Chapter-VII

Conclusions and Suggestions
Chapter-7
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My thesis entitled "Globalization and Indian Agriculture: A Case Study of Selected Districts Of U.P." has been divided into seven chapters. The first chapter deals with introductory information and research methodology of the present study. It included historical development of liberalisation and agriculture and role of capital formation in the economic development process. Research methodology for the present study is also discussed here. The study of four districts of Meerut region and Kanpur region is purposively selected for the present analysis. The district selected were Meerut, Bulandshahar (Meerut region) and Auraiya, Etawah (Kanpur region). Two hundred farmers were surveyed for present study. The second chapter deals with the trends of agricultural production in India and the process of capital formation. Chapter third discusses process of globalisation in Indian Economy. It also discusses exports and imports of major agricultural products. Chapter fourth discusses world trade organisations negotiations related with agriculture sector with subsidy, tariff and other issues. Chapter fifth is devoted to the impact of globalization on Indian agriculture. It discusses assets structure, sources of income, expenditure and capital formation of sample farmers. Chapter six discusses the problem of globalisation. The conclusion and suggestions for proper development of Indian agriculture in the process of liberalisation are given in the seventh and last chapter.

India become a member of the W.T.O. in 1995 and consequently become obligated under the Uruguay Agreement on
Agriculture (URAA). India bound its agricultural tariffs at 100 percent for primary products, 150 percent for processed products and 300 percent for certain edible oils. The level of W.T.O. bindings is far in access of the applied level. The role of capital formation is crucial in the context of agricultural development. It is particularly true of the Indian economy, where even submarginal land has been brought under cultivation and the labour is easily available. In such a situation modernization of agriculture with the help of advanced technology and intensive utilization of available surplus resources calls for a constant growth of capital. The larger the portion of current output invested by the cultivating families, the greater would be the increase in the production and the rate of growth. “Capital Formation involves investment whether public or private, investment, involving the purchase of factors of production and their utilization for the creation of non-consumption output.” Agriculture is called a backbone of Indian Economy because of its high share in employment and livelihood creation, not with standing, its reduced contribution to the nations G.D.P. It is the most important sector of the Indian economy form the perspective of poverty alleviation and employment generation.

The share of agriculture in national income has been declining from 56.6 percent in 1950-51 to 52.1 percent in 1960-61, 45.7 percent in 1970-71, 39.6 percent in 1980-81, 33 percent in 1990-91, 26.63 percent in 2001-02 and 15.7 percent of the G.D.P. (at constant 2004-05 prices), in 2008-09. While the share of agriculture in national income has been declining, the workforce engaged in agriculture has exhibited only a marginal decline. Data provided by the census of India reveals that whereas in 1961, 75.9 percent of total workforce was engaged in agriculture (the absolute number being 143.2 million
workers), in 1981 the percentage was 69 and further fell to 63.8 in 1993-94 and 59.9 in 1999-2000. In absolute terms, agriculture provided employment to 238.68 million persons in 1993-94. In 1999-2000 also, although the percentage had declined from 63.8 to 59.9, the number of persons employed remained 237.8 million.

The linkage between agriculture and industrial sectors, is widely recognized in the literature, focuses in the role of agriculture as, supplier of wage goods to the industrial sector and provider of raw materials to agro-based industries which have a weight of 21.2 percent in the index of Industrial production base 1980-81=100 and weight of the 17.6 percent in the index with base 1993-94=100 and generator of agricultural income that enables rural demand for industrial products to take place. Empirical tests show that a unit increase in agricultural output would have a positive effect on both industrial production and national income. Rangrajon 1982 estimated that 1 percent increase in agricultural output tends to raise industrial production by 0.5 percent and augment national income by 0.7 percent. At the time of independence 1947, India has about 5 million holdings. Projection indicates there are now some 110 million holdings in the country. Today every fourth farmer in the world is an Indian.

Capital as a factor of production needs no introduction. In any productive effort, Capital plays a very crucial role and is the most effective factor in promoting a faster rate of growth in any industry. Capital, which is usually understood a produced means of production, is produced solely in response to economic motives and land and labour as factors of production differ from capital in that regard. It is therefore, clear that anything that has been produced and not consumed is capital. Alternatively, capital may be defined as the
"accumulated output used to increase the effectiveness of current productive activity."

The process of capital formation moves through three stages 1-generation of saving 2-mobilisation of savings 3-investment. A part of the total resources generated in an economy is withdrawn from the present consumption so as to increase the volume of real savings of a community. The magnitude of real savings will depend upon the a-will to save b-power to save c-facilities to save. The savings so generated in the economy need to be mobilized for investment. If people save a part of their income, but it is kept out of circulation, it will not facilitate the process of capital formation. There should be a widespread networking of the banking, insurance and other financial institutions which may collect the public savings and take them to investors. Finally the process of capital formation is completed when real savings are converted into real capital assets. A country should have an entrepreneurial class which is prepared to bear the risks of business and invest savings in productive occupations so as to create new capital assets.

India is a founder member of the General Agreement on Tariffs and Trade (GATT) since 1997 and its successor, the world trade Organization W.T.O. which came into effect on 01.01.1995 after the conclusion of the Uruguay Round of Multilateral Trade Negotiation India's participation in international trade is to ensure more stability and predictability, which ultimately would lead to more trade and prosperity for itself and the 134 other nations which now comprise the W.T.O. India also automatically avails of M F N and national treatment for its exports to all W. T. O. members.

The Doha round of trade negotiations which received a set back when consensus evaded, at the Fifth Ministerial conference of W.T.O.
at Cancun in September, 2003. It got a boost with the members adopting a Framework Agreement on August, 1, 2004 outlining the elements and principles, which will guide the further negotiations.

It has been observed that the loses from world trade and there are indeed numerous examples of states, where the often-repeated benefits of a global economy are clearly absent. This is a failure of the WTO, is to aim at the wrong target. The WTO is about providing opportunities and access—it does not provide guarantees and does it provide all the conditions for participation in the global economy. In essence, it says to governments here are a set of market opportunities that your local firms or individuals, if they are competitive could benefits from, here also are the rules under which they will be allowed to operate in foreign markets and under which others must be allowed to operate in our market.

The one of the most important element of policy reform under discussion and which evokes little enthusiasm among farmers or the political class, related to subsidies. The main agricultural inputs, namely water, electricity, fertilizers and credit are all being supplied to farmer at prices which do not cover the costs incurred in providing them. The magnitude of unrecovered costs on these inputs has been rising at a much faster rate than public investment in this sector. In 1994-95, the total unrecovered costs on account of water, fertilizers and power of agriculture is estimated at nearly Rs. 30000 Crore (Shrivastav & Sen 1997) as against a total public sector plan outlay on agriculture and rural development (including irrigation and special area programmes) of Rs. 21,600 Crore.

India provides products specific domestic support in the form of Minimum Support Price. As the base period (1986-88), International prices were higher than the domestic prices for all commodities export.
sugarcane and tobacco, the product specific Aggregate Measurement of Support is essentially negative for India. The total non-product specific support for fertilizers, water, seeds, credit and electricity during the reference period is Rs. 45.8 billion (Mehta, 2003), this is less than the minimum level and therefore there is no reduction commitment under AoA. Under art 6.2 of AoA, India is also entitled to exclude input subsidies given to low-income and resource-poor farmers. Taking this account the Aggregate Measurement of support words out to be less than 3% of the value of the domestic agricultural output.

India made significant efforts at removing non-tariff barriers to trade since July, 1991. In April 2001, India was compelled to remove QRs on remaining 715 items, as a part of her commitment of WTO. India had been arguing with the WTO that the organization should allow more time for removal of QRs on BOP grounds. However, India lost the WTO case, which finally led to the complete elimination of QRs in 2001. Had India won the case, the process of removal of QRs on consumer durables could have dragged on up to April 1, 2006.

Tariff rates have been brought down over a decade from a peak rate of about 33% to peak tariff rates. The momentum of peak rate reductions was maintained often by taking recourse to the recommendations of the Chelliah Committee (Vermani, 2003), the peak rate recommended by Chelliah Committee was 50%. However, the ministry of finance decided to take bold steps to reform tax structure in 1997-98 and brought it down to 40 percent in the same year. Indian farm exporters were US $ 6.1 billion which accounted for 1 percent of the global export, and China and Brazil accounted for 3 percent each in the global farm export during the same period. These
countries could not increase their farm export owing to high farm subsidies by the developed countries.

Further, the commitments regarding the technical barriers to trade, social agenda to covering labour standards and environmental and phyto-sanitary issues also require establishment of certain national standards and technical regulations in a standardized and transparent system.

The eight years between the commencement of the third plan and fourth plan (1961-1969) were the years of great significance for Indian agriculture. The new strategy of agricultural production came to be introduced around this period. The first stage of new strategy pertained to the Intensive Agricultural District Programme. It was started in 1960-61 in three districts and was subsequently extended by stages to another thirteen. While the performance varied it clearly demonstrated both the value of the package approach and the advantage of concentrating effort in specific areas. In 1964-65 and subsequent years a modified version of the same approach was extended to several other parts of the country in the form of Intensive Agricultural Area Programmes. The main concern of the programme was with specific crops.

The new strategy is concerned not only with a higher yield but with a greater intensity of cropping. Entirely new crop relations have been made possible by the development of short duration varieties of paddy, jower, maize, and bajra, suited to different agro climatic conditions. Among other crops included in the rotation are barley, oil seeds, potato and vegetables. Besides, the other factors contributing to the cropping intensity are: Governmental Programmes like major irrigation projects, flood control, development of markets and rural
infrastructure, urbanisation and rural industrialisation pricing policies etc.

A new emphasis has come to be attached to the role of agricultural technology as a major input of agricultural production. A member of steps have been taken to facilitate organisation and development of agricultural research through evolving the state funded National Agricultural Research System (NARS). Towards this end the Indian council of Agricultural Research was recognised in 1965. To it were transferred the research institutes which had been previously administered by the Union Government, presently numbering at 89. An important step was the establishment of agricultural universities which were conceived of as extension of education, presenting numbering at 30.

It can be observed that new agricultural strategy cannot be identified with one input or one institution as such. It touches the whole of the agricultural economy and provides for a package of measures, services and practices. The adoption of the new agricultural strategy has led to a breakthrough in agricultural production a phenomenon that has come to be known as the Green Revolution. The effects of the green revolution can be studied in two parts—economic and socio-economic and socio-logical impact.

Agriculture has been rightly described as India’s ‘giant in chains’ few sectors are regulated by so many central and state laws relating to land holdings, supply, pricing, stocking transportation, marketing, export import taxation and credit. The New Agricultural Policy was announced on July 29, 2000. The Uruguay Round of Multilateral Trade Negotiations led to Agreements relating to several aspects of international trade, including agreements relating to
agriculture and textiles which are the two of the most important traditional exports items of India.

Nine Countries U.S., the U.K. Germany, then USSR, Japan, Iraq Iran, Australia and Canada had a lion’s share ranging between 51 to 62 percent of our exports and 56 to 75 percent of imports during the three decades from 1951-52 to 1979-80. In 1990-91 their share of export was as high as 56.7% while their share in imports had fallen down to 47.6%. More recently in 2007-08, 49.1 percent of our total exports found their destination in the EU, the USA and Japan.

Globalization is now an irreversible process and is not a mere economic and financial phenomenon. Liberalisation of agricultural trade has resulted in increased globalization of Indian Agriculture. The share of agricultural trade in agricultural GDP has increased from about 6 percent per annum during the triennium ending 1990-91 (before liberalisation) to about a percent in the late 1990’s.

The National Agricultural Research System needs to be strengthen and re-oriented within the framework of a strategic plan with greater public investment and private participation while harnessing science and technology to achieve food and nutrition security, issues of bio-diversity, natural resources management, farming system approach, farm mechanisation, information networking and effective partnership with public and private institutions have to be addressed.

India is the second largest producer of food in the world more than 200 million tonnes of foodgrains, 150 million tonnes of fruits and vegetables. The Indian agriculture has made great strides over the years. During the 1990’s, there has been a declaration in production of all the principal crops. The growth in production of all principal crops declerated from 3.19% per annum during the decade of eighties to
2.29% per annum during the decade of nineties. The growth in food grains productions during the nineties has managed to be just equal to population growth rate (2.02% versus 2.16%). In the last five decades, the Government’s objectives in agricultural policy and the instruments used to realize the objectives have changed from time to time depending on both internal and external factors. Globalization in the context of agriculture can be best discussed in the context of three components- improvement of productive efficiency by ensuring the convergance of potential and realized output increase in agricultural exports value added activities using agricultural produce and finally improved access to domestic and international markets.

However, economic reforms within India are necessary to have the path of successful globalization. The stated objective of the new economic policy is to raise the economy’s growth rate from the current 5.5% achieved over 15 years to about 7 or 8% per year. In the wake of India’s efforts towards globalization and economic reforms, the expected benefits of total factor productivity growth can be represented using the production frontier. The production frontier traces out the maximum output obtainable from the use of inputs. India’s total exports in GDP has increased over the years from a mere 3.1 percent in 1965-66 to about 15.5% in 2008-09. This tendency reflects the growing significance of the export sector in the Indian Economy.

In discussing the level of imports, it is useful the relationship between imports and national income. In planned economies the development efforts is likely to increase imports faster than national income because investment as a proportion of national income is stepped up and the import content of investment is high in the early stages of development. The public investment in agriculture in real
terms has witnessed steady decline from the sixth five year plan to the 10th year plan. Trends in public investment in agriculture and allied sectors reveal increased significantly from -0.41% during the 1990’s to 13.64% during 2001 to 2008. However the growth in index area moderated but remained positive.

The Government price policy for agricultural commodities seeks to ensure remunerative prices to the growers for their produce with a view to ensure remunerative prices to the growers for their produce with a view to encouraging higher investment and production, and to safeguard the interest of consumers by making supplies available at reasonable prices. The price policy also seeks to evolve a balanced and integrated price structure in the perspective of the overall need of the economy. India like most of other countries including developed countries employs a variety of instruments to both protect and support its agriculture. These instruments can broadly be clubbed into three categories: domestic policies, import policies and export policies. The domestic policies comprise a wide range of policy instruments like input subsidies on fertilizers, power and irrigation water, public investment in development of water resources.

India has been active WTO negotiations both as a sovereign nation as also collectively as a principal members of G20 and G33 groups of nations. As a result of commitments under the Uruguay Round, India has bound all the tariff lines in agriculture India had bound its tariffs, at 100% for primary products, 150% for processed products and 300% for edible oils except for certain items, which were historically bound at a lower level in earlier negotiations.

Trade liberalization primarily causes changes in producer and consumer surplus and the net effects of this liberalization depend on which of the two effects are stronger Several researchers have
attempted to quantify the effects of trade liberalization. The available results points to mixed evidence of the effects of trade liberalization.

Liberalization of imports may have a negative effect on the Indian agrarian economy mainly on account of the huge subsidization of agriculture by most of the developed countries which implies that imports are sold below the cost of production in India. The imperfect nature of world agricultural markets and also on account of higher volatility of agricultural prices in international markets which in turn gets transmitted to the domestic markets. The analysis highlights that more powerful players in the trade space have evolved many new instruments of safeguarding there national interests while the weaker players like India have been forced to implement their commitments of the Agreement on Agriculture. Therefore various provisions regarding AoA are going to adversely affect the Indian agriculture International trade. As a result, India’s share in global farm exports in only 1 percent at present. With such a small share, India continues to be a marginal player in world agricultural trade.

The most unfavourable clause from India’s view point in the entire AoA pertains to aggregate measure of support which is biased and this trade-distorting clause must be removed from the AoA mere advanced among them, and without regard to their legitimate food and livelihood security and rural development concerns with only minimal market access commitments being called forth from themselves. Further, the G-20 also emphasised the requirement to eliminate all forms of exports subsidies within a credible time frame and to achieves substantial reductions in trade distorting domestic support. However, in the leap up to the WTO General Council Decision on August 1, 2004, the negotiations among the Five Interested Parties (FIPs), comprising of EU, US, Australeia, Brazil and India resolved
the divergent positions on key aspects of the three pillars in the agriculture negotiations. Thus, we can say that the "Framework Agreement" provides a useful basis for further negotiations on detailed modalities that could help to create market access opportunities for products of export interest and safeguard small and vulnerable producers of farm products.

From the foregoing discussion, we can conclude that despite an adverse situation in post WTO period, India has been able to maintain the steady flow of exports of those commodities which are consistent with emerging global demand patterns. There are several deficiencies observed in the existing agreement in agriculture, which favours developed countries. Export subsidies provided by a few developed countries are prevalent in agriculture, India needs to develop strategies to enhance exports and prevent possible large scale imports. India also needs to address systems an institution which are required to enhance the competitiveness of the agricultural commodities.

However opinions of the economists about the expected impact of liberalisation on domestic agricultural prices are divided. There has been apprehension that the Uruguay Round of World Trade negotiations are likely to reshape world economic structure for decade to come. He wanted that if this negotiation succeeds transnational corporation would gain unprecedented right to set up base in the third world Uruguay Round rolled back the third world gain in Economics Sovereignty since independence and unshared in a new era of Economic Colonialism, where economic power is more concentrated in Trans National Corporations (TNCs).

Further, we have not questioned the western definition of 'what is' and 'what not' trade distorting subsidy is WTO rules permit
quantitative restrictions to be retained in case of balance of payments difficulties. Our balance of trade is not showing any surplus for the post several years. Since our imports exceeds exports. Under this situation by using the provisions of WTO rules India can very well use quantitative restrictions also in cases where they are required. The WTO agricultural agreement provides a vast opportunity for the Indian Agricultural sector, but for the realization of those benefits, India has to be alert and has to catch up in numerous directions.

Estimating the potential impacts of liberalization of trade in agricultural and nonagricultural commodities in the wake of WTO negotiations on the agriculture is complicated and would depend on the outcome of the negotiations currently underway. More specifically it would in large part depend upon the extent to which the developed countries are willing to scale down their: domestic support, export subsidies, tariffs and non tariff barriers and let increase their market access for: the developing and least developed countries. While several proposals are currently on the table in respect of each of these components, agreements have alluded all of them. Several researchers have nevertheless attempted to evaluate using the scenario analysis approach, the likely impacts of some of the alternative proposals under discussion in one or more of these areas on one or more of the affected variables viz. international prices, production, trade and welfare at the global and/or at the level of a region/country. In the following paras we attempt to very briefly give a summery of impacts from a few selected recent studies on the subject. It may however be important to mention that the results obtained from different studies are not strictly comparable because of the differences in underlying assumptions, the differences in methodology employed, the time
frame considered and the nature of impacts analyzed. The results from most of the studies on lateralization of agricultural trade point towards an increase in international prices of a majority of the agricultural commodities, increase in volume of international trade and an increased welfare consequent upon liberalization. The impacts on production of different crops, principally the cereals, however appear to be marginal.

USDA (2001) has estimated that the full elimination of global agricultural policy distortions would result in an annual world welfare gains of US$ 56 billion. Moreover elimination of agricultural trade and domestic policy distortions could raise world agricultural prices by about 12 percent. Evaluating the impacts of comprehensive multilateral liberalization of agricultural trade policies using a CGE model. Cline estimates that the welfare benefits from a free trade in agriculture for India will be to the tune of $0.82 billion. Full liberalization of OECD farm policies would boost the volume of global agricultural trade by more than 50% but would cause real food prices to rise by only 5% on average (Anderson:2003). Some models have projected food price rises of about 8 - 12%. (Diao et al:2002). Another study (Beghin and Aksoy: 2003 in World Bank:2003) estimate that world prices are likely to go up by even higher margins: 10-20 percent for cotton, 20-40 percent for dairy products, 10-20 percent for groundnuts, 33-90 percent for rice and 20-40 percent for sugar. Results of a World Bank study indicate that a removal of agricultural tariffs and subsidies by all WTO countries would generate an increase in developing country exports of 15% and increase in imports of 12%. In terms of this study, India would experience an increase in exports of 13%. World prices of wheat are expected to rise
by about 10% and prices of rice are expected to rise by about 16%. As a net exporter of both rice and wheat, India therefore, stands to gain significantly from terms of trade improvements.

Another recent World Bank study shows that in terms of potential reform, or the pillars of agriculture negotiations, (Hertel and Keeney) increased agricultural market access is the key to successful liberalization of merchandise trade accounting for well over half the potential economic welfare gains to developing countries and the world as a whole from removing all merchandise trade distortions, and farm subsidies. Within agriculture, the potential gains from market access are shown to be far more important than those from abolition of domestic support and export subsidies, accounting for 93 percent of the gains from total agricultural liberalization Anderson.

Another study demonstrates how improving market access in the developed countries through lowering of tariffs would be beneficial to India. Domestic Support has been viewed as the equivalent of implicitly imposing tariffs. Cline (2003) has estimated the tariff equivalent of all subsidies and added it to tariff rates in the Quad (US, ES. Japan, Canada) to indicate the overall levels of protection provided by the Quad to agriculture. Thus in the case of EU and US if tariff equivalents of subsidies are taken into account the overall tariff protection rises substantially. (Source: William R. Cline, 2003, Trade Policy and Global Poverty and ATPSM) Using this approach, it would be suggested that unless domestic support is reduced the real tariff reduction effects for India would be only two thirds of the total gain. This would be particularly the case for the US and the EU whose tariff equivalent of subsidies is far greater than for other countries. In fact tariffication of the level of subsidies and
adding it to the tariff rates is a far more logical way of addressing the effects of subsidies the adding it to tariff notifications of addressing the effects of subsidies than through notification of subsidies and targeting reduction commitments on these notifications.

Anderson (2003) has projected that a complete global liberalization of agricultural trade including the removal of massive agricultural protection by OECD countries) would have the effect of increasing net annual exports of agricultural and food exports products by $2.7 billion 91 from India: a 40% rise over the current level of agricultural exports. The current annual value of agricultural production in India is close to $100 billion. A $2.7 billion growth in exports would constitute in itself close to 2.7% annual growth in value of Gross Domestic Agricultural Product which equals the current average annual growth rate. This is based on the assumption that all additional exports come from additional domestic agricultural production and is not diverted from domestic consumption. Thus assuming an adequate supply response, growth rates in agriculture production may tend to double on average for the first few years.

UNCTAD using a GTAP- CGE model, has attempted to evaluate the impacts of two agricultural tariff reduction scenarios (1) 3 large [band Approach I-Soft Tariff Reduction and (2) 3 small band approach I- Hard tariff Reduction, on imports, exports, production and welfare in India (IINCTAD:2005). The results obtained suggest that while welfare improves with tariff cuts in the hard scenario the same is not true for other variables.

Developed countries as a whole see much larger gains in the soft scenario in comparison to the hard scenario. Some products
emerge as being sensitive on several counts. Paddy sees a decline in output and employment in the soft scenario, but both exports and imports increase under both scenarios. However, the extent of import increase, from a smaller base, is much larger than the extent of export increase. The study thus suggests that paddy and rice trade should be liberalized cautiously. Vegetables, nuts and fruits also show an output and employment decrease along with an increase in trade. Oil seeds and oil show an output and employment decline accompanied by import increases and minor export increase.

For evaluating the implication of tariff cut, four scenarios were formulated: continuation of Uruguay Round Formula, three band soft approach, three band hard approach, and four band hard approach. Comparing all the four simulations at an overall level, it is easy to observe that the total welfare is highest in the third scenario which is a hard scenario. However, export and import growth is higher in the case of the four band simulation. The study suggests that for India the negotiating strategy should be based on maximizing the producer surplus, as the producers of agriculture are generally poor and a pro-poor strategy would imply a maximization of the producer surplus. However, it is also noted that poor urban consumers are likely to be hit by tariff changes. On balance however, as a larger share of total population is dependent on agriculture, maximizing producer surplus may be a priority-negotiating objective. On this basis the Uruguay Round Formula or the four-band formula may be the right approach to adopt.

As the analysis, of some of the proposals under discussion at the WTO by various researchers show that in overall terms India stands to gain from liberalization of trade in agriculture.
recent trend of a slow down in growth of agricultural production and increasing domestic demand, will India be able to encase on the opportunities that may be made available to it by a more liberalized regime?

The recent mid term appraisal of the 10th Five year plan, commenting on the supply side scenario notes that agricultural growth has been poor, with productivity growth coming to almost a complete halt in several products. Within the crop sector only fruits, vegetables, condiments and spices have grown by over 2.5%; per annum. Output prices have fallen relative to input prices reflecting a fall in profitability in agriculture. On the demand side per capita consumption of all cereals, pulses and edible oils have fallen, with growth of consumption decelerating for all types of food including milk, vegetables and fruit. This situation implies that there may be a need to focus on production and demand increasing the scope of the provision of subsidies through minimum support price in other areas such as the Eastern region. Rao (2005) however, opines that the prospects for exports of food grains from India seem real, at least for a decade, if the growth rate in food grains output of around 3 percent can be achieved, as the domestic demand for food grains is unlikely to exceed 2.6 percent per annum with even 7 percent growth rate in GDP. India is unlikely to absorb domestically the whole of food grains output from a growth rate of around 3 percent for quite sometimes unless drastic changes in income distribution can be effected.

Suggestions

1. From the foregoing discussion. We can conclude that despite an adverse situation in Post-WTO period, India has been
able to maintain the steady flow of exports of those commodities which are consistent with emerging global demand patterns, like fresh and processed fruits, fish and meat products. On the one hand, India is accumulating large surplus of foodgrains, which cannot be sold in international market, and at the same time it is becoming more and more deficient in edible oils. There is need for domestic policy interventions to correct these imbalances, as trade is not resulting in achieving balance in domestic supply and demand.

2. There are several deficiencies observed in the existing agreement in agriculture, which favors developed countries. Export subsidies provided by a few developed countries are prevalent in agriculture. Dirty tariffication, tariff escalation, tariff rate quota practiced by rich nations reduce opportunities for exports of agricultural products from developing countries like India. In addition, SPS and Technological Barriers to Trade (TBT), measures such as pesticides residues and restrictive quality standards are used to reduced market access.

3. India needs to develop strategies to enhance exports and prevent possible large-scale imports. The basic push to agricultural exports in India, along with policy initiatives, has to come through (a) yield improvement (b) reduction in waste and (c) efficiency in resource management of land and capital. Research in biotechnology has great potential to meet this challenge. It would be more appropriate that developing nations pool their resources to strengthen their
own research and development activities in biotechnology for their benefit.

4. India also needs to address systems and institutions which are required to enhance the competitiveness of the agricultural commodities. India may focus on markets, which have large potentials such as fruits and vegetables, fish, meat and cereal preparations for export purpose. This would require addressing effectively the existing quality and infrastructure related problems. The exports of raw cotton, oil meals, oil cakes, sugar and molasses should be actively discouraged as they have low priority in the international market and are low growth products. After the establishment of WTO agreement on agriculture trade competitiveness has become a major issue. Many countries are protecting their farmers and agriculture sector by providing them different types of incentives. But Indian farmers remain desprotected in 1980's (Diwakar, 1993) and later as well (Chand and Jha 2001). For a long time, prices of agricultural commodities in India have been largely decided by the administered prices and not by the market, because imports of agricultural commodities were restricted. However, the situation has undergone major changes after the introduction of WTO in 1995, wherein the control of many agricultural products has been gradually removed to meet the obligation of AOA. Protagonists of this policy expect integration of the domestic market with the international market resulting in to reducing distortion of domestic prices and increasing overall agricultural productivity through efficient allocation of resources. Ahluwalia (2000) expects that removal of imports
restrictions will have some dent on the domestic market prices. However, since the degree of removal of restriction is not same across different commodities, its impact on prices is expected to be varied across different crops as well as among regions because of varying cropping pattern. But one should not undermine that majority of holdings are of small and marginal farmers engaged mainly in subsistence agriculture growing food crops it is also argued that continued higher support prices, large market supplies and international price situation have created serious problems in marketing and disposal of surplus cereals. Emerging export scenario does not seem offer much scope for crops having large surplus in the country. Moreover, "In the context of world trade liberalization to remain in competition, the farmers need to chalk out their production plan in such a way that will improve the quality of the produce as per demand of the international consumers (Karwaira, et. Al, 2003). In post WTO period export price of all agricultural commodities is expected to drop sharply, whereas domestic price would move up, may be under pressure of rise in support. Under such an environment, our government should be very cautious against pressure mounted by developed countries to dismantle subsidies and to cut tariffs. The urgent need for the government is to provide certain incentives to agriculture. In order to protect the interest of the farmers, instead of cutting subsidies, appropriate tariff protection should be provided. India can even deny the market access of both rice and wheat to other countries under the provisions of the Agreement on Agriculture since they are
staple foods of our country. Not only this, the present regime of agriculture subsidies particularly export subsidies should be continued as India is free to provide certain export subsidies such as subsidizing of export marketing costs, internal and international transport/freight charges etc. Policy effort also required for risk management in agriculture. Besides this, public sector as well as private sector investment in agricultural research, extension, infrastructure, storage and marketing of produce, particularly in case of oil seeds, pulses and horticulture crops such as fruits, vegetables and flowers need to be strengthened. This will definitely make Indian agriculture highly productive and internationally competitive, both at the price and quality levels. This would reduce the competitiveness and profitability of export of these commodities. Bringing down domestic prices remains the only option to improve competitiveness of Indian agriculture (Singh and Vasisth, 2002). Thulesamma (2002) argued that excessive increase in support prices above the cost of cultivation together with open-ended procurement policy has been counter productive leading to many serious problems, such as shift in cropping pattern, monoculture burgeoning food grain stocks, sinking of ground water, salinisation of soil and other environmental problems due to intensive cultivation.

However, opinions of the economist about the expected impact of liberalization on domestic agricultural prices are divided. There has been apprehension that the Uruguay Round of world trade negotiations are likely to reshape world economic structure for decade
to come. He wanted that if this negotiation succeeds transnational corporations would gain unprecedented right to set up base in the third world. Uruguay round rolled back the third world gain in Economics Sovereignty since Independence and ushered in a new era of Economic Colonialism where economic power is more concentrated in Trans National Corporations (TNCs) (Chakravarti 1991). In the Uruguay Round Agreement (URA) by and large developing countries were on the margin of the negotiations on the relative basis and therefore outcomes of the URA have a greater adverse impact on developing countries than on industrialized countries (Ingeo, 2003). Rao (1994) argues that "the farmer (typically small, poor and unorganized) has now opportunities open to him to increase his output as also widen his contacts with the market and the world outside the village. However, it would not be easy for them to make the transition from the survival oriented traditional attitudes and modes of behaviour which still prevail among a large number of farmers to the ruthlessly competitive environment of the modern markets dominated by powerful groups. Obviously, vulnerability of farmers in the new environment is not ruled out until they acquire the capacity to withstand its pressures. There is likelihood of a sharp fall in prices of many agricultural commodities across different regions in India. This will aggravate farmer's condition further as it has already happened in various parts of the country leading towards subsidies (Deshpande and Naik, 2002). Therefore, any rethinking about minimum support price, subsidy and agriculture price policy to survive in international market needs serious examination and scrutiny of internal situation of Indian agriculture.
Further we have not questioned the western definition of 'what is' and 'what not' trade distorting subsidy is. WTO rules permit quantitative restriction to be retained in case of balance of payments difficulties. Our balance of trade is not showing any surplus for the past several years. Since our imports exceed exports. Under this situation by using the provisions of WTO rules, India can very well use quantitative restrictions also in cases where they are required.

The tariffication process stipulated by WTO is gradual and it provides adequate scope for adjustment; the ceilings of tariff agreed by WTO are indeed fairly high. Hence the government should protect the agricultural sector and farmers by using the upper limit of tariffs agreed by WTO and side by side it should solve the internal problems of this sector. A proper mix of reform policies, tariffication and support measures should be designed to promote the development of the agricultural sector of the Indian Economy and to redress the several issues of this sector.

Future Agenda for India

The WTO agricultural agreement provides a vast opportunity for the Indian agricultural sector, but for the realization of those benefits, India has to be alert and has to catch up, in numerous directions. In the liberalized trade scenario, 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 concern. WTO regime has many safeguards, relaxations, and exemptions for the developing countries, which India must exploit to its favour. The new regime would have
far-reaching implications for Indian agriculture – both positives and negatives. India should try to maximize, its gains and minimize its losses in the changing world environment. The Government of India should take advantage of the safeguards laid down within the WTO framework to protect Indian agriculture and promote its global competitiveness. It is heartening to note that India has a great potential to increase its agricultural production by raising productivity, improving quality, providing irrigation facilities, developing rural infrastructure, spending liberally on agricultural research and strengthening marketing network. Besides India should organize developing countries to get WTO agreement on agriculture suitably amended to their benefit. Especially, it should exert pressure for inclusion of food security clause allowing developing countries to adopt a suitable policy regime required to create and maintain food security. Shifting of a sizeable proportion of work-force to non-agricultural sectors diversification of agriculture, raising per hectare yield to the global lever, protecting dairy and poultry sectors from the onslaught of foreign competition are some of the challenges to be met for increasing the global competitiveness of Indian agriculture.

In order to meet the above-mentioned challenges, the Government of India will have to take serious and bold steps at the policy level. One serious problem has been lack of preparedness for negotiations. Obviously, the process of preparedness requires a high level of professional expertise with analytical and practical wisdom. There has to be a close nexus between the negotiators of the Government on the one-hand and industry, business circles and academic and research bodies on the other.
One serious problem in increasing exports of agricultural products is that despite commitments to reduce subsides; the countries in EU are continuing their agricultural subsidies programme in some form or another. To meet this challenge, India will have to form a block of developing countries to safeguard their interests. It is heartening to note that at the recently concluded WTO ministerial conference at Cancun, India has emerged as a leader of the developing nations of the world. The Indian team was able to argue for the interests of 650 million Indian farmers, the highly successful and growing software sector, etc.

While all that India might have wanted was not fully achieved, some lessons have emerged for the agricultural sector. The increased market access of the rest of the world to our markets would become a reality to be dealt with by strong action on the ground of land reforms, irrigation, agricultural modernization, and better grain storage. The big opportunity is there for India to become a top agri-export country. All support on free movement, rapid rural road building, clean and reliable power and provision of other technical and infrastructure support to facilitate global trade will become mandatory and urgent.