

TRADE LIBERALIZATION AND THE AGRICULTURE SECTOR IN INDIA

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Introduction

“India is the second largest producer of food in the world. Its exports are just 0.9% of the world food trade despite the inherent strengths it has in tea, spices, rice, floriculture, mangoes and grapes.

Agricultural and processed food exports continue to be residual and aren't a strategic part of our Food Management Policy. India is not seen as a reliable and quality supplier of agri and food products in international markets. Focus on specific products in specific growing areas for exports like tea, spices, rice, mangoes, grapes, floriculture, etc. to establish credibility. Mandate all food processing units to obtain GMP/HACCP within three years. These units to be accorded benefits similar to ISO 9000 certified units in Exim Policy. Permit regulated exports of specific surplus commodities on annual basis and honour international contractual terms.

Inadequate infrastructure for handling export of perishables; Limited cold storage facilities at ports/airports - Cold storage facilities should be enlarged and made available at all ports and major airports. Indian freight rates are around 50% to 100% higher than other countries - Generally freight subsidy is 25% of IATA rate or Rs 10 per Kg in India. Like in other countries, this has to be increased to 25% of actual air freight paid or Rs 25 per Kg whichever is lower.

Multiplicity of agencies leading to lack of co-ordination - One central agency: Agro and Food Development and Export Promotion Council to be set up. The existing agencies such as APEDA, MPEDA, etc. to be integrated in the new council. Announce specific package for horticulture and floriculture EOUs; Provide term loans for Grading, Packing and Cold chain units as well as processing units at the rate of 9% per annum. Horticulture Board could subsidize these; 3 year moratorium on repayment of term loan and interest; NABARD to provide 100% refinance to banks and financial institutions for funding exports of horticulture products and produce. India is going to be the most populated country in the world in the next decade. Food and Agro Management is therefore the most important issue that the Government now needs to address.

With around 11% of the total land area of the world, India accounts for more than 16% of the world's population. India is however in a position to leverage its natural endowments which surpass most nations in the world including China. But when it comes to productivity, India fares poorly as compared to even China which is able to feed its population by producing around 40% more food than India on land which is 40% less than that of India! India has also failed to realize that in spite being one of the largest producer of fruits and vegetables in the world, it wastes fruits and vegetables every year equivalent to the annual consumption of United Kingdom- i.e. Rs 23,000 crores. Moreover, India

wastes food grains in excess of what Australia produces each year. Total wastage is Rs 50,000 crores which is over 6 times the annual food subsidy. Of the total production of fruits and vegetables, only 2% are being processed in India as compared to 70% in Brazil and 78% in Philippines. Although India is the largest producer of milk in the world at 74.3 million tonnes, exports of milk and milk products are negligible.” *Prime Minister’s Council on Trade and Industry, 2002*

Despite wide ranging reforms in almost all sectors of the economy, Indian Agriculture has remained outside the reform process. The subsistence nature of the occupation and a rural population that remains a cohesive vote bank has contributed to this anachronous phenomenon. The lurking suspicion has been that primary sectors must remain protected and under government patronage and this has seen a world wide view. In the US and in Europe farmers enjoy continued protection. Japan, Australia and New Zealand maintain status quo on this issue despite fiercely campaigning for market based economies. Rice, beef, milk and sugar are among the many agricultural products that these developed markets continue to protect and distort world wide prices. The US and the EU have held opposing stances and this came to a head when the WTO’s dispute resolution mechanism ruled against subsidies to high technology companies in the US and imposed penalties to undo the damage that EU had suffered. While a large number of reform measures are called for, there is a pressing need for market conditions and institutions that would support integrated agriculture markets.

In countries like India, with a predominant agrarian base, the reverse accelerator operates well where a rising demand for consumer goods stimulates orders for capital goods. And that explains bullish sentiments in the market place when there is good rain and good harvest. Any improvement in the agri marketplace would further this phenomenon and ensure that a growing rural market acts as a multiplier for the entire economy. Traditionally it was industrial demand that fuelled the capital goods sector and therefore growth in the economy, but with two thirds of the consumer base engaged in agriculture, effective demand in the rural sector is thwarted due to imperfections in the market place brought about due to laws and regulations put into place during the hey days of food security problems.

The Indian Food Processing Sector

The Food Processing sector in India is one of the largest in the world in terms of production, consumption, export and growth prospects. Important sub sectors in food processing industries are:- Fruit & Vegetable Processing, Fish-processing, Milk Processing, Meat & Poultry Processing, Packaged/Convenience Foods, Alcoholic beverages & Soft drinks and Grain Processing etc. Primary food processing is a major industry with thousands of rice-mills, flour mills, pulse mills and oil-seed mills. There are several thousands of bakeries, traditional food units and fruit/veg./spice processing

units in unorganized sector. In the organized sector, there are over 820 flour mills, 418 fish processing units, 5198 fruit/vegetable processing units, 171 meat processing units.

Key Statistics

Size of the industry	Rs. 250,000 crores
No of units	Approximately 6607
Investments	Rs. 20097 crores
FDI as on 31/2/04	Rs. 3500 crores
Contribution in GDP	5 percent
Direct employment	Approximately 2.77 lakh
Exports (2004)	Rs. 14500 crores
Growth	15 percent per annum
Contribution in total exports	10 percent

During the negotiation rounds of GATT, especially since the seventies, the world has witnessed a significant reduction of import duties. Lately there has been a reduction also in the unilateral application of quotas and other traditional non- tariff barriers. However, a considerable number of such barriers in the shape of technical regulations and standards still persist. Technical standards and regulations including sanitary and phyto-sanitary controls are not in themselves trade barriers. However, their misuse to raise new obstacles to imports and to give protection to domestic producer is trade barriers.

Developing New Markets

The Expert Committee on Strengthening and Developing of Agricultural Marketing in June 2001 made certain recommendations on developing agricultural markets.

- Physical markets with facilities and services will attract farmers and buyers.
- This will create a competitive trade environment and result in offering best of prices to producers and sellers.
- The institution of regulatory markets has achieved limited success and acted more as a restrictive structure.
- Marketing liberalization and overcoming constraints faced by various organizations, including the private sector is necessary.
- There is a need to establish vibrant, dynamic and assimilative marketing structures and systems given the domestic and global liberalized scenario.
- There is a need for a thorough overhaul of existing policies, rules, regulations, legal provisions inhibiting free marketing systems.

- Private sector, corporate and joint ventures need to be encouraged with suitable policies and incentives to set up markets for free and competitive trade.
- Modernization of infrastructure is essential for development and operational efficiency of markets.
- Commodity exchanges have to be institutionalized and their scope increased to instill confidence and awareness among market players.
- Managerially competent and administratively viable organizations are required to administer marketing structures.
- The functions of APMCs and Marketing Boards have to be remodeled towards this end.
- Regulations such as registration/licensing, traded commodity coverage, control on packaging and labeling, laws affecting market places and control on movement of produce, volume of commodities traded, laws relating to access to credit and dispute resolution mechanisms need to be reviewed and a framework worked out, keeping in view the current domestic and global scenario.
- Direct marketing is one of the alternative marketing structures that needs to be promoted.
- This will economize transportation costs and improve price realization.
- The role of the private sector may be encouraged outside the purview of Agriculture Produce Marketing Committee (APMC) Acts.
- Information systems in terms of portals, websites, data bases, information packages and other software (generic as well as customized) on agriculture marketing have become indispensable. All these need upgradation and promotion.
- The commodity coverage under Forward Contracts should be enlarged to facilitate competitive and free marketing systems, which will also minimize price fluctuations across regions and across seasons. A full-fledged agriculture marketing credit policy needs to be re-designed.
- The public sector should play important role in remote and difficult areas for marketing.
- Specialized markets for fruits, vegetables and other horticulture products may be promoted with comprehensive and efficient infrastructure facilities.
- Mega markets and/or alternate marketing structures with the involvement of private, public, cooperative or joint ventures may be promoted on a large scale for efficient marketing of perishable and other agricultural products. These need to be encouraged outside the purview of APMC Acts.
- Professionalisation of personnel in marketing structures and their training modules and facilities need upgradation and improvement. Infrastructure for quality assurance especially for perishables, standardization, grading and quality control infrastructure needs to be promoted with government support.

The food chain in India has several intermediaries from the farmer to the consumer. It is estimated that 20% of the food produced in India is wasted¹. Less than 2% of fruits and vegetables is processed and wastage is estimated at 25% of total production. While agri industry is allowed to trade in food grains, there are storage limits under the Essential Commodities Act (ECA). Many *mandis* illogically make it illegal for farmers to sell through alternative distribution channels. APTFYP makes the point that such reforms are resource neutral, that is, they do not require significant additional public resources.

Successful dis-intermediation, with or without the use of information technology, can allow producers to obtain better prices, without the final consumer having to pay higher prices. Dis-intermediation also spills over into better extension services and even credit and insurance.² And one shouldn't forget that controls exist not only over spot markets, but also futures or forward trading through the Forward Contracts (Regulation) Act of 1952 and reservation of agri-based and food processing industries for the small-scale sector.³ Bans on futures trading and stocking of all agricultural commodities include those on institutional credit and finance for such activities.⁴ While on legislation, it is also necessary to mention a multiplicity of laws, orders and regulations. There are too many statutes and orders and these have not been rationalized or harmonized. 9 different Ministries are concerned with food processing and there are 22 related Acts and Orders. Laws to enforce food standards should be unified and rationalized. Simultaneously, enforcement must be strengthened.⁵ Indian standards must be aligned with international standards like the CODEX.⁶

A broader point that is being made through this reform agenda is one of encouraging diversification. Such diversification can encompass tree farming, agro forestry, dairy, poultry, fisheries and agro-processing. Although not always articulated clearly, diversification will obviously be encouraged through greater private sector participation, removal of policy distortions (such as unnecessarily high procurement prices for foodgrains⁷), scrapping of legal hurdles, development of risk management institutions and a refocusing of public sector driven research.

There are two obvious points that emerge. First, since diversification automatically implies exposure to additional risk, there must be risk and disaster management, or reduction, instruments. This spills

¹ Acharya gives a figure of 7% for foodgrains, 30% for fruits and vegetables and 10% for spices as being lost before reaching the market. CIIs estimate varies between 25 to 40 per cent.

² ITC's *e-choupal* and *choupal sagar* experiments can be mentioned, but there are other such experiments also.

³ Among other things, reservation leads to extraction rates (for rice and wheat) that are 10 to 30% below international standards.

⁴ Private transporters get low priority on railway movements. This forces them to rely on expensive road transport. Credit controls by RBI constrain trade financing by the private sector.

⁵ There are specific recommendations for the Prevention of Food Adulteration (PFA) Act, which we are ignoring.

⁶ There is a separate point about India being adequately represented at international bodies that frame such standards. SPS standards may act at NTBs, but in addition, there is no question that Indian standards fall short. For instance, one can mandate that all food processing units should have GMP/HACCP certification.

⁷ In passing, poultry is classified as neither agriculture, nor industry, and thus suffers on both counts.

over into issues connected with insurance, transaction costs associated with futures markets and management of exogenous shocks connected to natural disasters⁸. Second, there are issues connected with public sector research and extension services.

India spends 0.26% of agricultural GDP on research and 90% of expenditure on research and development (R&D) comes from the public sector.⁹ However, R&D paid little attention to crops grown under dry land conditions and there was little participation of farmers in testing and selection of varieties. Agricultural research and extension services need rehabilitation, with a focus on subsistence crops and dry-land agriculture. Krishi Vigyan Kendras (KVKs) need to be integrated with State and district level extension machineries and selected agricultural universities and research laboratories need to focus research on high-yielding hybrid coarse grains, pulses and items of mass consumption.¹⁰ This is in addition to the point about upgrading facilities and expertise in ICAR (Indian Council of Agricultural Research) and State Agricultural Universities and taking these closer to industry, with hard budget constraints and funding linked to outcomes. However, there is a difference between developing technology and disseminating it. In emphasizing the former, one shouldn't lose sight of the latter and there are few training centers for farmers, with no organized institutions to perform this function.

Industry Overview

The Food Processing sector in India is one of the largest in terms of employment production, consumption, export and growth prospects. Important sub sectors in the food processing industry are Fruit and Vegetable Processing, Fish-processing, Milk Processing, Meat & Poultry Processing, Packaged and Convenience Foods, Alcoholic beverages & Soft drinks and Grain Processing. Primary food processing is a major industry with a large number of rice mills, flour mills, pulse mills and oil-seed mills. There are several thousands of bakeries, traditional food units and processing units in the unorganized sector. In the organized sector, there are over 820 flour mills, 418 fish processing units, 5198 fruit and vegetable processing units, 171 meat processing units.

The turnover of the total food market is approximately Rs.250, 000 crores (US \$ 69.4 billion) out of which value-added food products comprise Rs.80,000 crores (US \$ 22.2 billion). India is the world's second largest producer of fruits & vegetables, but hardly 2% of the produce is processed. India is the

⁸ Droughts and cyclones. Drought prone areas are Gujarat, Rajasthan, Madhya Pradesh, Maharashtra and parts of Punjab, Haryana, Uttar Pradesh, Karnataka, Tamil Nadu, Andhra Pradesh, Bihar and West Bengal. See, *Risk Management*, Bharat Ramaswami, Shamika Ravi and S.D. Chopra, *State of the Indian Farmer*, Vol. 22, and *Natural Disaster Management*, A.R. Subbiah, *State of the Indian Farmer*, Vol. 21, Ministry of Agriculture and Academic Foundation, 2004.

⁹ *Technology Generation and IPR Issues*, Ghayur Alam, *State of the Indian Farmer*, Vol. 5, Ministry of Agriculture and Academic Foundation, 2004.

¹⁰ In publicly funded R&D, there has been an exclusive focus on rice and wheat. But one should also mention that most new areas (such as bio-technology) are in the private sector. Consequently, public-private partnerships rather than the public sector alone, provide the key.

land of spices producing all varieties worth over Rs. 3500 crores (US \$ 900million) amounting to 28% of world production, which is processed for value-addition and export. It grows 22 million tonnes of oilseeds covering most of the varieties. Other important plantation products include tea, coffee, cocoa and cashew. It has large marine product and processing potential with varied fish resources along the 8041 km. long coastline, 28000 km. of rivers and millions of hectares of reservoirs and brackish water. India's livestock population is the largest in the world with 50% of world's buffaloes and 20% of cattle, but only about 1% of total meat production is converted to value added products. India is the largest milk producer in the world and about 15% of the total milk production is processed through the organized sector. The size of the semi-processed and ready to eat packaged food industry is over Rs. 4000 crores (US \$ 1 billion) and is growing at over 20%.

India is the second largest producer of fruit and also of vegetables in the world yet the commercial processing of fruit and vegetables is less than 2.0%. The main reason being that domestic consumption of processed items is quite meager because of economic reasons and also as a matter of habit. The Indian consumers by and large very much prefer fresh fruit & vegetables. The high cost of packaging pushes up the cost of the processed items and thereby makes them out of reach of the common man. Because of the varied agro climatic conditions some fresh fruit & vegetable are available throughout the year. The fruits like bananas are non seasonal and apples, oranges, and potatoes etc. are put in the cold stores thus prolonging their shelf life & making them available in the off season. Some fruits like guavas, oranges have two seasons so they are available in fresh form for four to five months in a year.

There are a little over 5198 units registered under the Fruit Products Order of 1955 distributed all over the country. Most of the units fall in the cottage and or small-scale sector. A few modern processing plants have, now come up and many more are in the pipeline. The installed capacity which was 11.08 lakh tonnes, in Dec. 93 increased to 25.00 lakh tonnes at the end of the year 2004.

Joint Ventures

The important countries with which the Joint Ventures have been signed are U.S.A., U.K., Netherlands, Switzerland, and Germany. The proposals include in the fields like technology transfer, financial and or marketing tie-ups. These tie-ups include production of items like canned mushrooms, banana & mango puree, fruit concentrates, dehydration of vegetables particularly of onion. A few proposals of frozen fruit and vegetables have also been approved.

Product Range

The important items manufactured in the country are fruit pulps particularly of tomatoes & mangoes, ready to serve juices, canned fruits, jam, pickles, squashes, etc. Recently, items like frozen fruits,

pulps, dehydrated & freeze dried vegetables, canned mushrooms etc. are also being produced. In the coming years new items like carbonated fruit drinks, dehydrated and freeze dried fruits, fruit juice concentrate are expected to be manufactured.

Exports

India in a small way has been in the export market for almost 30 years. Among the popular items in export are mango chutneys, pickles. Fruit juices, canned and dehydrated mushrooms, frozen & canned fruit & vegetables. The main markets for mango pulp are Saudi, Kuwait, UAE, Netherlands and Hong Kong. In case of pickles & chutneys the popular markets are USA, UK, UAE, Germany, & Saudi. Other items like tomato Paste, Jams, Jellies & Juices are exported to USA, Russia, UK, UAE and Netherlands.

Policy Environment

- No industrial license is required for almost all of the food & agro processing industries except for some items like: beer, potable alcohol & wines, cane sugar, hydrogenated animal fats & oils etc. and items reserved for exclusive manufacture in the small scale sector. Items reserved for S.S.I. include pickles & chutneys, bread, confectionery (excluding chocolate, toffees and chewing-gum etc.), rapeseed, mustard, sesame & groundnut oils (except solvent extracted), ground and processed spices other than spice oil and oleoresins, sweetened cashew nut products, tapioca sago and tapioca flour.
- Automatic investment approval (including foreign technology agreements within specified norms) upto 51% foreign equity or 100% NRI (including Overseas Corporate Bodies (OCBs)) equity is allowed for most of food processing sector, except malted food, alcoholic beverages including beer and those reserved for S.S.I. For some industries dividend balancing with net foreign exchange earnings is necessary for automatic clearance.
- Upto a maximum of 24% foreign equity is allowed in SSI sector
- Use of foreign brand names is now freely permitted.
- MRTP (Monopolies & Restrictive Trade Practices Act) rules and FERA (Foreign Exchange Regulation Act) regulations have been relaxed to encourage investment and expansion by large corporates.
- Most of the items can be freely imported and exported except for items in the negative lists for imports & exports.. Capital goods are also freely importable, including second hand ones in the food processing sector.

Fiscal Policy and Taxation

- Wide ranging fiscal policy changes have been introduced progressively. Excise & Import duty rates have been reduced substantially. Many processed food items are totally exempt from excise duty.
- Custom duty rates have been substantially reduced on plant & equipments, as well as on raw materials and intermediates, especially for export production.
- Corporate taxes have been reduced and there is a shift towards market related interest rates. There are tax incentives for new manufacturing units for certain years, except for industries like: beer, wine, aerated water using flavouring concentrates, confectionery & chocolates etc.
- Indian currency (rupee) is now fully convertible on current account and convertibility on capital account with unified exchange rate mechanism is foreseen in coming years.
- Repatriation of profits is freely permitted in many industries except for some, where there is an additional requirement of balancing the dividend payments through export earnings.

Export Promotion

- Food processing industry is one of the thrust areas identified for exports. Free trade zones (FTZ) and export processing zones (EPZ) have been set up with all infrastructure. Also, setting up of 100% Export oriented units (EOU) is encouraged in other areas. They may import free of duty all types of goods, including capital goods.
- Capital goods, including spares upto 20% of the CIF value of the Capital goods may be imported at a concessional rate of Customs duty subject to certain export obligations under the EPCG scheme. Export linked duty free imports are also allowed.
- Units in EPZ/FTZ and 100% Export oriented units can retain 50% of foreign exchange receipts in foreign currency accounts.
- 50% of the production of EPZ/FTZ and 100% EOU units is saleable in domestic tariff area.
- All profits from export sales are completely free from corporate taxes. Profits from such exports are also exempt from Minimum Alternate Tax (MAT).

WTO and International Trade Issues in Agriculture

There was no attempt to liberalize agriculture and integrate it into the GATT framework before the Uruguay Round (1986-94).¹¹ Hence, the agricultural liberalization proposed in the Uruguay Round and set out in the Agreement on Agriculture (AOA) is at best a beginning and is no more than imperfect and incomplete liberalization. There are three strands to liberalization proposed in the

¹¹ From 1st January 1995, the Uruguay Round agreements entered into force and the historical GATT (General Agreement on Tariffs and Trade) was subsumed under the WTO umbrella.

AOA.¹² There are disciplines placed on domestic support, through computation of an Aggregate Measure (or measurement) of Support (AMS). Once this has been done, there are reduction commitments on the base period AMS, if the computed AMS is above the threshold.¹³ This only leads to a reduction in the base period AMS, without setting a cap to the AMS. Some policies (green box, blue box) are also exempted from AMS calculations. Quantitative Restrictions (QRs) on imports have to be converted into tariffs and after this tariffication, tariffs have to be reduced.¹⁴ Yet again, there is no cap on tariffs (although there are bindings) and reductions apply to the base period tariff. Nor are tariff rate quotas (TRQs) precluded.¹⁵ For export subsidies on agricultural products, there is a reduction commitment on base period export subsidies, with no cap.¹⁶

There is sufficient evidence to demonstrate that the promised agricultural liberalization, which accounted for the bulk of the market access liberalization promised in the Uruguay Round, hasn't happened.¹⁷ Rather perversely, using exemptions, export subsidies on agricultural products in developed countries are higher after the Uruguay Round began to be implemented. QRs have been converted into artificially high tariff equivalents, referred to as dirty tariffication. As with industrial products, there are specific duties, high peak tariffs and tariff escalation. TRQs lead to low tariffs below the threshold, but extremely high tariffs above the threshold. Exemptions have been freely used to violate the spirit of AMS liberalization. The special safeguards clause¹⁸ has been used to hinder market access, not to speak of the SPS agreement.

This is known and agriculture is part of the built-in or mandated agenda of the Uruguay Round. That is, even if there were to be no DDA (Doha Development Agenda), agriculture would have been negotiated. Agricultural liberalization in all three strands forms part of the DDA, now formalized in the framework agreement of 1 August 2004. The argument for disciplining distortions in developed countries is fairly simple,¹⁹ although perceptions differ on whether a country is a net exporter or importer of agricultural products, and whether it perceives itself to be a net importer or exporter of

¹² Two other agreements also have indirect implications for agriculture. First, there is the agreement on TRIPs (trade-related intellectual property rights), with provisions on geographical indications (GIs) and plant and seed varieties. Plant and seed varieties have to be protected through patents, or through a *sui generis* system, which can be weaker in the sense of providing less protection to the patent holder. That part, there is the agreement on sanitary and phyto-sanitary (SPS) measures, which allows standards. There is documentation that SPS standards act as NTBs (non-tariff barriers). Milk, fruit and groundnut exports from India can be mentioned.

¹³ The threshold is 5% for developed countries and 10% for developing countries. LDCs have no commitments in agriculture.

¹⁴ There is a difference between developing and developed countries in terms of the reductions required and in terms of the timeframe over which reductions have to be brought about.

¹⁵ TRQs have low tariffs for imports below a threshold and higher tariffs for imports above that threshold.

¹⁶ There are separate commitments on value and volume of export subsidies.

¹⁷ UNCTAD and WTO Annual Reports are good sources. Depending on the source of the estimate, 90% of welfare gains from market access liberalization were supposed to come from agriculture. These are welfare gains rather than trade gains and hence, accrue to consumers in developed countries also, through lower prices. But the export or trade gains to developing countries are not insubstantial.

¹⁸ This is in addition to the regular safeguards clause and is a special feature of the AOA.

¹⁹ The argument is simple. Protectionist pressures in the EU, Japan, South Korea and even the US, are extremely complex.

agricultural products. And what complicates matters further is the required quid pro quo on the part of developing countries and interpretation of the special and differential (S&D) treatment clause.

Shorn of public posturing, the Indian approach to agriculture negotiations exhibits some schizophrenia, with the fear of self-reliance in foodgrains production being destroyed, not very easy to dismiss.²⁰ If one takes the issues item by item, on domestic support, Indian AMS levels are around 7%²¹, well below the permitted threshold of 10%. There is enough slack for increasing domestic support. It is a separate matter that Central and State governments are in no fiscal position to increase such support.²²

India has no specific export subsidies on agriculture²³, so the disciplines on export subsidies do not bite either. That leaves tariffs on agriculture, QRs on imports having been phased out.²⁴ Unlike domestic support and export subsidies, negotiating positions here are probably more than public posturing, compounded by the fact that domestic agricultural reform has not happened²⁵ and agriculture has been in trouble in the second half of the 1990s. In addition, in the absence of reforms that facilitate diversification, agriculture has been equated with foodgrains production and foodgrains policy. There are also differences in perception across Commerce Ministry, Agriculture Ministry and Food and Civil Supplies Ministry.²⁶ At best, border reforms represent a trigger for agricultural change. But they are necessary conditions, not sufficient ones. In the absence of domestic agricultural reforms, the schizophrenia is unlikely to change. Consequently, India is unlikely to be in a position to tap the global potential, should it be opened up. This supply-side constraint is equally applicable to the Agri Export Zones (AEZs) that Commerce Ministry has been trying to push.

On the flip side, despite the fear, there is no particular reason for India to fear a deluge of agro imports. Barring isolated sectors, India is cost competitive in agro products. The bindings are also sufficiently high.²⁷ Therefore, other than edible oils (especially soy), and odd items like milk powder, chicken legs or sugar, there is no reason to fear large-scale imports. Of course, non-viability of edible oil production has a strong geographical dimension, with significant transition pains. With two-thirds

²⁰ The papers in *WTO Agreement and Indian Agriculture*, edited by Anwarul Hoda, Social Science Press and ICRIER, 2002, represent a comprehensive survey.

²¹ They vary from year to year though. Also, the text has been kept simple. There are separate reduction commitments for product-specific and non-product-specific support.

²² The efficiency of present public expenditure on agriculture in the form of input subsidies is an internal reform issue.

²³ Existing export subsidies are not agriculture specific. Introduction of agriculture-specific export subsidies will also run into the fiscal constraint problem.

²⁴ Implying QRs on balance of payments (Article XVIII B of GATT) grounds. QRs through Articles XX and XXI of GATT continue.

²⁵ There is a long list, encompassing public investments, R&D, extension services, credit, insurance, infrastructure, procurement and distribution, input subsidies, contract farming, export and import controls and restrictions on inter-State movements. All of these have been mentioned earlier.

²⁶ There are also WTO-linked issues connected with fertilizer imports and the viability of domestic fertilizer plants, especially the ones that produce urea.

²⁷ The average binding is 117%, increasing up to 350% for some varieties of edible oils. For some items like milk powder and coarse foodgrains, bindings were 0%. But these have been re-negotiated upwards, with TRQs also in place.

of the population employed in the rural sector²⁸, the political economy is of course important, with parties in the Opposition ready to critique whatever the government does.²⁹ And the presumed loss of sovereignty argument is perceived to be correspondingly stronger for agriculture. It is not surprising that the *Kelkar Task Force on Indirect Taxes* recommended reductions in industrial tariffs by 2004-05 and 2006-07, while leaving agricultural tariffs untouched.³⁰

This is the background against which one should consider the 1st August 2004 framework package, to be refined further at the Fifth Ministerial in Hong Kong in December 2005. A longish quote from Annex A of the 1st August 2004 agreement is in order, remembering that India's negotiating interests are primarily designed to control imports, rather than push exports.³¹ "Having regard to their rural development, food security and/or livelihood security needs, special and differential treatment for developing countries will be an integral part of all elements of the negotiation, including the tariff reduction formula, the number and treatment of sensitive products, expansion of tariff rate quotas, and implementation period. Proportionality will be achieved by requiring lesser tariff reduction commitments or tariff quota expansion commitments from developing country Members. Developing country Members will have the flexibility to designate an appropriate number of products as Special Products, based on criteria of food security, livelihood security and rural development needs. These products will be eligible for more flexible treatment. The criteria and treatment of these products will be further specified during the negotiation phase and will recognize the fundamental importance of Special Products to developing countries. A Special Safeguard Mechanism (SSM) will be established for use by developing country Members." Other than reduced commitments and longer timeframes, the Special Safeguard and Special Products clauses should be more than adequate to take care of any Indian perceived threats about import surges in specific sectors.

While India's agricultural trade interests remain peripheral, as of now, there are some estimates of price competitiveness, the results often being functions of whether an importable or an exportable hypothesis assumption is used and whether one uses the nominal protection coefficient (NPC), the effective protection coefficient (EPC), the effective subsidy coefficient (ESC) or the domestic resource cost (DSC).

²⁸ Strictly speaking, 72% as per the 2001 Census. Agriculture should not necessarily be equated with rural. But unfortunately, given the Indian policy framework that is precisely what happens. A failing of development planning in India has been the progressively declining contribution of agriculture to GDP, without a commensurate decline in agriculture's contribution to the workforce.

²⁹ This is regardless of which party is in the government and which is in the opposition.

³⁰ *Report of the Task Force on Indirect Taxes*, Ministry of Finance, December 2002. "The Task Force is of the view that agricultural goods stand on a different footing where various other factors like subsidy, market intervention measures, minimum support prices make it necessary to look into each item individually. The Task Force is not equipped to take on this function and recommends that a separate group with the requisite expertise may be set up to look into the duty structure for such products. The Task Force has thus not given any recommendation with regard to the road map for import duty structure on agricultural products, etc. At the same time, the Task Force also recommends that such duty should not exceed 150%." If the maximum binding on industrial products is 40%, prevention of distortions in resource allocation requires 40% and no more on agricultural products as well.

³¹ The pushing exports objective comes by virtue of India being a core member of G-20, which also includes Brazil.

The following is a fair assessment. “It came out that on import hypothesis, most of the crops except oilseeds, some coarse cereals, and sugar were competitive. In the case of these commodities also, the picture would change in case the developed countries agree to withdraw their domestic support to agriculture.... However, the import competitiveness is getting reduced over time because of several factors.

First, the price hike given to these commodities year after year has led to very high prices of these commodities. Secondly, the productivity growth rates in these crops have decelerated during the recent years.... Thirdly, competitiveness is also adversely affected because there is currently a global recession and general downturn in agricultural prices.... As far as the export hypothesis is concerned, for most of the important agriculture commodities, India was able to become competitive after a sharp devaluation in 1991. But in this case, the degree of competitiveness is much lower. Further, some of the major crops like rice and wheat became non-competitive during some recent years because of fall in their international price combined with a big increase in their domestic price due to increase in MSP....

Although India is an efficient producer in many commodities, but the efficiency of its production is getting reduced because of lack of technological innovations. It would need a major thrust in infrastructure investment in general and investment in science and technology, in particular for India to maintain and enhance its competitiveness. The above discussion is only confined to analyzing the competitiveness of field crops. A much more important area for investigation is competitiveness in animal husbandry products and in the floriculture and horticultural crops. Although some work has been done in this area, but adequate data availability remains a major constraint.”³²

Having said this, anything between 10% and 13% of the Indian export basket of goods (excluding services) comes from the agricultural sector. In absolute terms, such exports are around 7 billion US dollars a year. Tea, coffee, rice, wheat, sugar and molasses, tobacco, spices, cashew, oil meals, fresh fruits and vegetables, meat and meat preparations and marine products³³ figure prominently in this export basket³⁴. The 2004 - 2009 Foreign Trade Policy introduced a Vishesh Krishi Upaj Yojana (Special Agricultural Produce Scheme) to push exports of fruits, vegetables, flowers, minor forest product and their value added variants. Imports of agricultural products account for between 4.5% and 5.5% of India’s imports of goods (excluding services) and pulses, cashew nuts, other fruits and nuts and edible oils account for the bulk of such imports. The absolute import figure is between 2 billion and 3 billion US dollars a year.

³² *Globalization and Indian Agriculture*, G.S. Bhalla, *State of the Indian Farmer*, Vol. 19, Ministry of Agriculture and Academic Foundation, 2004.

³³ However, fish products are not covered by the WTO agreement on agriculture.

³⁴ There continue to be quantitative restrictions on exports of agricultural products, apart from trade of some products being mandatorily channeled (canalized) through designated state trading agencies.

Food Processing and Retail Trade

India has sometimes been called a nation of shopkeepers. This epithet has its roots in the huge number of retail enterprises in India, which totaled over 12 million in 2004. About 78% of these are small family businesses utilizing only household labor. Even among retail enterprises that employ hired workers, the bulk of them use less than three workers.

India's retail sector appears underdeveloped not only by the standards of industrialized countries but also in comparison with several other emerging markets in Asia and elsewhere. There are only 14 companies that run department stores and two with hypermarkets. While the number of businesses operating supermarkets is higher (385 in 2004), most of these had only one outlet. The number of companies with supermarket chains was less than 10.

Retail sales, which amounted to about Rs7, 400 billion in 2002, expanded at an average annual rate of 7% during 1999-2004. Retail sales are also expected to expand at a higher pace of nearly 10%. In a developing country like India, a large chunk of consumer expenditure is on basic necessities, especially food related items. Hence, it is not surprising that food, beverages and tobacco accounted for as much as 71% of retail sales in 2004. The remaining 29% of retail sales are non-food items. The share of food related items fell over the review period, down from 73% in 1999. This is to be expected as, with income growth, Indians, like consumers elsewhere, spent more on non-food items compared with food products.

Sales through supermarkets and department stores are small compared with overall retail sales. However, their sales grew much more rapidly. As a result, their sales almost tripled during this time. This high acceleration in sales through modern retail formats is expected to continue during the next few years with the rapid growth in numbers of such outlets in response to consumer demand and business potential.

Government Policy for Organised Retail in India

There has been vigorous opposition to foreign direct investment (FDI) in retailing from small traders who fear that foreign retailing companies would take away their business, lead to the closure of many small trading businesses and result in considerable unemployment. Given the political clout of the small trading community, because of their enormous numbers, the government has barred FDI in retailing since 1997. Hence, at present, foreign retailers can only enter the retailing sector through franchising agreements.

Organisational Characteristics of Indian Retail

Given the traditional and underdeveloped state of the Indian retail sector, the organizational characteristics of retail enterprises are rudimentary. Most of them belong to independent enterprises in the form of small family businesses.

Cooperatives have been present in India for several decades, spurred by the encouragement given by the Indian Government, which viewed the cooperative movement as an integral component of its erstwhile socialist policies. However, since the 1990s, there has been a reduction in government support for cooperatives. In 2002, there were about 35,000 outlets run by cooperatives.

Economic liberalization, competition and foreign investment since the 1990s led to a proliferation of brands with both foreign and Indian companies acquiring strong brand equity for their products. Hence, franchising emerged as a popular mode of retailing. Sales of franchises grew at a rapid pace of 14% per annum over the review period. In 2002, there were over 5,000 franchised outlets.

The other major retailing organization format is multiples, better known as "chain stores" in India. In 2002, there were about 1,800 chain stores. Among the various organizational formats, sales of chain stores grew at the fastest pace, with sales growth during the review period averaging 24% per year.

Marketing of Fruits and Vegetables

At present, the wholesale markets for fruits and vegetables on a country-wide basis are concentrated in 10 large cities viz., Delhi, Calcutta, Bangalore, Chennai, Mumbai, Jaipur, Nagpur, Vijayawada, Lucknow and Varanasi. These cities account for the arrival of 75 per cent of vegetables marketed in major urban areas in India. Delhi, Calcutta, Mumbai and Pune alone account for the arrival of 55 per cent of vegetables. Delhi and Calcutta account for transit trade in 40 per cent fruits and 13 per cent vegetables. Delhi, Calcutta and Mumbai receive 59 per cent of total fruits and 46 per cent of vegetables.

In a study carried out in 1998, it was found that cities with more than 20 lakh population account for transit trade in 66 per cent of fruits and vegetables. In 48 cities with a population of more than 5 lakhs (as per 1981 census), there were 102 fruit and vegetable markets of which 54 were regulated. The wholesale trade in fruits takes place in 65 markets and in vegetables in 81 markets. Each market on an average serves a population of about 7 lakhs. The prices in these markets, however, are governed by demand and supply principles with the regulating market committee not playing any role in price correction or arresting wide price fluctuations.

Agro Industry in India: An Overview

As per recent studies the turnover of the total food market is approximately Rs.250000 crores (US \$ 69.4 billion) out of which value-added food products comprise Rs.80000 crores (US \$ 22.2 billion). The Government of India has also approved proposals for joint ventures, foreign collaborations, industrial licenses and 100% export oriented units envisaging an investment of Rs.19100 crores (US \$ 4.80 billion) out of which foreign investment is over Rs. 9100 crores (US \$ 18.2 Billion). The agricultural food industry also assumes significance owing to India's sizable agrarian economy, which accounts for over 35% of GDP and employs around 65 per cent of the population. Both in terms of foreign investment and number of joint- ventures / foreign collaborations, the consumer food segment has the top priority. The other attractive features of the Indian agro industry that have the capacity to lure foreigners with promising benefits are the deep sea fishing, aquaculture, milk and milk products, meat and poultry segments.

Excellent export prospects, competitive pricing of agricultural products and standards that are internationally comparable has created trade opportunities in the agro industry. This further has enabled the Indian Agriculture Industry Portal to serve as a means by which every exporter and importer of India and abroad, can fulfill their requirements and avail the benefits of agro related buy sell trade leads and other business opportunities.

With a view to coping with the need to handle increasing agricultural production, the number of regulated markets has also been increasing. There were 7161 regulated markets in the country. Most of these regulated markets are wholesaler markets. There are in all 7293 wholesale markets in the country. The basic objective of market regulation is to regulate the trade practices, increase market efficiency through reduction in the market charges. Elimination of the intermediaries and to protect the interest of the producer-seller, the existing machinery has failed to check the trading malpractices and has made the agricultural marketing system highly restrictive and inefficient.

In 1965 the central warehousing corporation, Food Corporation of India, Agricultural Prices Commission and several other organizations were set up. The Food Corporation of India (FCI) set up in 1965 was mandated by the government to procure all wheat and paddy that was offered first sale at the minimum support price. This procurement policy insures steady income to the farmers. The minimum support price is applicable to 25 major agricultural commodities, covering all important cereals, pulses, oil seeds, cotton, jute, sugarcane and tobacco.

India, which ranks second among the emerging retail markets in the world, can position itself as a lead player in Asia if the retail sector spells out a highly focused and differentiated strategy for efficient management of supply chain. Modern retailing in India is booming and India can position itself as a

lead player in Asia, if the retail sector here attains the competitive strengths by responding to the changing markets

The Indian retail sector is on the threshold of something big. With the total retail trade estimated at \$200 billion and the organized segment accounting for a mere 2 per cent of this, almost all the organized players have in place aggressive expansion plans spreading either to more cities or to larger towns.

The Retailers Association of India (RAI), formed recently by the top 25 modern retailers in the country, estimates that the annual retail consumption in the country is around Rs. 900,000 crores but with value addition could be scaled up to Rs. 1,200,000 crores. In fact, the association is confident that modern retail would have a beneficial trickle-down effect on sectors such as steel, cement and glass, bring larger revenues for the State governments and boost sectors such as tourism and hotels. The development of modern retail in India could enable enhanced productivity, employment and economic growth.

Integrating the retailing sector to efficiently manage the agribusiness is the prime need of the hour. In this regard the Government alone cannot create any miracle but with the involvement of private sector and corporate, this goal can be achieved.

High Value Crops

- Tea tree, *Melaleuca alternifolia*, is a high value plantation crop, known for its oil-yielding leaves of high medicinal value. India has plenty of suitable lands for commercial cultivation of Tea tree, and they should be tapped to their full potentials. The plant comes up well in high humidity regions and it can tolerate even damp area.
- Plantation crops are high-value crops of great economic importance and provide huge employment opportunity, especially to the women throughout the year. The sub-tropical climate of Northeastern India is extremely favorable to the cultivation of many plantation crops
- Seasonal crops like vegetables in the formative years of the plantation crops and permanent crops like orange, areca nut, agar, tree beans, black pepper, gooseberry etc. could be grown in the matured plantation to augment productivity and profitability. Intercropping also stands as insurance against crop failure and price slump
- The organically, grown products have been gaining popularity worldwide and fetching premium price both at the domestic as well as international market. On account of high amount of organic matter and other plant nutrients in soils of hilly regions, the plantation crops can be grown organically with minimum of agro-chemicals.

- Fish is an important component of the rapid growth of animal product consumption in developing countries that will continue into the foreseeable future. Fish are also the fastest growing food export of developing countries.
- During the past three decades the poultry scenario in the country has changed dramatically. Today poultry farming has transformed itself into an organized industry. It plays a major role in the fight against malnutrition and poverty among the rural masses of our country. The importance of poultry sector in solving the problems of unemployment and under-employment is well-conceived by planners and personnel in the developmental programmes. Among the livestock vocations poultry farming requires only less capital investment and it is same time has in added advancing ensuring quick returns
- Indian sericulture contributes four types of silk Mulberry, Tassar, Eri & Muga to the World of silk fabrics. Mulberry silk accounts for 90% of the total silk production in the country, thus it has assumed prominent place in the agro-industrial activities. In the context of rural development, mulberry/sericulture served the social objectives like: Providing off-farm employment, preventing migration of rural people

Challenges and Opportunities in Development of High-Value Agriculture in India

- Though there is vegetable and fruit production in India the opportunity for raising a variety of fruits and vegetables by taking advantage of the varying climate and other favorable features remain largely untapped.
- In horticulture and forestry, the accent would be on identifying and multiplying fruit, timber and non-timber species suitable for wasteland. Also, there should be special attention on medicinal plants, especially with regard to identifying and extracting alkaloids and secondary metabolites.
- While raising commercial plantations, special care should be taken to identify the right variety of proven performance, adaptability and high oil content.
- Requirement of improved varieties/hybrids of fruits, vegetables, plantation crops, medicinal and aromatic crops, flowers and ornamental crops, spices, cashew, oil palm with high production potential, biotic and abiotic resistance and export value.
- Development of post harvest handling, storage and processing system, product diversification and value addition.
- The cultivation of plantation crops in the region has been traditionally a corporate activity. The production system is also highly knowledge intensive and scale biased. Therefore, the expansion of small-scale tea in the recent period confronts number of constraints including lack of information and extension services, timely supply of processing facilities and lack of

required knowledge of agronomic practices. Inadequate training infrastructure to prepare the required skills among the farmers is also a reason for slow growth.

- There is vast scope for expansion of tea, coffee and rubber in the region. Adequate policy support is needed to intensify small-scale cultivation of these crops in suitable areas
- Issues such as the net impact of high-value fish-fed shrimp exports on the price of low-value fish to the poor, for example, cannot be addressed without taking into account the complex tradeoffs between the supply and demand of all agricultural commodities worldwide and the adjustments that producers and consumers make to changing relative prices. These tradeoffs and contrasts them with a series of in-depth syntheses of knowledge concerning aquaculture-specific policy issues, such as the outlook for fish-feeding technologies, interactions between events in the fishery and livestock sectors, and emerging environmental concerns. There is vast scope of increasing fishery production by efficient and rational management of the existing reservoirs and by taking up new reservoirs wherever new hydroelectric projects are set up.
- Goat and sheep are not only reared unscientifically but practically no attention is given to these non-bovine animals. Pigs on the other hand are kept by tribal and in some cases schedule caste people. Religious taboos discouraged pig rearing and poultry farming among the Hindu caste families
- Development of local and non-descript stock through artificial insemination programme be taken up more vigorously. The local stock should be improved in a phased manner and total replacement of first and second-generation stock with the freshly improved breeds to maintain productivity of milk.
- Chilling plant and other infrastructure facilities needs to be created to handle storage and marketing of milk and other livestock products

The value addition to food in India is only 7% against 23% in China, 45% in Philippines and 88% in UK. Also small scale and regional unorganized players, who still account for 75% of processed food production, dominate the industry. A few large corporates and global food majors have now started investing in the Indian food industry and it is expected that the industry will grow at an accelerated pace from here.

The major impediments to the growth of processed food Industry have been as follows:

- Poor infrastructure with respect to road and telecommunications.
- Transport is not geared to handle efficiently perishable food products.
- There are no reliable cold chains for fruit/ vegetable storage or sale of frozen
- Products like ice creams or temperature sensitive chocolates.

- Food habits vary widely across the country. Therefore food products have to be adapted to varying local tastes in every region.
- Technology is not available with small-scale players. For large players, the current small size of the market does not justify investment.
- Cost of packaging and distribution is very high

India has 6 percent of the world's human population, 15 percent of the world's livestock, 2 percent of the world's geographical area, 1 percent of rainwater, 1 percent of forest, and 0.5 percent of pastureland. Consequently, the stress on the population-supporting capacity of natural ecosystems is immense. The country has over 7500 km of coastline and about 2.1 million sq km of exclusive economic zone in the oceans. Around 60 percent of the geographical area suffers from soil erosion, water logging, and salinity. Two-thirds of the total 450 million heads of livestock struggle for survival in crowded rain fed regions.

Nearly 65 percent of the population in India depends on agriculture. It was hoped that the start of the WTO negotiations would pave the way for an arrangement reflecting the aspirations of farming communities in India and other developing countries. The failure of the Seattle Ministerial Conference in 1999 blunted that hope. Indian agriculture was perceived as badly hit when, in compliance with its obligations under WTO on April 1, 2000, the Government of India eliminated all import restrictions from more than 700 items, a large portion of which were agricultural commodities. The remaining 700 or so items were made free from import restrictions in 2001. The result of this liberalization is that many agricultural commodities and processed foods have entered the Indian market from different countries and are seen on supermarket shelves. The political economy of agriculture as a result is at a crossroads where liberalization, globalization and world trade³⁵ have caused some concern in the Indian farming community.

Within the agriculture text proper there are border measures and domestic policy disciplines. On border measures, QRs must be converted to tariffs, and tariffs brought down to 36 percent (over six years) by developed countries and by 24 percent (over ten years) by developing countries. Export subsidies must be reduced by stipulated percentages on both volume (21 percent for developed and 16 percent for developing countries) and budgetary terms (36 percent for developed and 24 percent for developing countries). In addition, there is a minimum market access commitment of 5 percent, increasing to 5 percent over a period of six years.³⁶

³⁵ There are four sets of WTO agreements that are relevant to agriculture. First, there is the agriculture text proper. Second, there is the sanitary and phyto-sanitary measures (SPS) agreement. Third, the agreement on intellectual property rights, specifically on microorganisms and plant and seed varieties. Fourth, the agreements on industrial tariffs, especially after the phase-out of the quantitative restrictions (QRs), which have implications for fertilizers and the fertilizers policy.

³⁶ On domestic measures, there is the system of calculating the AMS (Aggregate Measurement of Support) with a threshold AMS level of 10 percent for developing countries and 5 percent for developed countries. In excess of the threshold,

Eight years after the Uruguay Round agreements entered into force, there is reason for the wide spread dissatisfaction with the implementation of the agricultural sector liberalization. There are times when agreements have not been implemented, or agreements have been circumvented and their spirits violated. The reasons are not far to seek. First, the Uruguay Round was the first attempt to impose multilateral disciplines on agriculture. Second, the liberalization proposed was an imperfect one, unlike the Dunkel Draft that which would have liberalized agriculture much more.

It is now fairly certain that the rise in international prices due to agricultural trade reforms, as predicted by many studies, may not pass on fully to the farmers and to developing countries. In fact, one does not see a consistent increase in the spot export prices of agricultural commodities. Despite the implementation of the reforms, there have been wide fluctuations in the spot export prices of agricultural products. This should not, however, come as a surprise as the international markets are very thin. Exogenous supply shocks arising out of over-production or shortages in countries like India can cause sharp fluctuations in export prices, as the markets are inherently thin. India may want to emphasize these points and bargain for concessions somewhere else. If agricultural prices are not expected to rise, higher reduction commitments by the developed countries in various forms of price and non-price support could be suggested.

India's priorities in the World Trade Organization (WTO) negotiations on agriculture cannot but include the protection of domestic agricultural production and the welfare of farmers, what with the political interests that prevail in an economy facing uncertain electoral issues. The government has no choice but to bring in measures that seek to ensure food security, livelihood, and rural development. Obtaining market access for products of export interest to India is also high on the agenda.

India's proposal, submitted to the World Trade Organization in November 2002, states that the country is in favour of methodologies for minimal tariff reduction and for provisions of special safeguards against import surges. Currently, developed countries have these provisions while developing and less developed countries do not. On domestic support, India's proposal calls for steep reduction in all forms of trade distorting domestic support by developed countries and flexibility to developing countries to improve their agriculture, food, and livelihood security. It also calls for immunity from challenges of Article 6.2 measures. Steep reductions in export subsidies of developed countries and a call for disciplining export credit, guarantees, and insurance provided by developed countries such as the United States are demanded. India is also in favour of developing countries retaining marketing and transport subsidies on exports. Developed countries through dirty

developed countries have to reduce the base level of AMS by 20 percent. Developing countries have to reduce the base level of AMS by 13.3 percent.

tariffication, as agreed under the Uruguay Round, have clearly and not so cleverly undermined agricultural trade liberalization³⁷.

After promising market access to agricultural goods in return for agreeing to widen the scope of multilateral trade negotiations to cover trade-related intellectual property, trade-related investment measures and trade-in-services during the Uruguay round, developed countries have not reduced agricultural subsidies or lowered tariff and non-tariff barriers. They are now seeking further market access in new areas such as investment in return for market access in agriculture. Developed countries should demonstrate their commitment to the multilateral trading system by delivering what was already promised rather than continue asking for further concessions from the poorer countries.

The Current Situation

Many blame import liberalization in general and the World Trade Organization in particular for overflowing godowns and falling agricultural product prices in the country in recent times. The impending removal of the last of the Quantitative Restrictions (QRs) on all agricultural products has added to the fears for the future of Indian agriculture. While contractual obligations and import liberalization forced on the Government have indeed considerably increased the exposure to the world market, there has been a tendency to shift the blame for domestic problems on to external factors.

The immediate challenge is what will follow the removal of QRs. There is no reason to believe that there will be a flood of imports, only that protection can no longer be provided by a ban on imports but by customs duties. With the plugging of loopholes that existed in the form of zero tariffs on cereals and dairy products, agriculture will for now continue to enjoy a measure of protection. Where the Government could fail - as it did in the case of edible oil imports is by moving slowly on increasing tariffs whenever global or domestic prices fall. However, the fairly high levels of tariff protection that India can now invoke could be under threat when the next phase of multilateral negotiations on agriculture begins at the WTO.

This is the second issue, on which the Government has approved a set of proposals that will constitute India's initial negotiating stance. These talks will be completed only years down the line. In its first set of proposals, the Government appears to have chosen to place greater importance on protecting agriculture than on liberalizing farm exports. This is apparent from the demand for constituting a "Food Security Box" that will facilitate higher levels of protection and codify provisions that already exist in the WTO agreements³⁸.

³⁷ For instance, the European Union has set tariff bindings for the base period at about 60 percent above the actual tariff equivalents on an average. The US has set them at 45 percent above the recent rates.

³⁸ An influential section in the policy-making establishment has been pushing for India to become an aggressive agricultural exporter. But the twin of joining the side of the agricultural exporters at the WTO is a lowering of import protection. While

The third issue is the functioning of the 1994 WTO deal on agriculture, which far from boosting trade, has been used by the rich countries to increase farm subsidies. Experts in the country have demanded a review of this agreement, but such a review underlies the preparatory work now going on at the WTO for future talks. Besides, India has officially already made proposals to address the “implementation problems” in the farm pact. Going further may force India to offer more concessions on imports.

A fourth issue is intellectual property protection. Compelled as India was in 1994 to agree to provide *sui generis* protection to plant varieties it had the choice of drafting its own legislation. This could have contained innovative provisions to protect traditional rights. Yet, six years of procrastination and inter-Ministry squabbling have meant that no legislation has been enacted, opening the door to disputes at the WTO from other countries.

Where imports have caused problems they have followed either leaden-footed decision-making or the Government placing the interests of the consumers above that of the farmers. Both were evident in the setting of tariffs for edible oils (mainly palmolein), which were raised only recently. The larger problems that Indian farmers face are the result of high costs, low productivity, falling public investment, poor market development and ultimately limited purchasing power among one billion people. All these are domestic policies.

The Agreement on Agriculture (AoA) under the WTO

The Agreement on Agriculture signed at the end of the Uruguay Round of negotiations deals mainly with the nature of entry of the imported goods in domestic markets and the nature of support provided to the domestic farmers and exporters of agricultural goods by their governments. It also lists the different types of crops subsidies that have to be reduced. Are the farmers of the developing countries receiving equal benefit as compared to the farmers in the developed countries? How would these measures improve the ability of Indian farmers to compete in world markets?

The Agreement on Agriculture signed at the end of the Uruguay Round of negotiations, which has as its objective the establishment of a “fair and market-oriented agricultural trading system”, dealt with three groups of issues. These were (i) better market access, or easier entry of imported goods into different national markets; (ii) reduced domestic support, or lower direct or indirect support provided to domestic farmers by national governments; and (iii) lower export subsidies or lower budgetary support for exporters of agricultural products.

Market Access

India continues to demand adequate market access for its exports, the Government has wisely decided against too aggressive a position on liberalization of trade in agriculture.

Market access was sought to be increased in a number of ways. First, the AoA made tariffication mandatory. That is, countries had to dismantle, in a phased manner, any non-tariff barriers such as a ban on imports of particular agricultural products or ceilings set on the quantities of individual products that could be imported (otherwise termed quantitative restrictions or QRs), and only use import tariffs or duties as means of protection.

Second, the agreement required that the developed countries reduce their tariff levels by 36 percent over a six-year period from the start of implementation, with a commitment to reduce tariffs on each tariff line by a minimum of 10 percent. Developing countries were required to reduce tariffs by 24 percent over a 4-year period, and ensure a tariff reduction of 10 percent in each tariff line.³⁹

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

Finally, there was a minimum level of actual access of imported commodities to domestic markets that each country had to ensure. This was set at 3 percent of average domestic consumption during the 1986-88 reference years, to be ensured by 1995 and 5 percent of the same by 2000 in the case of the developed countries and 2004 in the case of the developing countries. If countries did not reflect this minimum access, they were expected to use the mechanism of “tariff-rate quotas”, or lower tariffs for imports of a magnitude required to ensure the realization of minimum access requirements.

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

Domestic Support

The AoA defined the principles on the basis of which the Aggregate Measure of Support (AMS) provided by the government of a country to its agricultural sector was to be computed. The aggregate measure of support was the sum total of the AoA product-specific and non-product-specific support provided by national and sub-national or federal governments in individual countries. The original Dunkel Draft of the Uruguay Round Agreement provided for commitments to reduce domestic support on a product-by-product basis. However, the agreement between the G-2, the US, and EC at meetings that took place at Blair House in Washington in November 1992 (known as the Blair House

³⁹ It needs to be noted that given the level of such tariffs at the time of implementation of the tariff reduction commitment, the actual increase in access may not be substantial. The least developed countries were provided a concession, as they were not required to reduce their tariff levels.

Accord), which paved the way for the successful conclusion of the negotiations on the Uruguay Round, replaced these product-wise commitments to a commitment to reduce overall support to agriculture⁴⁰.

Not all of these measures of support were considered violative of free trade principles and therefore eligible for inclusion in calculations of the AMS. In fact, the Agreement on Agriculture categorized the different possible measures of support into three categories. The first, termed the “amber box” measures, were seen as “those policies, which do have a substantial impact on the patterns and flow of trade”. All such domestic support measures were to be taken into account while computing the AMS level, and countries had to commit themselves to reduce in the aftermath of the agreement. The second termed the “green-box” measures were those that were seen as having no major effect on production and trade and were considered completely non-violative of the AoA and not subjected to any reduction commitments. They included a variety of “direct payments” to farmers, which were seen as augmenting their incomes without influencing production decisions. Some of them were:

- Producer retirement programmes,
- Resource retirement programmes,
- Environmental protection programmes,
- Regional assistance programmes,
- Public stockholding for food security reasons,
- Agricultural input subsidies for low-income, resource-poor families,
- Domestic food aid,
- Certain types of investment aid,
- General services that provide among other things: Research, training, and extension, Marketing information, and Certain types of rural infrastructure

The third, termed the “blue-box”⁴¹ measures, were additional exemptions arrived at through the Blair House accord and were introduced to allow the US and the EC to continue to support agriculture, while meeting AMS provisions. They were exempt from inclusion in the AMS subject to reduction commitments, but were conditionally actionable. These included notably compensatory payments and land programmes of the EU’s Common Agricultural Policy, aimed at compensating producers for

⁴⁰ Support in the form of subsidies comes by way of (i) price support, or measures such as government procurement, backed by export or import controls using tariffs and QRs and (ii) budgetary support, in the form of explicit budgetary outlays on subsidies on farm inputs and credit, agricultural research and extension, deficiency payments, insurance and disaster payments, diversion payments for temporary retirement of resources, and compensation in lieu of reductions in market price support or implicit budgetary outlay in the form of revenues foregone as a measure of support to agriculture.

⁴¹ Blue box provisions are considered to be “non-trade distorting”. Such payments were exempt if they: (1) are based on fixed area and yields, or (2) made on 85 percent or less of the base level of production, or (3) made on a fixed number of head of livestock.

limiting production, and the US government's deficiency payments scheme, aimed at compensating producers facing market prices that are below a targeted level.

AMS Reduction Commitments

The agreement required countries to reduce their AMS levels by 20 percent in the case of the developed countries, and 13.3 percent in the case of the developing countries during the implementation period. However, there was a minimum level of support that all countries were allowed to provide, which was set at 5 percent of the value of production in the case of the developed countries and 10 percent in the case of the developing countries. Countries were not required to reduce their AMS below this level in order to realize their domestic support reduction commitments. Further, those countries characterized by an AMS that was below the *de minimus* level, were free to increase the extent of support they offered to agriculture⁴².

Under market-access provisions of the AOA, countries were required to convert non-tariff barriers into tariffs, and commit to reduction of tariffs by an unweighted average of 36 percent with a minimum rate of reduction of 15 percent for each tariff line. However, the spirit of these measures was lost as developed countries engaged in 'dirty tariffication,' i.e. there was tendency to use data which allowed tariffs to be bound as high as possible. Hathaway and Ingco (1995) show that some European Union (EU) tariffs and the US tariff on sugar contain considerable 'dirt'. In contrast, though the bound tariff on sugar is 150 percent, India has never exercised this option completely.

Moreover, Japan, EU, and US have reduced low tariffs more than the high tariffs. As a result, average rate of reduction was 36 percent, but the average tariff levels were reduced by less than 36 percent. In contrast, India has agreed to tariff bindings of 0 percent on commodities such as milk powder long ago, and has high tariff on liquid milk that is hardly traded. If possible these rates need to be re-negotiated, and suggestions could be made to have the Swiss Formula of steeper reductions of high rates by the developed world.

As per the AOA, member countries are required to calculate the total aggregate measure of domestic support (AMS) extended to the agricultural sector every year. The current measure of AMS should not exceed the base AMS (1986-88 period), and it has to be reduced by at least 13.3 percent in ten years in the case of developing countries and by 20 percent during a period of six years for developed countries. Interestingly, most of the developing countries including India have net-taxed their agricultural sector, and as a result their AMS is negative. Therefore, there are no reduction

⁴² The asymmetry involved in setting an acceptable floor to the AMS but defining no ceiling meant that countries, especially the developed ones that had subsidized their agriculture heavily in the past and had to reduce the volume of such support by 20 percent, could end up with levels of support far higher than even 10 percent of the value of their agricultural output.

commitments on this issue for India. However, the rules have been framed in such a way that for most of the developed countries the current level of AMS is very low.

This situation has become possible due to various reasons. The base year AMS was calculated for the period 1986-88 when the world prices were very low. As a result, the base AMS is quite high for the developed countries. Moreover, while green-box measures are exempted from both the base AMS and current AMS, there is what are called blue-box measures exempted only from the current AMS. As a result, for most of the developed countries, base AMS is very high and current AMS is low.

Therefore, the AMS reduction commitments are nearly met for most of the developed countries. This implies that there will be insignificant reductions in the domestic support given by the developed countries. This certainly does not square with the spirit of WTO objectives. In this regard developing countries may make suggestions either to eliminate the blue-box measures or move the blue-box into the AMS calculation and subject it to reduction commitments. Further, they may negotiate for receiving some credit for their negative AMS. Studies show that the total AMS for India is negative, and, therefore, there are no reduction commitments on this issue.⁴³

The Indian AMS figure varies from year to year. However, it is always below the threshold of 10 percent. Consequently, domestic agricultural reforms do not have to happen on account of WTO. There are certainly methodological issues in computing AMS that need to be cleared up in subsequent negotiations. The question is: Will India gain from liberalization? If it is accepted that India does gain from global agricultural liberalization, as studies have indeed documented, India can afford to be more aggressive in the negotiations. India can then argue that the blue and green box policies, exempted from AMS calculations should be disciplined. There should be a cap on the AMS and the minimum market access commitment can be linked to the actual level of AMS. It can be argued that the export-subsidy disciplines should be at much finer levels (eight digits, say) and that tariff-rate quotas (TQRs) should be prohibited. It is also possible to argue that the Special Safeguard Clause should be scrapped.

Export Subsidies

In its bid to make agricultural trade freer, the AoA required nations to reduce the subsidies they offered to exporters of agricultural products, as these were considered an unfair practice. Signatories to the AoA committed themselves to reduce the expenditure they incurred on such subsidies to levels that were 36 percent lower than their 1986-90 average values in the case of the developed countries

⁴³ Nevertheless, the methodology involved in the calculation of AMS needs to be carefully looked at. The AOA text implies calculation of nominal AMS, which does not give any consideration to inflation. Within the product-specific AMS, the per unit price support is to be calculated as the difference between the administered price and c.i.f. price of the importable commodity or f.o.b. price of the exportable commodity, the latter prices representing the fixed external reference price for that commodity. However, part of the difference between the administered price and the external reference price will be the domestic freight, insurance, and other related expenses. These must be added to the c.i.f. external reference price so that the external reference price is comparable to the administered price paid to the farmers at the village markets.

and 24 percent lower relative to the same figure in the case of developing countries. Further, countries agreed to reduce the volume of agricultural exports that were subsidized, by reducing the share of subsidized exports by 24 percent relative to the 1986-88 base period in the case of the developed countries and 14 percent in the case of developing countries. Further, it was mandated that commodities that were not subsidized at the time of the agreement, would not be supported with subsidies in the future as well. The problem here is often that export subsidy commitments are seen at aggregated levels⁴⁴.

There are two angles to India's negotiations in terms of what India has to do and in terms of what other countries have to do. On disciplines that apply to India, the issues are fairly simple. There are too many problems on border measures, since bound rates for agricultural commodities range between 100 and 150 percent. Barring a few items, as shown by agricultural economists such as Ashok Gulati and Anil Sharma, India's agricultural products are price competitive. Since liberalization, even if it is imperfect, India's agricultural products are likely to become even more competitive. Consequently, fears of India being deluged with imports of agro-products are unrealistic, even if import duties were to be zero. With import duties upwards of 100 percent, the argument is strengthened. This issue attains some additional significance because India no longer has access to Article XVIII B justification of QRs on the balance-of-payments ground and barring a small prohibited and banned list, everything was put on OGL (open general license) from 1 April 2001. There is no reason to create distortions by imposing import duties of more than 40 percent on agricultural products, while the maximum bound duty on industrial products is 40 percent. Therefore, a maximum duty of 40 percent on agricultural products is reasonable.

These issues must be discussed among the member countries to see that the methodology used is consistent across countries and is based on sound economic principles. In comparison to market access and domestic support, disciplines on export competition were considered the most binding of all AOA commitments. Nevertheless, 25 percent of the members of WTO have maintained the right to subsidize exports. For example, only three exporters account for 93 percent of subsidized wheat exports and two countries account for 94 percent of subsidized butter exports (Konandreas, Sharma and Greenfield, 1999). Moreover, there is a concern about circumvention of rules through carrying forward unused export subsidies from one year to the next. These issues too could be addressed in the re-negotiations. Since the majority of countries do not give export subsidies, they could press for further reductions in the export subsidies. Countries can be persuaded to bring in other forms of

⁴⁴ This allows the flexibility to maintain and even increase subsidies at finer levels of disaggregation. It has been observed that the allocation of TQRs is often arbitrary and non-transparent. As long as TQRs exist, they amount to a de facto reintroduction of QRs. When QRs are replaced by tariffs, the actual tariffs set are considerably higher than what the tariff equivalents of QRs should have been. Protection surfaces through the SPS agreement, which allows standards that are higher than internationally accepted standards provided these have adequate scientific basis. On occasion, protectionism also surfaces through anti-dumping and anti-subsidy investigations. State trading, government procurement, and government monopolies are not sufficiently regulated. Given the imperfection of global markets, competition policy is also an issue.

export assistance such as export credits and export credit guarantees into the fold of general rules on export subsidies.

Most of the issues discussed so far relate to price competitiveness of agricultural commodities. However, the WTO member countries have reached agreements on SPS and TBT that essentially affect the quality competitiveness of Indian agricultural commodities.

Sanitary and Phytosanitary Agreement and Allied Measures

Any discussion on the effects of the WTO agreements on Indian agriculture will be incomplete without a discussion on SPS and TBT agreements. In fact, Article 14 of the AOA clearly states: *Members agree to give effect to the Agreement on the Application of Sanitary and Phytosanitary Measures*. The Agreement on SPS allows members to adopt and enforce measures necessary to protect human, animal or plant life or health, subject to the requirement that these measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between members where the same conditions prevail or a disguised restriction on international trade.

Moreover, Article 3.2 states that sanitary and phytosanitary measures that confirm to international standards and guidelines shall be deemed to be necessary to protect human, and animal or plant life or health. For food products, the agreement has accepted the guidelines on food safety and food standards set by the Codex Alimentarius Commission (CAC). An important component of the CAC guidelines is the implementation of a food safety system called Hazard Analysis and Critical Control Points (HACCP).

Adoption of the quality system will not only ensure exports of value-added agricultural products, but will improve our domestic food quality as well. Article 9 of the SPS agreement provides for technical assistance to developing countries to build their infrastructure for food processing. Similarly, the agreement on Technical Barriers to Trade (TBT) sets standards for labeling and packaging of agricultural products as recommended by CAC.

Unless India keeps itself abreast of the emerging guidelines of CAC, it may face non-tariff-barriers in future. In this regard, WTO does encourage developing countries to take active part in the CAC activities to decide on various SPS and TBT-related standards. Among developing countries, India has been active in its participation. This practice needs to be pursued on a continued basis to protect interests of Indian agriculture, without jeopardising the spirit of achieving uniform international standards.

Agriculture and Intellectual Property Rights - The TRIPS Agreement

The TRIPS⁴⁵ Agreement protects intellectual property rights in all WTO member countries and constrains the production of imitation products. While its purpose is to encourage invention and innovation by ensuring private agents a return for investment in Research and Development (R&D), it is framed in such a way that it may discourage competition and prevent the dissemination of knowledge and technology. Recent experience suggests that this has actually been the result. The major issues in the TRIPS Agreement, relevant to agriculture and food processing industries are discussed below.

Transfer of Technology

It has already been stressed by the representatives of several developing countries in the WTO that the objective of fostering the transfer and dissemination of technology, which is already explicitly stated in Article 7 of the TRIPS Agreement, should be made operational through special provisions. This is because, after a period in the early 1990s when technology access constraints were relaxed somewhat, there has been a tightening up after TRIPS was signed. In fact, the developing and least developed countries now face growing constraints to get access to up-to-date technologies.

The enhanced competition between MNCs, which has also been reflected in the growing tendency towards merger and concentration at the international level, has in turn been associated with a reduced willingness to part with or share new technologies. Also, the stronger protection to invention, which has been granted under TRIPS, makes it more difficult for industries in developing countries to use the technology developed elsewhere, through reverse engineering and other devices. This reduces one of the more obvious means of “catching up” by late industrializes, and of the more important sources of technology particularly for small and medium enterprises across the world⁴⁶.

Research and Development

In the area of crop research, the focus has been on improving the quality of certain products in a consistent way, or on genetically modifying certain crops so as to ensure particular features that are

⁴⁵ The Agreement on Trade-Related Aspects of Intellectual Property Rights is set out in Annex 1C of the Final Uruguay Round text. There are 73 articles in the text, split up into seven different parts. Part I is on general provisions and basic principles. Part II is on standards for specific intellectual property rights and covers copyright and related rights, trademarks, geographical indications, industrial designs, patents, layout designs of integrated circuits, and protection of undisclosed information. There is also a section on the control of anti-competitive practices in contractual licenses. Part III is on the enforcement of intellectual property rights. Part IV talks about the acquisition and maintenance of intellectual property rights, while Part V is on dispute prevention and settlement. Part VI is on transitional arrangements and Part VII talks about institutional arrangements.

⁴⁶ The enhancement of technology flows to developing countries requires revision in several articles of the TRIPS Agreement, such as Article 27.1 (working obligations), Article 31 (b) (broader application of “refusal to deal” as an autonomous ground for compulsory licenses), Article 40 (specification of illegal restrictive business practices in voluntary licenses), and Article 66.2 (further specification of measures to be adopted to encourage the transfer of technology to Least Developed Countries).

found to improve marketing chances, rather than on improving yields. This is despite the fact that yield improvement remains the primary concern of most cultivators across the world and will remain the prime determinant of global food security at least as long as world population continues to increase.

For this to change in a way that would be more beneficial to people in general, the increasingly common perception that scientific research is essentially something that is carried out or funded by private corporations, must be fought. It is important to remember that even in the developed countries, until the 1980s most of such kind of research was actually funded by governmental and quasi-governmental agencies, other public bodies and universities, rather than by corporations. While the profit motivation was not entirely absent, certainly it was not the dominant motivating principle in much of the most important research that has occurred even in this century. It is necessary to recreate this pattern, in both developed and developing countries, simply because the research areas with the greatest long-term benefit to societies remain those where social returns are higher than private returns, and where, therefore, socially desirable levels of expenditure will not otherwise be maintained.

Control of Monopolies

There is an inherent contradiction between the competition policy that seeks to prevent the exercise of undue and unfair market power, and the TRIPS agreement, which effectively grants monopoly rights to patent holders. Since most R&D is now conducted under the aegis of MNCs or funded indirectly by them, they also end up holding the vast majority of the patents.⁴⁷

There is sufficient evidence that such patents are used as a means of increasing market power and undermining the competition, and this in turn can easily lead to the growth of monopolies with attendant forms of anti-competitive business practices. In some cases, these monopolies and the fact that large MNCs control important patents can be especially worrying when the products relate to crucial areas such as agricultural seeds and life-saving drugs. By restricting competition, the TRIPS rules will enable some companies to jack up prices of their products far beyond costs and thus earn rents in terms of monopoly revenues and profits. This has already been clearly seen in the case of computer software.

Thus, IPRs allow companies a monopoly of seed ownership and other biotechnology products. These companies can then also behave in a monopolistic way in global sales and distribution. For example,

⁴⁷ The number of patents granted worldwide in 1995 was about 710,000 and that at the end of 1995 about 3.7 million patents were in force in the world. Since then, there has been an increase in patenting activity, dominantly by large companies based in the North. Thus, it has been estimated that industrial countries hold 97 percent of all patents, and that 90 percent of all technology and product patents are held by MNCs.

the chemical company Monsanto owns the second largest cottonseed company in the world (Stoneville Pedigreed) and is a major shareholder in the world's largest cottonseed company (Delta & Pineland). Restrictive business practices have been found to occur in cases where farmers who use Monsanto's Roundup Ready soybean seeds also end up using Monsanto's pesticides and allow inspections of their fields. The linking of seeds and pesticides purchases has also been found in the case of cotton cultivation in South Asia, with problematic effects in terms of higher variability of output in addition to higher monetary costs for farmers.

It is a point of debate whether the TRIPS agreement by itself needs to be modified to take account of this problem, or whether a simultaneous application of a more stringent competition policy would be sufficient to deal with it. It is true that the expansion and strengthening of IPRs has taken place with a more effective application of competition law, such as an increase in the number of compulsory licenses granted in the United States to remedy anti-competitive practices. But such conditions do not exist in most countries, nor is the institutional framework strong enough vis-à-vis large multinational companies, to ensure the effectiveness of anti-trust measures. In general, therefore, the nature of patent law itself needs to be sensitive to the potential that may be implicit in it for creating or strengthening monopoly behaviour, and it should contain provisions that allow for revoking of patents or reduction of patent period if the holder is found guilty of anti-competitive behaviour. This is especially necessary in the case of patents relating to essential products.

Biodiversity and Indigenous Knowledge

Much technological progress in the recent past has been in the field of biotechnology and genetic engineering, which in turn has been based on generic resources that are often available only in the tropics (that is, mainly developing countries). Increasingly, while research organized by private corporations into genetic resources has drawn on the traditional knowledge of indigenous communities, these communities and people themselves do not benefit from the patents or even from the resulting inventions. The issue of acknowledging and rewarding the contribution of indigenous and local communities is currently being discussed internationally.

The Convention on Biological Diversity has attempted to deal with the question of people's participation in biotechnological research activities in areas where genetic resources are located, and share the fruits of such research. Similarly the Food and Agriculture Organization of the UN in an International Undertaking has developed the concept of "farmers' rights", defined as the "rights arising from the past, present, and future contribution of farmers in conserving, improving and making available plant genetic resources". These are important because they recognize the inherent communal and participatory nature of invention and technological progress, an aspect that the TRIPS approach has hitherto missed completely.

Reconciling the TRIPS agreement with these conventions and peoples' rights may become one of the focal points of re-negotiation. This could include the amendment of Article 27.1 (requirement of universal novelty as a condition for patentability), and Article 29 (obligation to prove that prior informed consent has been obtained with regard to claimed biological materials). A new provision on "traditional knowledge" could also be considered. An important point in this regard is that those developing countries that are hastening to meet the requirements of the TRIPS agreement may end up pushing through legislation that does not adequately safeguard the traditional knowledge rights and therefore negatively affects all citizens⁴⁸. The new Patents Act in India is also being criticized on grounds of inadequate protection to bio-diversity and traditional knowledge.

Life Forms and Plant Varieties

Article 27.3 (b) of TRIPS says that members may also exclude from patentability, plants and animals other than microorganisms, and essentially biological processes for the production of plants and animals other than non-biological and microbiological processes. However, members shall provide for the protection of plant varieties either by patents or an effective *sui generis* system or by any combination thereof. These provisions were to be reviewed after four years, but no systematic review has been put into place at the WTO.

There are two key issues involved with respect to the patenting of life forms and the protection of plant varieties. The first relates to the process of "bio-piracy", that is the theft of biological resources and traditional knowledge from the developing countries. Examples of bio-piracy abound - the case of the US patent on the use of turmeric for healing wounds is a well-known one. The second aspect is the advent of biotechnology. The ability to identify, isolate, and move genetic materials across species types has aroused great commercial interest and investment in biotechnology. Genetically engineered crops and foods are being produced with the global market as their target; thus the need to obtain IPR protection for such "new" products.

In relation to the patenting of life forms, Article 27.3(b) provides that countries may exclude from patenting plants, animals and essentially biological processes, but countries must patent micro-organisms, micro-biological and non-biological processes. But there is no scientific or legal rationale for the distinction made between the different types of life forms and of natural processes. In fact, such a distinction goes against the basic principle of patent laws in many countries that "discoveries" (as opposed to inventions) are not patentable.

⁴⁸ Under the Industrial Property Bill 1999, Kenya's attempt to domesticate an agreement on Trade-Related Aspects of Intellectual Property Rights is unwittingly skewed in favour of foreign control over local genetic resources. In particular, small-scale farmers' ability to grow food through seed saving could be severely curtailed due to failure to protect indigenous and traditional knowledge systems. Doctors and international medical relief agencies in Kenya have launched a vigorous campaign against the proposed Industrial Property Bill.

The second aspect of Article 27.3 (b) is the protection of plant varieties. Countries must protect plant varieties through the patent system, or through the establishment of an effective *Sui generis* (i.e., unique or of its own kind) system or any combination of the two. Once again, there is no clear distinction that can be drawn between plants and plant varieties from the scientific or legal perspectives. However, there is a history of plant variety protection, in order to protect the interests of commercial plant breeders, which sought protection for their crop varieties but found it difficult to meet the requirements of the patent system.

A recent proposal of the African Group⁴⁹ of WTO members is significant, as it questions the TRIPS Agreement's requirement for mandatory patenting of some life forms and some natural processes. It calls for a clarification that plants, animals, and microorganisms should not be patentable, and that natural processes that produce plants, animals, and other living organisms should also not be patentable. The paper also puts forward the view that by stipulating compulsory patenting of microorganisms (which are natural living things) and micro-biological processes (which are natural processes), Article 27.3(b) contravenes the basic tenets of patent laws that substances and processes that exist in nature are a discovery and not an invention and, thus, are not patentable. The Africa Group paper also gives a clear direction to the review of another part of Article 27.3(b), which specifies that members shall provide for the protection of plant varieties either through patents or an effective *sui generis* system.

Environment

While several new innovations can have adverse ecological and environmental implications, the area of biotechnology research and application is perhaps the most fraught in this regard. Many environmentalists are concerned that the present lack of controls and accountability in the system will be detrimental to the global environment, especially as it is likely to accelerate biodiversity loss and could threaten natural ecosystems.

Within the WTO Committee on Trade and Environment, India has already indicated the need to amend the TRIPS Agreement in order to facilitate the access to and use of environmentally sound technologies. The proposal requires the amendment of Article 31 (compulsory licenses) and Article

⁴⁹ The African countries have thus proposed a review of TRIPS which would enable the following: (a) clarify that developing countries can opt for a national *sui generis* law that protects innovations of indigenous and local farming communities (consistent with the Biodiversity Convention and the FAO's International Undertaking); (b) allow the continuation of traditional farming practices, including the right to save and exchange seeds and sell their harvests; (c) prevent anti-competitive rights or practices that threaten food sovereignty of people in the developing countries; (d) harmonise Article 27.3(b) with the provisions of the CBD and the FAO's International Undertaking, which take into account the conservation and sustainable use of biological diversity, the protection of the rights and knowledge of indigenous and local communities, and the promotion of farmers rights. These proposals have been supported by many other developing countries.

33 (duration of patents), and suggests that patent holders should be subjected to an obligation of transferring environmentally sound technologies on fair terms and most favorable conditions. It also proposes a financial compensatory mechanism.

The Doha Ministerial Meet

When the WTO's fourth ministerial meet ended on November 14 2001 at Doha, Qatar, after an unscheduled sixth-day of negotiations, there were three declarations that were released. These were: a) the 'Doha Development Agenda', or the ministerial declaration which set out a road-map for a new round of trade talks, even though there was no explicit mention of a round; b) the declaration on a set of implementation issues raised by the developing countries; and c) a 'political statement' on the TRIPS agreement and public health.⁵⁰

The Doha Declaration states that:

- Each member has the right to grant compulsory licenses and the freedom to determine the grounds upon which such licenses are granted; and
- Each member has the right to determine what constitutes a national emergency or other circumstances of extreme urgency, it being understood that public health crises, including those relating to HIV/AIDS, tuberculosis, malaria and other epidemics, can represent a national emergency or other circumstances of extreme urgency.⁵¹

The Doha Round came as a triumph for the developing countries as they were able to use their ability to get the ministerial meet to deliberate and make a declaration on the more than 40 issues relating to the implementation of the Uruguay Round that had been raised by them over time. The declaration splits the implementation issues into those that were settled at Doha and a number of 'outstanding issues,' which would be negotiated as part of the new round.

However, not much should be made of the 'victory' involved in having some of the issues settled at Doha. Barring some agreement on the imposition of anti-dumping duties by the advanced countries, the most crucial implementation problems such as those relating to domestic support for agriculture in the US and EU and trade in textiles have been just accepted as issues that are in need of negotiation as part of a new enlarged round. That is, going against the grain of demands from the developing

⁵⁰ Agreement on these declarations notwithstanding, there is many a question that remains unanswered. It is unclear to what extent developing countries, led by India, were able to redress existing inequalities in the world trading system and stall imposition of new burdens through a new round of negotiations.

⁵¹ However, the situation in countries, which have no manufacturing capacity to be able to effectively utilize compulsory licensing, has been left ambiguous. The declaration merely states: "We recognize that the WTO Members with insufficient or no manufacturing capacities in the pharmaceutical sector could face difficulties in making effective use of compulsory licensing under the TRIPS Agreement. We instruct the Council for TRIPS to find an expeditious solution to this problem and to report to the General Council before the end of 2002." This does weaken the 'flexibility' available to some countries.

countries, including India, in the run up to Doha, that implementation issues need to be sorted out before any new round of talks is initiated, almost all of those issues have been included in the agenda of the new round.

The major setback here is that rather than settle the implementation issues in an area where even the Uruguay Round had mandated a review that began last year, the declaration ties up discussions on agriculture with discussions on a whole range of issues that are to be taken up as part of a new round. This is significant because that set of negotiations have been defined as a “single undertaking”, implying that countries do not have the choice of joining an agreement on some of the issues while opting to reject agreement on the rest. This would mean that the developing countries are being “made to pay twice” - they were bullied into signing an iniquitous agreement at the time of the Uruguay Round negotiations; and, now, to redress some of that inequity they are being forced to offer more concessions in new areas as part of the ‘single undertaking’ mechanism. Also, after much hard bargaining, the developing countries have managed to obtain a small concession in the area of agricultural support in the developed countries.

The EU had, after much stonewalling, to agree to reduce, “with a view to phasing out”, of agricultural export subsidies. This is only a small advance, since no date has been set for the phase out and since the real issue, which is the reduction in the use of “permitted” green- and blue-box subsidies by the developed countries to subsidize their farming community, has been left to be renegotiated in the course of the new round. This despite the evidence that many of those subsidies not only affect the volume of world production and trade, but in the final analysis of world prices as well.

Another victory for developing countries came in the area of geographical indications. Geographical indication is a kind of implicit copyright, provided, for example, to wine producers from France for use of the word *Champagne*. Developing countries have managed to include a provision to discuss the extension of that privilege to commodities other than wine and spirits. If that discussion leads to such an extension, it could, for example, help India to file for protection regarding use of terms such as ‘*basmati*’, *Kancheepuram*, *Kolhapuri*, etc., on geographical grounds.

Finally, India has won a symbolic victory on the inclusion of the ‘Singapore issues’. The immediate agenda for the new round includes, besides implementation issues and the already mandated negotiations on agriculture and services, only industrial tariffs, anti-dumping duties and certain aspects of trade and environment. Core labour standards have just been referred to and the work of the ILO in this area taken note of. And negotiations on the so-called Singapore issues, such as foreign investment, competition policies, public procurement and trade facilitation, though not altogether dropped, are to be taken up as part of the new round only after reconsidering the matter and generating an explicit consensus on negotiations on these at the time of the fifth ministerial meet to be

held in 2003. While agreeing to postpone final decision on these issues, the developed countries have also put in a mandate for completion of negotiations by 2005⁵².

Problems that Persist

A disappointment at the Doha meeting was that the promise of greater transparency made after the fiasco at Seattle was not delivered. Doha made clear the distance developing countries as a group have to travel if they are to make any real difference to the unequal international trading order. The most disconcerting was the innumerable ways in which the developed countries conspired to divide the developing countries and win major concessions for themselves. The scenario as it evolved was indeed quite instructive.

To start with, the US set itself up as a reasonable negotiator demanding some liberalization of agricultural trade plus inclusion of issues such as industrial tariffs and anti-dumping duties in the agenda for a new round of trade negotiations. The EU, on the other hand, remained intransigent on agricultural protection and subsidies, but put on the table a range of new issues varying from the environment to investment and competition policies. This almost predetermined the compromise, the EU gave in a bit on agricultural trade, the developed camp as a whole agreed to discuss implementation, but in return got a new round, which at the minimum had the issues raised by the US on the agenda and at the maximum included all issues raised by the EU. The actual outcome included a new round that had on its agenda a combination of issues lying somewhere between the minimal demands of the US and the maximal demands of the EU.

The Aftermath of Doha

The Doha ministerial in November 2001 heralded a new round of multilateral talks, including negotiations on agriculture. However, sharp differences between member countries debating market-access issues at Geneva have ensured the talks are at a standstill. Distortions in agricultural trade today will go only when these differences are settled. Trade will help raise international prices of agricultural commodities to remunerative levels, and ensure income stability for farmers in the

⁵² The symbolic victory of India and 12 other developing countries, which had pushed hard on these issues, was enhanced when the chair of the final Doha plenary made the following statement: "I would such as to note that some delegations have requested clarification concerning paragraphs 20, 23, 26 and 27 of the Draft Declaration. Let me say that with respect to the reference to an 'explicit consensus' being needed, in these paragraphs, for a decision to be taken at the Fifth Session of the Ministerial Conference, my understanding is that, at that Session, a decision would indeed need to be taken, by explicit consensus before negotiations on Trade and Investment and Trade and Competition Policy, Transparency in Government Procurement, and Trade Facilitation could proceed. In my view, this would give each Member the right to take a position on modalities that would prevent negotiations from proceeding after the Fifth Session of the Ministerial Conference until that Member is prepared to join in an explicit consensus."

developing countries. India, like most other developing countries, is asking for better market access for its exportable agriculture commodities to developed countries.⁵³

India and other developing countries want industrialized countries to substantially lower their farm subsidies. The Doha mandate on agriculture commits member countries to have “comprehensive” negotiations aimed at substantial improvement in market access, reduction of all forms of export subsidies, and substantial reduction in trade-distorting domestic support. This position is similar to that of Japan, Norway, and Korea. India is in a position to make reduction commitments on tariff as its average bound rate for farm products is among the highest.

On domestic support and export competition, India’s position is similar to that of the Cairns Group. On bound rates vis-à-vis applied rates, most developing countries would have to negotiate from the bound levels as proposed by Harbinson. On the other hand, Singapore, Hong Kong, China, and others prefer negotiating on the basis of applied rates as their applied rates are pegged at their bound levels. The three-band formulation proposed by Harbinson’s first draft proposes tariff reduction in the following manner: zero to 20 percent, 20 percent to 120 percent, and 120 percent and above. The four-band prescription suggested by him in the second draft seeks the following reductions - zero to 20 percent, 20 percent to 60 percent, 60 percent to 120 percent, and 120 percent and above.

The Indian Government has indicated that it is important for the Multilateral Trade Negotiations (MTNs) to address the inter-linkages among the three pillars in the negotiations, namely, market access, domestic support and export competition. All food-safety issues should be included in the Sanitary and Phyto-Sanitary (SPS) Agreement. Labeling requirement should be considered in the Agreement on Technical Barriers to Trade. On the issue of domestic support, while developing countries are ill equipped to provide essential subsidies to their farmers, developed countries can continue to give subsidies to their rich farmers under various categories. In the interest of clarity, transparency, and effective reduction of subsidies, there should be fewer categories or boxes.⁵⁴ Also, export subsidies for agricultural produce should be completely eliminated within an agreed time. Similar commitments are also needed for government-supported export credits or credit guarantees.

⁵³ Stuart Harbinson, Chairman of the WTO’s Agriculture Council came out with his first draft on agriculture on February 17, 2003 and a limited revision of certain elements on March 18, 2003. The Harbinson draft needs modifications and any formula that is devised should first cover the concerns of developing countries. For items of staple consumption that affect food security, there should be an exemption from the reduction commitment on tariffs. The US favours “ambitious” tariff reduction commitments that the European Union and many Third World countries do not agree with. The Indian government is keen that the Uruguay Round approach for further tariff reduction commitments is followed during the negotiations instead of a three- or four-band formulation for lowering the tariff “across-the-board” as proposed by Harbinson in the draft modalities for negotiations on the farm sector.

⁵⁴ Also, for the purpose of ensuring that the special interests of developing countries are taken care of, special safeguard measures should be provided to these countries under Article 5 of the existing Agreement.

In India, the WTO and the import liberalization regime have been blamed for the stock piling of foodgrains and the falling agricultural product prices. The removal of quantitative restrictions (QRs) on agricultural products has further added to the fears. However, while Indian agriculture is certainly exposed to the world market, it is fairly obvious that the blame has been shifted from domestic failure to external factors.

There are four distinct sets of WTO-related issues confronting Indian agriculture that need to be clearly understood and discussed in the ensuing public debate. The first is the fallout of the removal of QRs. There has been no surge in imports, even where protection is not being provided by a ban on imports but by customs duties. However, agriculture continues to be protected, especially, after some anomalies such as zero tariffs on cereals and dairy products have been removed.

Secondly, the Indian Government appears to have chosen to place greater importance on protecting agriculture than on liberalizing farm exports. This is apparent from the demand for constituting a “Food Security Box” that will facilitate higher levels of protection and codify provisions that already exist in the WTO agreements. An influential section in the policy-making establishment has been pushing for India to become an aggressive agricultural exporter. But on the other hand joining the side of the agricultural exporters at the WTO is at the cost of a lowering of import protection. While India continues to demand adequate market access for its exports, the Government has decided against an aggressive position on liberalization of trade in agriculture.

The third issue is the functioning of the 1994 WTO deal on agriculture, which far from boosting trade, has been used by the rich countries to increase farm subsidies. Experts in the country have demanded a review of this agreement, but such a review underlies the preparatory work now going on at the WTO for future talks. Besides, India has already made official proposals to address the “implementation problems” in the farm pact. Going further may force India to offer more concessions on imports.

The fourth issue is intellectual property protection. Compelled as India was in 1994 to agree to provide *sui generis* protection to plant varieties, it had the choice of drafting its own legislation. This could have contained innovative provisions to protect traditional rights. Yet, years of procrastination and inter-Ministry squabbling have seen disputes at the WTO launched by several countries against India. Farmers’ problems are high costs, lack of risk coverage, poor extension and storage facilities, low productivity, falling public investment, poor market development and limited purchasing power. And these cannot be hidden behind cries of protest against international trade.

Conclusion

Infrastructure in relation to post-harvest technology, including rural communication, godowns, refrigerated storage, and transportation arrangements for perishable commodities is inadequate. The World Trade Agreement stringent requirements of sanitary and phytosanitary measures are yet to be understood. There is an urgent need to improve yield per drop of water. During the last few decades, farmers in various countries have shifted from flow irrigation to sprinkler, drip, and now membrane irrigation. Plant-scale agronomy is replacing field-scale agronomy. Precision farming techniques need to be adopted. Contract farming and corporate farming, with increased investments, needs to grow. There is indeed an urgent need to quickly implement the Plant Variety Protection and Farmers' Rights Act as well as Biodiversity Act without delay. Indian farmers need adequate information. Computerized systems of information need to be developed and the benefits of cyberspace should be extended to poor farm families.

Given the complexities and escape routes available to the western world in the implementation of the agreements, one could question the methodologies followed in the reduction commitment norms. Market-access commitments have been tampered with dirty tariffication. Moreover, already low rates of tariffs have been reduced as compared to a reduction in high tariff rates.⁵⁵ On the other hand, some of India's low tariff bindings may be re-negotiated. Calculation of price support within the product-specific AMS is not clearly defined in the text. Therefore, it would be a good idea to bring a consensus among the member countries on this issue.

Developing countries that have net-taxed their agriculture, may ask for credit of some sorts for having negative AMS. Further, blue-box policies may be suggested to be eliminated altogether or moved out of the exemptions for the calculation of current AMS. Moreover, along with export subsidies, export credits and guarantees may also be suggested to be brought under reduction commitments. The SPS and TBT agreements do affect agricultural markets. Modernizing our agricultural processing will not only enhance our export-market potential, it would also reform domestic food quality.

Understanding the direction and magnitude of the effects of WTO agreements on Indian agriculture is a very difficult proposition. Some attempts have been made in the past to quantify the effects of the WTO Agreement and trade liberalization on Indian agriculture. While the direction of the gains to Indian agriculture may be correct, one may not agree with the assumptions of their models, and the magnitude and distribution of these gains. In the presence of imperfectly competitive export market structures, the increase in terms-of-trade for Indian agriculture may not be as high as predicted by the computable general equilibrium studies that implicitly assume perfectly competitive markets. Whatever little improvement may occur in the terms-of-trade, it will have negative or at best very

⁵⁵ Therefore, the Swiss Formula may be suggested to reduce higher tariffs by steeper cuts.

little effect on farmers' welfare, as supply response to terms-of-trade improvement is ambiguous. On this ground, developing countries may ask for further and sharp reductions in the export subsidies and domestic support given by the developed world. Indian agriculture will stand to gain through improvements in irrigation, transport, agricultural extension services and research. Expenditures on such items are exempt from domestic support reduction commitments under the green-box policies.

In the emerging post-WTO world economic order, direct competition from imported goods cannot be prevented. With the eventual dismantling of the quantitative restrictions and reductions of industrial tariffs, our choice of warding off foreign competition is nothing more than wishful thinking. So, we must focus on how India can use the changed conditions to earn benefits. For this, first and foremost the economy has to identify and develop a modern infrastructure to facilitate agricultural exports. The post-harvest technology and the storage facilities need to be upgraded. There is a need to commercialize the farm operations by improving the management and marketing techniques. This can be achieved by establishing mutually beneficial linkages with the industry. Thus, there is plenty of scope for India to change from a mere producer to an exporter of value-added and processed farm products and high quality seeds.

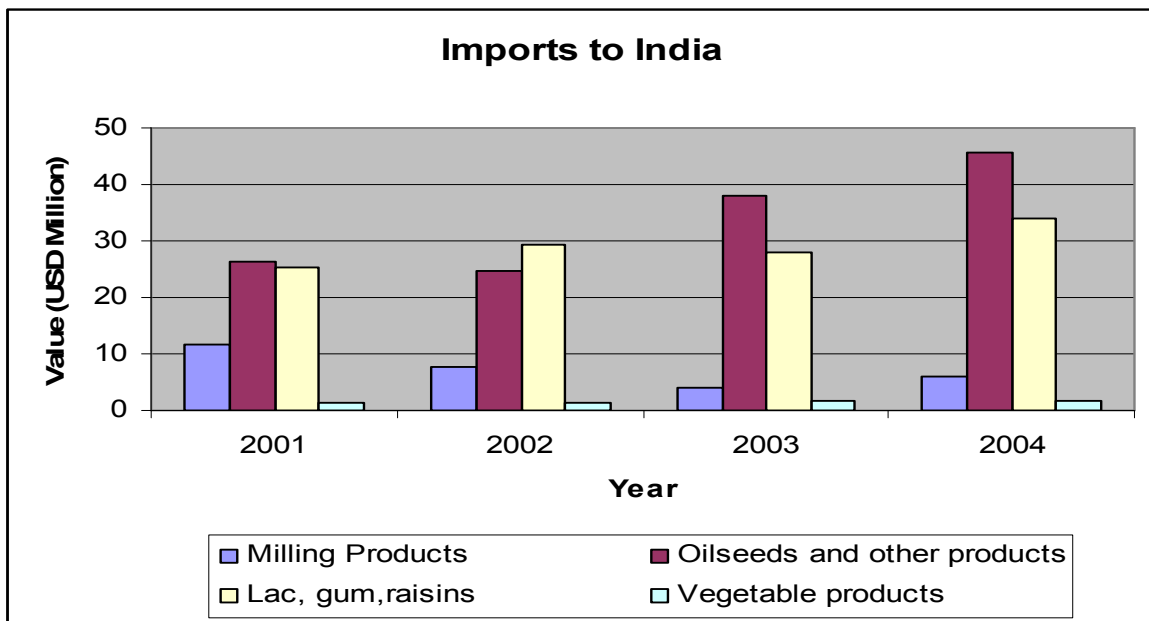
Import and Export Figures for India

Figure 1: Import figures for India – Fish, Poultry, Dairy and Livestock Products



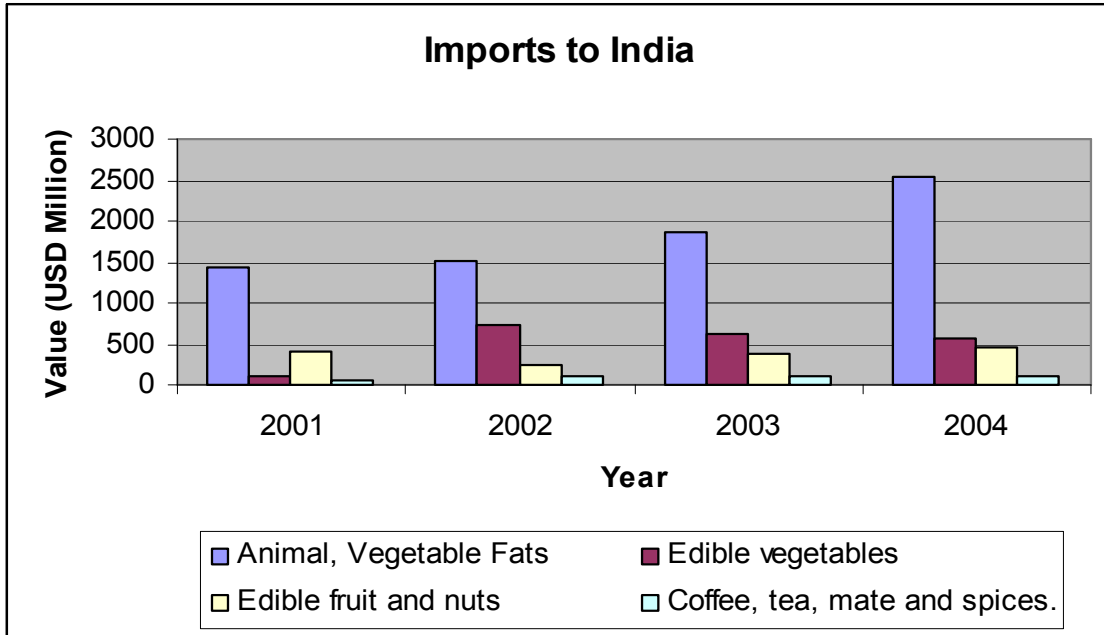
Source: APEDA, Analysis: IDF

Figure 2: Imports to India: Milling products, Oilseeds, Vegetable products, lac, gum etc.



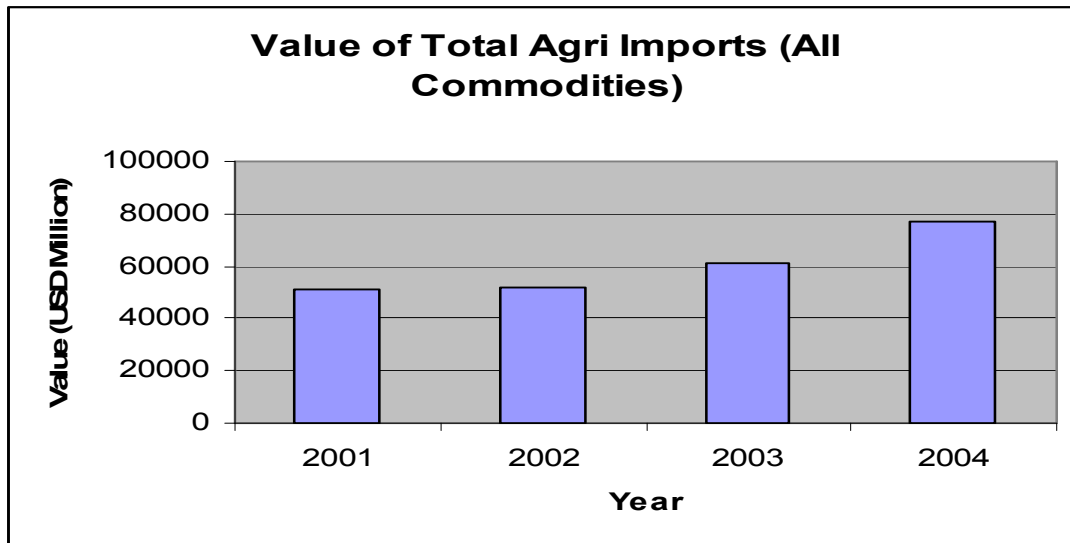
Source: APEDA, Analysis: IDF

Figure 3: Imports to India: Edible fruits and vegetables, Coffee, Tea, Spices...



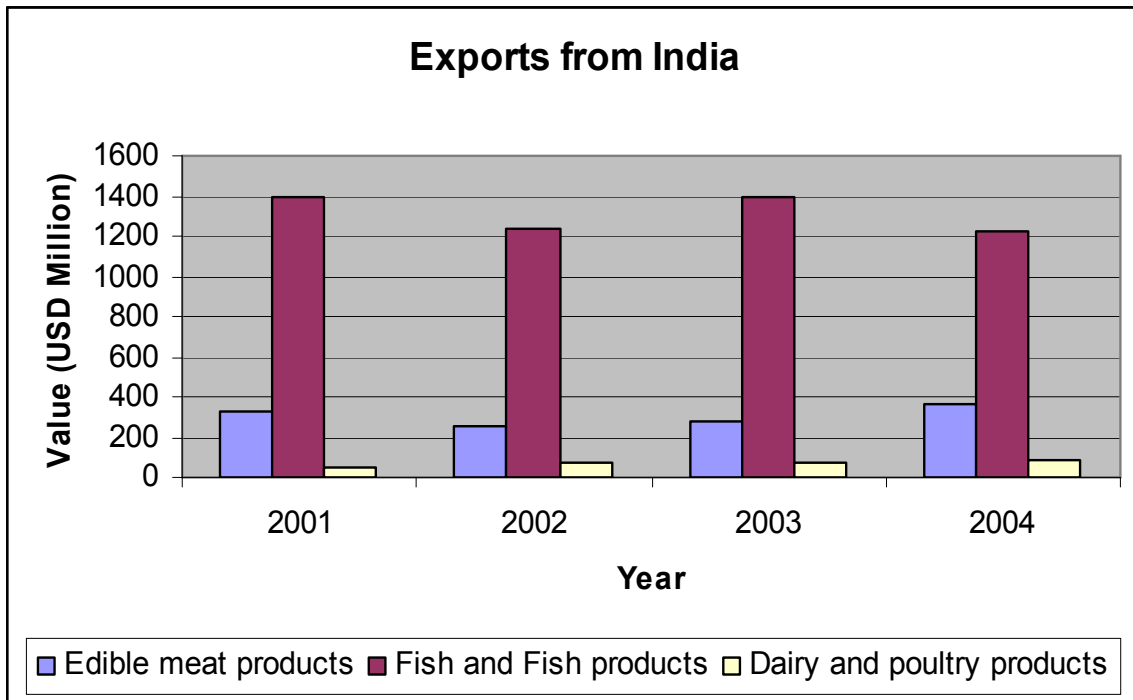
Source: APEDA, Analysis: IDF

Figure 4: Value of Total Agri-Imports (All Commodities)



Source: APEDA, Analysis: IDF

Figure 5: Exports from India: Livestock Products



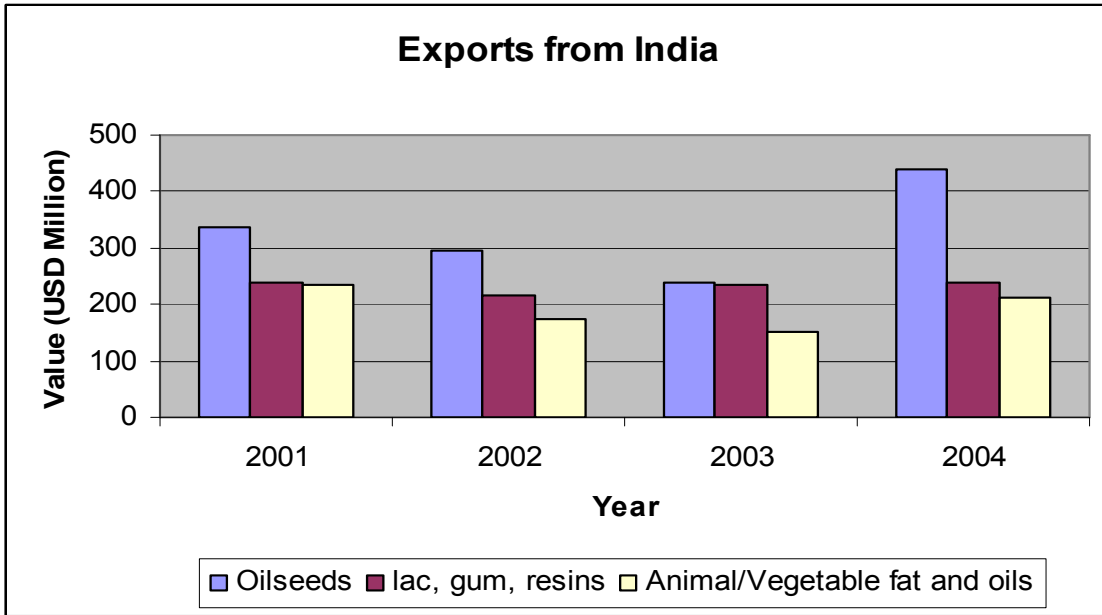
Source: APEDA, Analysis: IDF

Figure 6: Exports from India: Edible fruits and vegetables, Coffee and tea, Cereals...



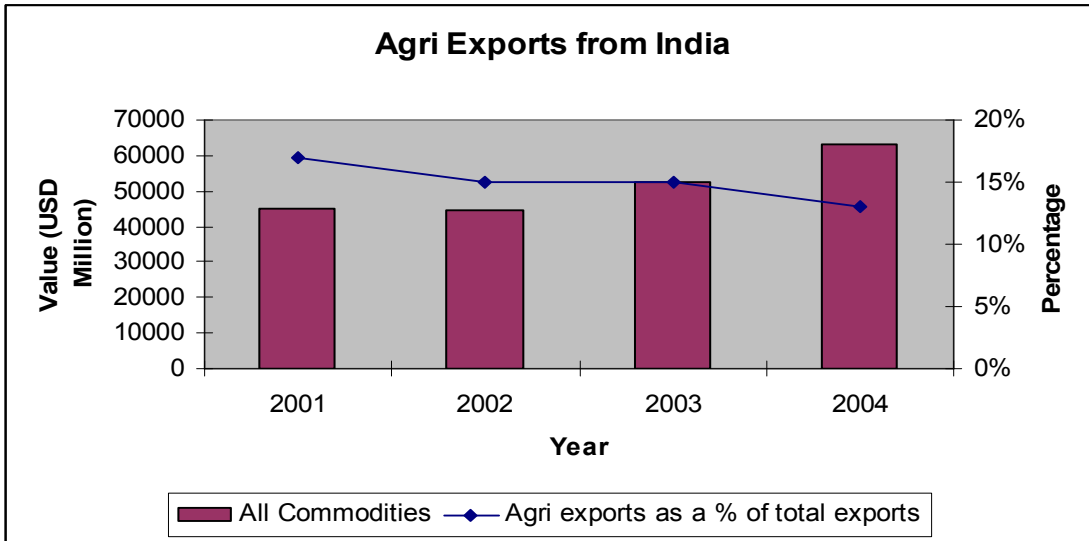
Source: APEDA, Analysis: IDF

Figure 7: Exports from India: Oilseeds, Lac, Gum, Animal and Vegetable Fats



Source: APEDA, Analysis: IDF

Figure 8: Agri-Exports from India



Source: APEDA, Analysis: IDF

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