by march 2000. In accordance with this agreement QRs on the Import of 714 items have already been abolished in the 2000-2001 Exim policy.

**EXIM POLICY**

Let us now, in brief analyse the likely impact of abolition of this QR regime on Indian Agriculture. In fact, no unanimous conclusion can be drawn on this issue on the one hand, same argue that "the sectors which may be affected by the removal of QRs from these 1429 items are small and marginal farmers which
constitute a very other hand, demand that "India along with other developing countries should negotiate for more liberal trade environment in the rest of the world too." The argument behind the demand of this later group is that India has a reasonably products, but she cannot enjoy this advantage because agricultural market in the developed world is highly protected.

In fact, India has already reduced tariff rates on different products to such an extent that in an overwhelming maternity of product lines, the present rates have gone much below the WTO-bound rates. Here are same instances: "For wheat the bound rate of duty is 100 percent but roller flour ills are allowed to import at zero import duty. For peeks, the bound rate is 100 percent, but they are being imported under pen General licence (OGL) at Zero import duty Edible oils most of which are bound at 300 percent import duty are open for imports at 15 percent duty' and so on. At this juncture India should set two options for herself. First she should opt for worldwide removal of all type of interval and external restrictions on agricultural trade. Second, If the first one is rejected, she should again raise her tariff-wall up to the limit bounded by WTO agreement.

ii) Export Competition

The agreement on export competition speaks of export subsidy reduction. Reductions should be both in the form of value and quantity. The base period is 1986-90 in both the cases. Member countries had agreed that the value of direct export
subsidies are to be reduced by 36 percent and the quantity of subsidized exports is to be reduced by 21 percent over the six year implementation period by the developed countries whereas least developed countries. The developing member countries are required to reduce direct export subsidies by 24 percent and the quantity of subsidized exports by 14 percent over a period of three years. The least developed countries on the other hand are given total exemption.

Examples of some of the prohibitive export subsidies are direct subsidies on exported and exportable items, subsidies to reduce the cost of marketing exports of agricultural products, subsidies in the form of favourable terms of internal transport and freight changes on export shipment etc. However the developing countries are conditionally exempted from using the last three forms of subsidy mentioned in the list.

In India no direct subsidy is provided to agricultural exporters rather, they are provided with income tax exemptions on their export project which is not mentioned in the prohibitive lest of export subsidy. In fact, India's problems does not lie in the reduction commitments regarding export subsidy. The very purpose of the agreement on this issue in WTO is to establish a competition oriented export trade in agricultural produce. But the hindrances to the fulfillment of this objective are the developed countries who frequently and extensively make use of different prohibitive forms of export subsidy. This is a serious threat to agricultural exports of
the developing countries India's problem also lies here. Because of continuance of export subsidies by these countries, developing countries like India who have clear advantage in agricultural export could not enjoy the fruits of her competitive adequate.

**iii) Domestic Support**

Quantitative restrictions on domestic support through the aggregate measure of support (AMS) is another important feature of the AOA. The AMS is the annual level of support in monetary terms extruded to the agricultural sector supports provided to the sector are of two types – product specific and non-products specific product specific supports are subsidies given producers of specific crops, whereas non-product specific supports comprise subsidies on inputs like power, irrigation fertilizer and credit. The AMS is calculated separately for either type of support. In the AOA it was decided that in no case, either for product specific support or for non-product specific support, the AMS was to exceed 10 percent of the total value of agricultural product for developing counties and 5 percent for the developed countries. If this stipulated have to reduce it by 20 percent over six years, whereas a developing country will get a ten year's term to reduce it by 13.3 percent subsidies to a minimum level will augment free and fair international trade. But the real story is country in the developed countries that a mere 20 percent present situation. Moreover the estimate for non-product specific AMS would be even lower had the study taken into Account the exemption allowed to low income and
resource poor producers. In case this means that India is no longer required to reduce has subsidy level since the aggregate measures of support are below the stipulated level in both the cases, product specific and non-product specific.

However the most unfortunate fact is that India is going on reducing for subsidy level regularly for the last few years on the ground of her commitment to WTO and thereby paving the way for the developed countries to enter into Indian agricultural market virtually with no competition. What is the picture on the other side? What tips if any are being taken by the developed world? The official AMS in the U.S.A. in 1994 was near about 23 billion US dollars, though its total transfers amounted to 90 billion U.S. Dollars. The U.S. offered in the WTO to reduce its AMS to $19 billion by year 2000. This is meaningless. Even if the entire AMS had been reduced to zero in 1994 itself, there would still have remained at least U.S. $65 billion of subsidy to their farmers or nearly 22000 dollars per full time farmer.

In fact the agreement itself provides enough loopholes to exploit and the developed countries are doing exactly the same. For example since reduction commitments are on total AMS a country may offer huge subsidy to some products while extending little on support to some others so that the total AMS does not exceed the commitment level. There are same other possibilities. Indian should demand abolition of the system of aggregation of support measures.
in the further rounds of ministerial conference of WTO. Moreover she should along with other developing countries steps so that the practice of substitution of one kind of subsidies by another kind can be checked.

iv) Farmer's Right

Living organism were beyond patentability in most of the countries of the world. So was agriculture. However in the Uruguay round negotiations, the developed group of countries put emphasis on the rights to protect intellectual property in the agricultural sector also as a result article 27.5.3(b) of the Uruguay Round Agreement (URA) states that "... parties shall provide for the protection of plant varieties by patents or by an effective suigeneris system or by any combination theory."

A landmark in the evolution of plant protection was the adoption of the International connection for the protection of new Varieties of Plants (UPOV) in 1960. Though the membership of the UPOV is open to all countries since 1968, till now only the developed countries have taken its membership. It has therefore evolved a plant variety legislation suitable to the socio-economic context of only the industrialized countries where farmers are no more a large part of the population and do not have any control our plant breeding or seed supply. This situation is very different from own where a majority of population continues to supply systems are still the main source of seed. No wonder, therefore soon after the URA was concluded demands were thus raised from many
quarters to go in for our own suigeniris system instead of joining UPOV. In fact joining UPOV would be more disastrous to the farmers right because the system is heading towards outright patents. Once a plant patent is given for multiple lames that may cover not only the whole plants but plant pants and processes as well. Patent protection implies that these given and characteristics. In the UPOV on the other hand what is granted is the plant breeders Right (PBR). PBRs do not entail ownership of the germplasm in the seeds, they only grant a monopoly over the selling and marketing of a specific variety. However the recent tread of the UPOV in to go in for outright patents. In its first amendment in 1978. The UPOU placed same restrictions on the protected seeds which providing two exemptions to PBRs, namely the farmers exemption and the research exemption. The first exemption allows the farmer to retain part of their harvest for subsequent planting as seed whereas the second one permits the breeders to use a protected variety in subsequent breeding experiments however the 1991 amendment of UPOV put stranger restriction.

So for India could not legislate any act in this regard but she has now proposed one. Thus new proposed act, protection of plant verities and farmer's rights Act developed a sui-given system to protect plant varieties and farmers right. In this act provision is made to extend is years of protection to a variety of plant which is new, distinct, uniform and stable. A variety is considered to be if it is not exploited commercially before hand to be distinct if it is clearly distinguishable from all other varieties known at the date of
application for protection to be uniform if all plants of the variety
are sufficiently uniform to alone it to be distinguished from other
varieties taking into account the method of reproduction of the
species and to be stable if it is possible for the variety to be
reproduced unchanged. Again the trees and vines under this new
out world get 18 protected variety can be used for production and
commercial sale only with breeder's authorization no royalties have
to be paid when protected seeds are used for non-commercial
purposes, like holding seeds for next year's sowing or across the
fence exchange among farmers.

Farmer's traditional rights to same, use, exchange share and
sell their farm produce of the protected variety except sale for
productive purposes under commercial marketing arrangements
are protected in the proposed also includes the right arising from
the past present and future contributions in conserving, improving
and future contributions in conserving, improving and making
available plant genetic resources. These are initiatives in the right
direction.