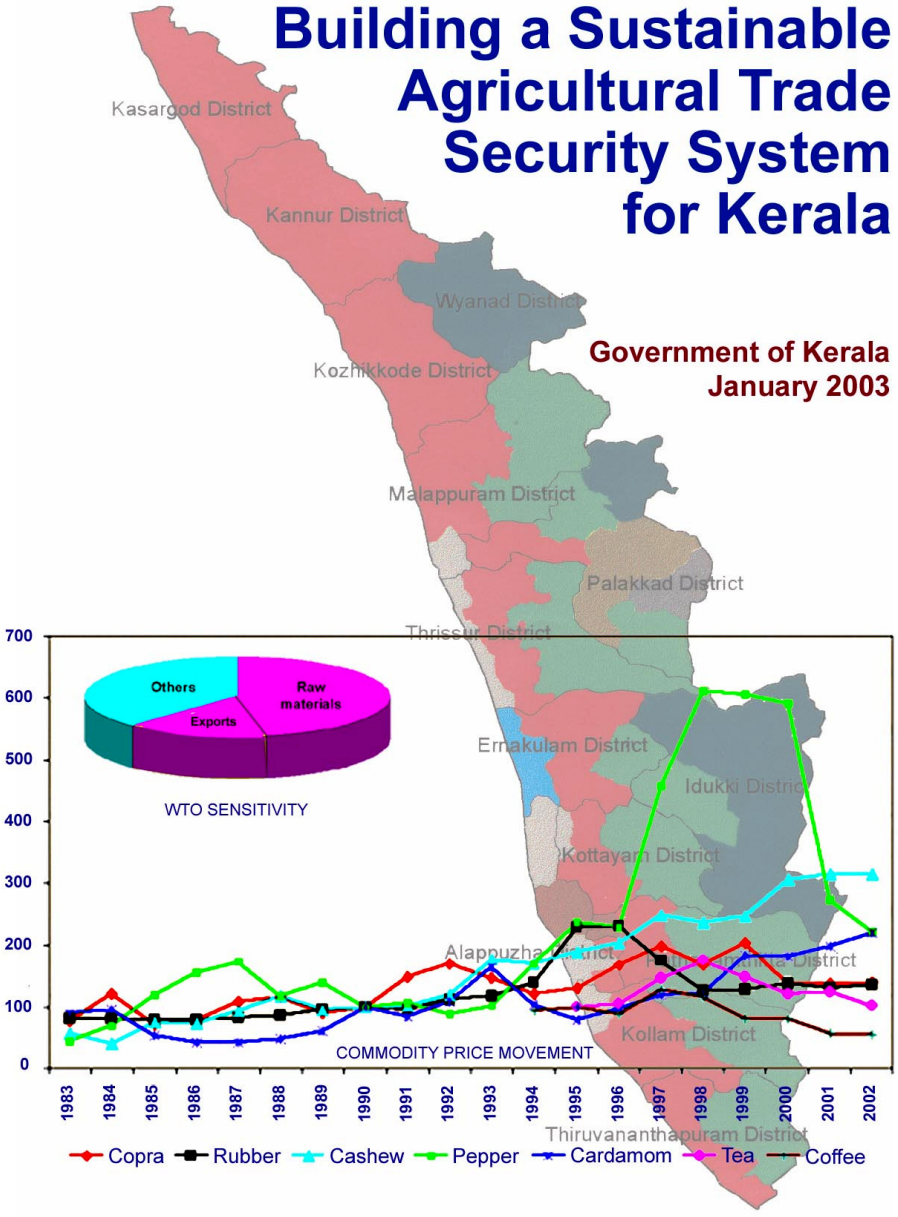
Report of the Commission on WTO Concerns in Agriculture

Building a Sustainable Agricultural Trade Security System for Kerala



Government of Kerala
January 2003

REPORT OF THE
COMMISSION ON WTO CONCERNS
IN AGRICULTURE

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Section A

Summary and Recommendations

Eight Years of the WTO

Eight years have passed since the World Trade Agreement (WTA), a family of global trade regulating agreements, and its implementation agency, the World Trade Organisation (WTO), came into existence on January 1, 1995. In this time it has become fully apparent that the WTO's principal and stated objective of creating a fair and equitable system of global trade amongst its member countries has not been met. The promise of substantial national economic gain from an increased value of world trade that prompted many developing countries, including India, to sign the Agreements, has been largely belied in the nearly eight year track record of WTO-regulated global trade. This is well documented in a large and growing body of empirical research and analysis. The WTO regime has, while widening the existing gap in economic and political strengths between the developed and developing countries, also brought about changes in national policy/legislation within developing countries that have adversely affected low income and resource poor groups. Nevertheless, developing countries including India are seeking avenues within the ambit of the WTO Agreements of reversing this adverse trend, and of taking advantage of the opportunities offered by the Agreement to expand and diversify their domestic market through trade. A pre-requisite for this is a factual assessment of the actual impact of WTO-initiated policy on production, employment, food and livelihood security, ecological resources, and so on, at the national and state levels. It is this that can shape a national/regional response and a planned transition towards a more open and equitable trading environment.

Importance of a Sustainable Trade Security System for Kerala

Within India, the state of Kerala stands apart in respect of its sensitivity to changes in the national and international trade environment. Its agriculture is marked by the existence of a series of agricultural micro-environments suited to different kinds of mixed farming, and by a large proportion of perennial crops in total agricultural

output. More than 80% of Kerala's agricultural commodities / products are dependant on home and international markets. The State accounts for 45% of the plantation crops in the country which provide daily employment to nearly 4 lakh workers. Nearly 20% of its population depend on plantation crops for their livelihood. Kerala's plantation and field crop mix includes paddy, tapioca, banana, rubber, coffee, cardamom, arecanut, cashew, pepper and coconut. Kerala is also the only State in the country having a substantial stake in all four major plantation crops, viz, tea, coffee, rubber and cardamom. Further, Kerala is a major State in the production of marine products for the international market.

Following the onset of the era of trade liberalization in farm products, as a result of the implementation of the Agreement on Agriculture (AOA) of the World Trade Agreement from 1995 onwards, Kerala's agricultural products have experienced a price crash of unprecedented proportions. The brunt of this crisis has been borne by cultivators belonging to the small and marginal farmer category who constitute a major segment of the rural workforce. Their subsistence depends upon market avenues. In order to assist the State Government in managing the crisis arising from the paradigm shift in the global farm trade regime brought about by AOA, a Commission on WTO concerns in Agriculture was set up by the Government on 31 July 2001, under the Chairmanship of Dr M S Swaminathan (Annexure I). In the order dated 19 September 2001, the composition of the full Commission and the list of commodities of specific concern were included (Annexure II).

The Commission started functioning soon after the issue of the Government orders, with Dr K N Shyamasundaran Nair functioning as Vice Chairman. The Kerala State Planning Commission provided secretarial assistance. The Commission has had five formal meetings. The draft Report of the Commission was finalised at the fifth meeting held at Kovalam on 6-7 November 2002.

The Report consists of 2 parts. Part 1 contains the Summary and Recommendations, followed by the main report which provides the rationale and arguments supporting the recommendations. Part 2 provides the supporting documentation for the main report.

The principal aim of our recommendations is to help the state to build a **Sustainable Agricultural Trade Security System**. In this context it is important to note that a vision of how to address the crisis in the spheres of employment and production in Kerala and to exploit the opportunities that the new trade regime might offer to a state so heavily dependent on domestic and export markets must necessarily draw on the special resources with which the state is endowed. Schemes for mass employment in Kerala, unlike most other parts of the country, can draw on a labour force whose members are literate, and are socially and politically conscious. A new phase of economic development must take advantage of these special resources, namely, a rich and varied natural resource base, a basic land reform, an educated, skilled and politically conscious work force, and unique achievements in the areas of health and education. A basic infrastructure network has built an urban-rural continuum unique to the state.

The substrate conditions essential for building a sustainable Agricultural Trade System relate to the following parameters:

Proactive State Policy which while building a response to the WTO, must defend and extend the economic and developmental gains achieved through state intervention and public action in the past. The state cannot afford to withdraw in the new, WTO-regulated phase of Kerala's development. It must continue to play a role in public investment (in agricultural extension, and infrastructure development, for example) as well as in protecting the lives and livelihoods of those, particularly the poor peasantry and agricultural labour, threatened by the new trade regime.

b. Productivity enhancement by bridging the prevailing gap between potential and actual yields with technologies on the shelf.

c. Quality Improvement through a quality literacy movement for producers and consumers, and by strengthening the infrastructure for sanitary and phytosanitary measures for both domestic and export markets.

d. Profitability Enhancement through concurrent attention to production efficiency and higher factor productivity, as well as to improved post-harvest technology, value addition and agro-processing. Measures for value-addition will also include organic farming and the production and marketing of organic spices, tea, coffee and fruits.

e. Sustainability Improvement, through attention to the ecological foundations essential for improving productivity in perpetuity, such as soil health care, water harvesting and efficient use and forest and agro-biodiversity conservation.

f. Stability of production and income through proactive advice on trends in home and external markets and through appropriate public policy measures like market stabilization fund and insurance.

While the above steps are largely in the domain of Kerala's farming families, labour unions, farmers' and planters' associations and the State and Central Government, the following components relevant to a Sustainable Trade Security System relate to the AOA of the World Trade Agreement. These are:

- Domestic support
- Market access
- Export subsidy
- Trade related Intellectual Property Rights
- Sanitary and phytosanitary measures
- Codex *alimentarius* standards

The impact of these on Kerala's farm trade will call for changes in the Government of India's Export-Import policies, as well as in the renegotiated AoA. The bound rates for different commodities and the determination of import tariffs for the following items need urgent attention on the part of GOI. Even in the most recent EXIM policy, the import tariffs on a range of products specific to Kerala have in a great many cases been fixed at levels well below the bound rate. These are:

- Rubber
- Coconut
- Coffee
- Tea
- Pepper and other spices
- Cashewnut
- Medicinal plants
- Fish and fish products
- Milk and milk products
- Meat and meat products
- Processed foods

The impact of the removal of Quantitative Restrictions (QR's) on the imports of agricultural commodities needs to be assessed objectively. Task Forces on each of Kerala's crops set up under this Commission have made a preliminary analysis of the impact of the removal of QR's. A factor kept in mind by the task forces was that unlike in industrialised countries, agriculture (crop and animal husbandry, fisheries, agro-forestry and agro-processing) constitutes the backbone of the livelihood security system of our country.

Thus, starting with the farm families themselves and extending upto the Government of India and WTO, there has to be appropriate action if a **Sustainable Agricultural Trade Security System** is to become a reality. Such an Agricultural Trade Security System is vital for Kerala's prosperity, **since under the conditions of Kerala, if agricultural trade goes wrong, nothing else will have a chance to go right**.

Spatial Focus of Trade

Kerala's trade strategy should be based on the following three guiding principles.

First, enlarge **home trade** and pay greater attention to cost and quality for the home market.

Second, impart a **regional focus** with particular emphasis on SAARC and ASEAN countries, so that the trade relationships among neighbouring developing countries is based on a **win-win mode** for all. Kerala, in particular, needs to have mutually beneficial relationships in trade with Sri Lanka, Malaysia, Thailand, Vietnam, Cambodia and Indonesia.

Third, enlarge **global trade**, particularly with countries in the Middle East, Africa, European Union, Russia and CIS countries and North America. This will call for market intelligence and continuous updating of information by the Virtual University for Agricultural Trade (which this report has recommended) in relation to the quantitative and qualitative dimensions of demand and the price structure.

Instruments for Managing Change

Kerala's agriculture is in a phase of transition as a result of the impact of globalisation of economies and liberalisation of trade. As repeatedly emphasised in this Report, this will call for productivity, quality and value-addition revolutions. There is need for effective instruments for managing change, particularly in the following areas.

• Demographic Challenge	Attracting and retaining youth in farming
• Technological Challenge	Genetic Engineering, genetically modified organisms (GMOs) and Information Technology
• Ecological Challenge	Climate, Water, Soil, Biodiversity (Global Conventions on Climate and Biodiversity)
• Economic Challenge	World Trade Agreement in Agriculture
• Ethical Challenge	Trade Related Intellectual Property Rights (TRIPS); FAO Treaty on Plant Genetic Resources
• Equity Challenge	Social and gender equity – Reaching the Unreached

From Marrakesh to Doha (1994-2002)

Globalization of economies and liberalisation of trade have economic, ecological, ethical and technological dimensions. The 1994 Marrakesh trade agreement in agriculture has proved to be an unequal trade bargain, since it has left industrialised countries much room for covering their huge farm subsidies under the blue and green box provisions. India has nearly 110 million farm families, as against about 2.00 million farm families in the USA and 7.40 million in the European Union. The average farm size is over 200 ha. in USA and 20 ha. in EU. The producer support estimate per farmer per year works out to US $ 20,000 in USA and US $1 4,000 in EU (Figures 1 to 3).

Experience of the last eight years has shown that WTO has no visible agenda for the resource poor farming families. Globalization has proved to be inherently asymmetric in its impact. Countries most dependent on exports of primary commodities have not been able to derive benefit from a "free trade" regime. Developing countries' share of total green box expenditures went down from 15% in 1995 to 12% in 1999. It is clear that the AoA needs to be redesigned on a pro-poor, pro-small farmer, pro-livelihoods and pro-environment framework. Global institutions like WTO and IMF also need to be restructured in such a manner that they can help to achieve the UN Millennium Development Goals in the areas of hunger and poverty elimination.

In the post-Doha negotiations it is obvious that every country will try to get relaxation from international rules and disciplines to suit their own specific needs. Thus, USA may try to get the green box provisions expanded to cover the very high support being given to a small number of farming families. The European Union may press for exemptions based on the multifunctionality of agriculture. Several developing countries, including India, have been pressing for a Development/Food Security Box. Ultimately, the negotiations may end up in a jungle of exemptions, with the odds weighted in favour of the rich nations.

Thus, the time has come for insisting that rich nations should phase out trade distorting subsidies and provide increased market access to predominantly agricultural developing nations. At the same time, we should realise that trade liberalization without increased investment in agricultural and rural development will not help us to

face the challenge of market efficiency. There is hence an urgent need for major investments in the following areas by both the Central and State Governments,

- Soil and Water Conservation
- Rural infrastructure, including roads and irrigation
- Post harvest technology and Markets
- Research and the development and dissemination of ecotechnologies
- Education and health
- Coping with drought and other natural calamities
- Sanitary and phytosanitary measures

Without such investment, no box can help us to face a competitive market.

Recommendations

We recommend the following steps for immediate consideration and appropriate action.

We have first listed a set of recommendations to be implemented at the national level. These begin with a set of strategies that India must in its interest pursue in the post-Doha negotiations. This is followed by a set of Kerala-specific recommendations, which includes recommendations concerning specific agricultural crops.

The Agreement on Agriculture: Negotiating Strategies for the Government of India

The post-Doha negotiations on the revision of the Agreement on Agriculture (AoA) are currently in progress. The modalities of the negotiations are to be finalised by 31st March 2003. A draft paper on modalities prepared by the Chairman of the WTO Negotiating Committee would have reached the Ministry of Commerce, GOI, by 18 December, 2002. The revised AoA is to be finalised at a Ministerial level meeting scheduled to be held in Cancun, Mexico, from 10 to 14 September, 2003. A note ('Modalities for Negotiations') prepared by the Ministry of Commerce, Government of India, in consultation with the Union Ministry of Agriculture, on India's stand is appended (Annexure III). It deals with issues relating to Market Access, Domestic Support and Export Competition.

- *Domestic Support*

It is well known that OECD countries provide subsidies to the extent of one billion dollars per day to their farmers. The USA has further increased farm subsidies in its Farm Bill of 2002. Obviously, these subsidies are being adjusted against Blue box

payments and Green box measures which are non-actionable. They do not seem to fall within the purview of Amber box measures, which alone are considered to be trade distorting.

In the current Geneva round of negotiations, it may be useful to propose the following alternatives:

First, all boxes may be abolished and the do's and don'ts with reference to trade distortion and unfair trade practices may be spelt out in clear and unambiguous terms.

Second, as an alternative negotiating principle, **a fourth box relating to Sustainable Livelihoods** (Livelihood Security Box) may be proposed, which will empower developing nations facing the challenge of providing livelihoods to the rural population to place restrictions on imports, where there is convincing evidence that such imports will erode job/livelihood opportunities in their countries. Since over 66% of the population of many developing countries including India depend upon agriculture (crop and animal husbandry, fisheries, forestry and agro-forestry and agro-processing) for their livelihoods, trade which leads to the destruction of rural jobs/livelihoods will further enhance poverty and hunger and will make the achievement of the UN Millennium goals in the areas of poverty reduction and hunger elimination, impossible. The result will be social disintegration because of a further increase in rich-poor divide. Globally, the continuation of the present situation where a few million farm families in industrialised countries, supported by heavy inputs of technology, capital and subsidy, compete with over a billion small farmers, having little access to technology, credit and adequate post-harvest infrastructure, will not help to make free trade an instrument of poverty eradication.

Trade **should not only be free but also fair** to the primary producers in predominantly agricultural developing countries. **The percentage of population dependant on agriculture for their livelihoods should be the major criterion for eligibility for using the provisions of the proposed Livelihood Security Box. The minimum could be 50% of the population**. The idea of a 'development box' has been suggested by a group of developing countries. Such a scheme would include measures that would provide market access for the crops produced by low income and

resource poor farmers with higher levels of domestic support for these farmers in keeping with Article 6.2 of the AoA.

Third, **we should avoid making** the very modest help being extended to millions of the small farm families come under the category of "Subsidy". A range of domestic support measures like those relating to infrastructure development, and many other forms of public provisioning, are non-trade distorting and hence non-actionable. '**Support for sustainable farming and rural livelihoods', rather than 'subsidy', should be the approach adopted for using the very modest financial help being extended to small producers, who are getting heavily indebted due to the unfavourable cost-risk-return structure of farming**. Policy makers in Government of India who deal with our interests in WTO should be sensitised in such issues.

- *Market Access*

First, all non-tariff barriers coming in the way of access to the markets of industrialised countries should be reviewed and removed. At the same time, assistance should be extended to developing countries to improve their capacity in the area of sanitary and phytosanitary measures as well as the adoption of **codex alimentarius** standards of food safety. Unrealistically high SPS standards are often used to create trade barriers against developing country exports. India and other developing countries must become a part of the process by which SPS standards are decided upon. At the same time we must evolve our own SPS standards for our domestic products as well as imports.

Second, our position is that obligatory tariff reduction should be minimal. We cannot agree to an across-the-board reduction of tariffs on all items. Also, the bound rate of 45% for soya oil deserves to be increased, keeping in view that the overall bound rate for edible oils is 300 percent.

Further, industrialised countries should agree to a substantial reduction in tariff peaks in the case of commodities of importance to the rural economy of developing countries.

Developing countries in which over 50% of the population depend upon agriculture for their livelihoods should be allowed to raise tariffs within certain limits and also impose quantitative restrictions on imports, wherever there is clear evidence that imports will erode or destroy the livelihoods of small farmers and asset-less rural women and men, thereby aggravating poverty.

Trade-related Intellectual Property Rights (TRIPS)

The revised TRIPS should be made compatible with the equity and ethics provisions of the Convention on Biological Diversity and the FAO Treaty on Plant Genetic Resources for Food and Agriculture. In particular, it should contain provisions for the compulsory licensing of rights in the case of inventions of great importance to food and health security, and for benefit sharing with the primary conservers of genetic resources and holders of traditional knowledge. This will help to avoid fear and accusations of biopiracy and to promote mutually beneficial biopartnerships.

- *Geographic Indication*

An objective system of including items in this list should be developed. Historical antiquity of product names, like "Malabar Pepper" should be an important criterion for eligibility to be included in such a list.

- *Trade Security and Farmers' Well being*

Youth will not be attracted to farming, if agriculture becomes a gamble in the market. Therefore providing assured and remunerative markets for the 500 million farming families in the world should be a major aim of the revised AOA. Sustainable farming systems and satisfied farming families alone can ensure food security for the nearly 8 billion children, women and men who will inhabit our planet by the year 2030.

- *Multi-functionality of Agriculture*

Agriculture influences the livelihood security of about 2 billion persons globally. At the same time, it has profound influence on ecological and cultural security. However, the concept of multifunctionality of agriculture, being advocated by developed countries should not be used to enhance subsidies and erect non-tariff trade barriers in the industrialised countries. **A Code of Conduct relating to the use of the**

principle of multifunctionality should be developed, if this principle is to find a place in the revised AOA.

Since agriculture constitutes the backbone of our livelihood security system, **protecting domestic agriculture and the livelihoods of farming families should be the bottom line in our stand at the on-going negotiations**. We should also keep in view the trends in our agricultural evolution towards increasing diversification and greater production of horticultural and animal products.

In the alignment of countries at the negotiating table, it will be prudent for India to work with those on the side of poverty reduction and rural well-being. We should be in a position to assure minimum income security for farming families, through appropriate tariffs and import restrictions. We should work with like minded countries in ensuring that trade distorting subsidies and non-trade barriers are not used by developed nations under different pretexts, including the possible introduction of the concept of multi-functionality of agriculture.

There are two additional recommendations that fall under the purview of the central government. These are:

- *Tariffication Code and EXIM policies of the Government of India*

The implementation of WTO provisions has necessitated the need for restructuring of Kerala's agriculture. As nearly 80% of the cultivated land in Kerala is under perennial/tree crops, a much longer 'adjustment' period -- at least 5-10 years of limited protection and additional investment support -- to the new trade environment must be provided. During this period the safeguards provided under WTA in terms of imposition of tariff and such other measures should be made use of. This will give farmers in the state time to acquire the necessary trade capabilities. Resources can get re-allocated to enhance the state's competitive ability.

The negotiations preceding the final Uruguay round did not consider the impact of changes in the tariff rates. For example, low tariff rates for Palm oil and Soybean oil have had an adverse impact on coconut oil, and in turn on the price of copra and coconuts. By accepting the maximum tariff rate of 45% for Soybean oil, it has

become impossible to have a higher rate for Palm Oil which is itself competing with coconut oil. Any increase in tariff rates would result in switching over to Soybean oil.

Also affecting Kerala's economy are the low bound rates and applied tariff rates for rubber (40% and 25% respectively). Measures are to be taken at the national as well as WTO levels to develop a Tariffication Code, based on principles of equity and the livelihood security of small farm families.

- *Restructuring of and re-tooling of Commodity Boards*

The various Commodity Boards of the Government of India such as the Tea, Coffee, Rubber, Coconut and Spices Boards, which have done valuable work in the past, have outlived their historical relevance in the context of the new global trade environment. Therefore, we recommend that the Government of Kerala may propose to the GOI the setting up of **a High Level Committee to review the work of the Commodity Boards** both in their common functions as well in their functions specific to the different commodities. The terms of reference to such a Committee should include the steps needed to restructure and re-tool these Boards in a manner that can ensure income and livelihood security to small producers and plantation workers who have been adversely affected by the present trade regime. Further, the Boards should become catalysts of a productivity, quality and value-addition revolution in plantation crops.

Kerala-Specific Recommendations

The Commission had made a few interim recommendations (Annexures IV to VII). The following are some of our major recommendations.

i) Constitution of a High Level Standing Committee on Agricultural Trade

Change in the trade environment can be managed effectively if there is synergy and convergence in planning and action among all the principal stakeholders. They will have to function like members of a **Symphony Orchestra**. To create an Agricultural Trade Policy Symphony in Kerala, we recommend the constitution of a **Standing Committee on Agricultural Trade**, under the chairmanship of the Hon. Chief Minister, with the Hon. Minister for Agriculture and Coir serving as Co-Chair. Principal Secretary (Agriculture) could be the Member-Secretary. All the principal stakeholders within the State like Farmers', Planters' and Labour Associations,

Commodity Boards of the Government of India, Kerala Agricultural University, ICAR and CSIR, Consumer Association, Mass Media (printed, electronic and internet) and all the concerned Departments of the Government of Kerala should find a place in the Committee. In addition, the Ministries of Agriculture and Commerce of the GOI may be requested to nominate senior level officers dealing with WTO issues to serve as ex-officio Members. The following could be the principal terms of reference to this Committee.

- To bring about convergence and synergy among all on-going programmes supported by State and Central Governments and by bilateral and multilateral agencies with a view to derive the maximum beneficial impact from the available resources, from the point of view of trade competitiveness.
- To monitor trends in home and external markets.
- To initiate proactive action, particularly to avoid / mitigate distress to farm and labour families.
- To take steps to shift to an era of precision farming in order to maximise factor productivity and minimise cost of cultivation.
- To promote trade and IPR literacy through the mass media.
- To provide policy oversight to the proposed Virtual University for Agricultural Trade and the reconstituted State Land Use Board.
- To suggest steps on an on-going basis to strengthen the livelihood security of small farm families and agricultural labour.

ii) Mitigating distress

The Committee had recommended in its very first interim report that the State should seek the assistance of the Government of India for initiating a **Food for Wage and Employment Stabilisation in Plantation Crops Programme** under GOI's Sampoorn Gramin Rozgar Yojana. Under such a programme, part of the wage will be paid in the form of rice to labour in plantations facing severe economic stress, to avoid retrenchment and closure. We are happy that the GOK has already taken steps in this direction.

Another immediate step is tax and excise duty exemptions to reduce the loss being incurred by plantations and farm families. Again, this is an area where we are happy that the Government had already taken action.

iii) Domestic Support Measures

A range of measures on the trade and domestic production-support front need to be designed to offer income support to cultivators, especially small and marginal cultivators. Such measures are needed not only as price relief and stabilisation measures, but also as measures designed to support and increase production. This package of measures must include the following:

- Statutory MSP to be extended to field and plantation crops in Kerala. Such a measure is fully WTO compatible as has been noted by the High Level Committee on a Long Term Grain Policy for India headed by Abhijit Sen, which recommended the continuation of the MSP-based system of procurement of foodgrains by the Food Corporation of India.

- With respect to trade, variable tariffs can be used to protect cultivators against sharp fluctuation in international prices and import surges. This measure has also been recommended in respect of food grains by the Abhijit Sen Committee.

- Re-imposing Quantitative Restrictions which can be done within the framework of a Livelihood Security Box. Indeed, it has been argued that direct import control measures, like QR's on the import of agricultural products, in pursuance of the objective of food security and rural development is permissible under the AoA even in its present form.

- Introducing a range of policy measures intended to improve production and contribute towards a sustainable income to cultivators. These could include crop insurance, a range of imaginative rural credit services, new forms of providing agricultural extension services, facilities for marketing, storage and processing, and encouraging marketing cooperatives.

- Initiating multi-disciplinary policy oriented research on a) the various forms of domestic support that are required to keep Kerala's agriculture and agricultural trade buoyant b) the compatibility of such measures with WTO stipulations, and c) crafting negotiating strategies that could institutionalise such measures in the appropriate WTO Agreements.

- Initiating a well planned and massive programme of replanting and rehabilitation of all perennial crops such as Coconut, Cashewnut, Rubber, Tea, Coffee and Cardamom, in a manner that the entire area can be covered in a period of 10 to 15 years; and establishing a Revolving Fund for revitalization and rehabilitation of the above crops, with the involvement of NABARD, NHDB, Commodity Boards and the State Government.

iv) Enlarging Domestic and Export Markets for Marine Products

The following measures need to be urgently implemented in the area of fisheries:

- Enhance the quality of domestically consumed fish and launch a quality awareness campaign among fishers, traders and consumers.
- Undertake a multi-stakeholder study of the current subsidies prevailing in the fishery sector, so that support which is non-actionable under the SCM agreement can be provided for fostering sustainable resource rejuvenation and management programmes.
- Create an up-to-date database that can help in taking informed decisions.
- Initiate **aquarian reforms** that will restrict the rights to own fishing vessels only to those who actually fish.
- Undertake measures for environmental protection and sustainable management.
- Retrain the Fisheries Department staff in eco-fisheries and **low external input sustainable aquaculture.**

In the following crops, issues like QR's, variable tariffs, and statutory MSP should be reviewed from time to time by the Government of India in consultation with the State Government.

v) Coconut

The coconut crop is vital for the nutrition and livelihood security of most of Kerala's population. This crop has experienced considerable price instability as a result of the large scale import of palm and soyabean oils. Coconut also suffers from several serious diseases and pests including root wilt and coconut mite. Therefore, there is need for the diversification of the income of coconut growers through value addition to all parts and products of the plant. Technologies are available for this purpose as would be observed from the recommendations of the Task Force included in Part 2 of the report. We recommend the formation of Small Holders' Coconut Estates in order to provide the necessary processing, packaging and marketing facilities to small producers. This will give them the advantages of scale in the field of post harvest technology. At the same time it is important to raise the import duty level at least to the level of the bound rate. Concurrently, there is need to improve the productivity of coconut in Kerala through extensive replanting with superior varieties including hybrids and improved management. Without such productivity improvement, the cost of production will always remain high and the margin of profit low.

vi) Plantation Crops

In the case of plantation crops, the state should develop a comprehensive policy framework embracing all aspects including land use and land reform, ecology and environment, production and productivity, trade and marketing, investment support, taxation, legal institutions and the responsibilities of local bodies. **A high level expert body may be set up for preparing such a comprehensive and integrated policy framework**.

a) Rubber

The removal of QR's on natural rubber (NR) is major reason for the sharp fall in the domestic market price of this commodity. Rubber is grown overwhelmingly by small cultivators. With an expanding automobile industry (cars, scooters etc) there will be increasing home demand for NR. It is therefore important to make a projection of demand and supply at

least until 2015 in order to have a balanced policy comprising of home production and selective imports so as to meet the demand without sacrificing the interests of small scale rubber producers. We recommend that the GOK and the Rubber Board may set up an expert group comprising representatives of both producers and consumers of NR in order to develop a perspective plan for the production, marketing, export and import of NR. In addition there is need to re-categorise rubber as an agricultural crop so that it can be brought within the AoA.

b) Tea

The crisis in the tea industry began in the early nineties due to the collapse of the former Soviet Union and the shift from rupee to hard currency payments. The industry in the past did not place as much emphasis on quality, variety and value-addition as has become necessary under a competitive trade regime. Kerala tea fetches lower price even in the home market due to poor quality. The future therefore lies in the improvement of both productivity and quality as well as the manufacture and marketing of value-added products like instant tea, tea bags, herb tea, etc. Solar drying of tea should be encouraged.

c) Coffee

Here again, we will have to place emphasis on productivity, quality ad variety. International prices vary according to the output in countries like Kenya, Colombia and Brazil. *Robusta* coffee, by virtue of high solubility, is well suited for the manufacture of instant coffee. Coffee pests will have to be managed in a manner that there are no pesticide residues in the final product. Small farmers will have to be provided with facilities for drying on a self-help group basis.

d) Spices and Pepper

There are untapped opportunities for value addition in the case of spice crops. Pesticide residues should be strictly avoided. Quality control and brand names are important. The production and marketing of organic spices should be encouraged. Also, Malabar pepper is a fit case for recognition under the principle of Geographic Indication.

e) Supply management through participatory buffer stocking

A modification of the Rural Godown Scheme of the Government of India can be developed by the Union Ministry of Commerce in the case of plantation crops. This will help to avoid both distress sales and price manipulation. Such a system is best maintained by farmers' associations/ cooperatives, with support from Government for building the needed infrastructure.

f) Preventing misuse of import for re-export

The provision for import of tea for re-export after value addition is often misused, much to the detriment of Kerala's growers. The procedure needs careful review jointly by GOI and GOK, so that the minimum value addition is atleast upto the value of the normal import duty. A good idea is being undermined by unscrupulous practices. Hence, there is need for a Code of Conduct in relation to imports for value addition and re-export.

g) Agri-export Zones

In our interim report, we had given detailed suggestions for converting the six Agricultural wholesale markets developed with support from the European Commission into Agri-Export Zones. We recommend that this step may be taken up immediately.

vii) Herbal Medicine and Ayurveda

Two potential high growth areas for Kerala deserve special attention. The first is herbal medicine and ayurveda and the second is tourism. Some of the steps needed in realising the untapped potential in these two areas are described below.

- Genetic Resources Conservation and Sustainable Use

A priority step relates to the strengthening of *in situ* and *ex situ* conservation of medicinal plants and the establishment of Seed Banks in the case of plants in demand for commercial use. Due to direct collection from their native habitats, many medicinal plants find a place in the Red Data Books of the Botanical Survey of India and IUCN (The World Conservation Union), thus indicating that they are threatened with extinction. The cultivation of plants in demand in the Ayurveda system of medicine by tribal and rural families on contract with appropriate pharmaceutical companies will help to foster organised sourcing of raw material. This will also help to strengthen the livelihoods of tribal and rural families. The cultivation of medicinal plants for which there is a market, based on assured buy back arrangements, could be an important component of Kerala Governments' programmes for tribal families.

With the increasing global acceptance of herbal systems of medicine, the demand for medicinal plants has been growing by leaps and bounds within India and outside. Over 95% of the medicinal plant species used by the Indian industry as Ayurvedic and herbal medicines, cosmetics, healthcare products etc., is collected from the wild. Indiscriminate destruction of forests together with unscientific extraction of the plant parts and overexploitation for export purposes etc, have led to the extinction of many valuable medicinal plants. Many others are endangered. A priority step relates to strengthening of the medicinal plants resource base by promoting *in situ* and *ex situ* conservation and large scale cultivation of medicinal plants with the involvement of tribal families, NGOs, farmers, corporate bodies etc. Formation of Societies at different levels involving representatives of Ayurvedic medicine manufacturers, farmers NGOs, cultivation experts, professional raw drug collectors etc, will facilitate

demand-based cultivation with a buy-back arrangement. The Society should take care of imparting technical know-how to the cultivators, supplying genuine planting materials, establishing nurseries and seed banks for propagation, collecting requirements from various pharmaceutical companies and marketing the produce at reasonable price.

- Maintaining the purity and authenticity of Ayurveda

Steps will have to be taken to promote quality control and certification in the case of Ayurvedic medicines. Research will be needed for the validation of claims and for ensuring that the claims printed on marketing labels are rooted in scientific data. Medicinal rices like *Navara* can be marketed abroad, if verifiable characteristics are listed on the label. If there is an effective certification agency, a suitable brand name can be given, as for example "Herbal Cures from God's Own Country".

- Growers' Associations

In order to give the power of scale to small growers of medicinal plants, Medicinal Plants Growers' Associations, each covering about 100 ha, could be formed on the model of Self-help Groups. Capacity building in the areas of cultivation and marketing will have to be organised. Such Growers' Associations can enter to a Memorandum of Understanding with companies with regard to sourcing of raw material for drugs. Herbal Estates could also be promoted for bringing about an end-to-end approach in relation to the cultivation, processing, packaging and marketing of medicinal plants and herbal medicine.

- Herbal Sanctuaries

Areas rich in medicinal plants can be developed into **Herbal Sanctuaries**, so that this unique biological wealth can be safeguarded and conserved for posterity.

- Herbal Biovalley

It would be desirable to develop the region extending from the Silent Valley Biosphere Reserve upto Wayanad as a **Herbal Biovalley**, on the model of the Silicon Valley for computer software. The Herbal Biovalley should provide the biological software essential for a dynamic medicinal plant industry. The infrastructure

necessary for seed multiplication including tissue culture facilities, establishment of nurseries of elite material, validation and certification and producer-oriented marketing and other centralised facilities to facilitate efficient decentralised production, will have to be provided in the Herbal Biovalley. We suggest that GOK may constitute a Project Design Team consisting of experts from Kerala and representative of the Central Medicinal Plants Board, and Bioresources Board, as well as NABARD and APEDA to prepare a Business Plan for **the world's first Herbal Biovalley**.

- Protection of Plant Varieties and Farmers' Rights and Biodiversity Acts

The already established Kerala Biodiversity Board should undertake an intensive programme of **Genetic Literacy**, in order to acquaint primary conservers on their rights relating to recognition and reward from the provisions of the Plant Variety Protection and Farmers' Rights Act, as well as the provisions relating to prior informed consent and benefit sharing provided under the Biodiversity Act, recently approved by both houses of Parliament. It would be useful to promote a cadre of "**Barefoot Legal Advisors**" to help to spread such genetic and legal literacy among the tribal and rural families engaged in the conservation and enhancement of agro-biodiversity. This will help to avoid biopiracy and promote symbiotic biopartnerships.

vii) Tourism

Kerala's unique advantages in tourism are well known. It is the only State in the country capable of launching a dynamic programme of home and global tourism which caters to the needs of health, spirituality and eco-tourism. Tourism related to health (ayurveda), spirituality (like Sabarimala, Guruvayoor, Malayattoor, Cheramaan Mosque at Kodungalloor) and nature (game sanctuaries, sea resorts etc) offers considerable untapped potential. In addition, there is scope for promoting a "Holidays on the Farm" programme in plantations as well as in Kuttanad to provide urban youth an opportunity for experiencing farm operations. The infrastructure in all these areas needs strengthening. **Specialist groups can be set up in these 3 areas of tourism to draw up detailed Business Plans**.

Ayurveda is unfortunately being exploited as a tool for promoting health tourism by many persons/ organisations who are interested only in immediate profit and not in long term reputation. This tendency will have to be curbed, if Kerala's unique heritage in Ayurveda is to retain its high reputation in perpetuity.

viii) The Role of the Media

The media has a special responsibility in reporting on the WTO and its impact, and in putting this information in the public domain. This is particularly so in a state where newspaper readership and media consumption is so widespread, and the media already so highly sensitised to livelihood concerns. Unique to this Commission, which would normally be expected to represent government/private concerns, is its recognition of the media as a critical agency that is a part of the strategy to meet the challenges that WTO-regulated trade regime. Some of the measures which could make for a productive media-government-public engagement include:

- The setting up of a **WTO Media Cell**, which could perform/coordinate more than one task. It could handle regular media contacts plus perform the role of a clearing-house of information pertaining to the WTO and Kerala. The Virtual University and concerned departments and ministries could feed information to the cell, which could be made available to interested media through regular information briefs, and which can also be put on a web-site.

- For the general media, the Media Cell must put out briefs, hold regular briefings in different parts of the state, make officers and specialists available for comment and/or interviews. In a state with such innovative and evolved channels of communication, the Cell could use a variety of techniques to inform writers and journalists across a range of publications.

- Over the long term, the Media Cell could also help to build and train a core group of specialist WTO writers. This would help the development of strong and informed writing on WTO related issues and their global, national and regional dimensions.

- Documentation of publications on the WTO, including books, journals, newspaper reports, magazines, etc.

We suggest that the Media Cell be set up immediately to provide authentic information on the ongoing post-Doha negotiations.

ix) Sanitary and Phytosanitary Measures

The GOK and GOI should participate actively in determining **the International Standards for Phytosanitary Measures**. Otherwise, the standards may come in the way of our exports. In addition, the following steps are needed urgently.

- Strengthen post-harvest infrastructure.
- Improve the sanitary conditions under which food is processed and animals meant for milk and meat are reared.
- Strengthen the capacity of State Government Institutions in relation to quarantine measures, sanitary and phytosanitary measures and codex alimentarius standards of food safety.
- Launch a **Quality Literacy Movement**, and train at least 2 men and 2 women members of every Gram Panchayat as **Quality Managers**.

x) Trade Entrepreneurship Facilitation Service

A one-stop information centre should be established in each district of Kerala to provide integrated information to educated women and men on the opportunities now available for remunerative and productive self-employment, as for example the establishment of Herbal Parks, Agri-Clinics and Agri-Business Centres, Food Parks, Eco-Enterprise Parks, Agri-Export zones, etc. Such Trade Entrepreneurship Facilitation Service Centres can be established in Universities or other appropriate institutions. There is also need for establishing eco-entrepreneurship training centres, which can promote the concept "**Good Ecology is Good Business**". In addition, Venture Capital facilities should be made available to entrepreneurs engaged in small-scale enterprises. A restructured Small Farmers' Agri-business Consortium could probably run this single stop Facilitation Service with support from the Central SFAC.

xi) Women and Farm Trade

Women play a key role in many export industries like cashew, coir, prawn, tea, etc. There is need to strengthen their role by paying specific attention to knowledge and skill empowerment and capacity building. They can play a leading role in programmes relating to the Virtual University for Farm Trade. At the same time, the health hazards associated with women specific operations, as for example cashew shelling, prawn peeling and coir rope making, need urgent attention. For attending to all issues related to women in Agriculture including legal rights in an integrated manner, it would be useful to strengthen the **Centre for Gender Concerns in Agriculture set up by the Kerala Agricultural University**, with support from the

National Agricultural Technology Project (NATP) of the Indian Council of Agricultural Research.

xii) ***Reorganisation of State Land Use Board***

Farm families need proactive advice on how to match production with potential market demand. In the case of perennial crops, there is limited scope for frequent alterations in land use. However, there is need for such advice in the case of annual crops and medicinal plants. For this purpose, the existing State Land Use Board should be revitalised and reorganised in such a manner that proactive advice can be given to farm families on land use during the south-west and north-east monsoon periods based on the following factors.

- Farming systems (crop, livestock, fish and agro-forestry) which will be most efficient under the given soil, water and climatic conditions
- Short and medium range weather forecasts (the country has developed considerable capability in this area)
- Projected market demand (both home and external markets)
- Cost of production, risks involved and expected return
- Potential for on-farm and non-farm livelihood generation, so as to maximize income and employment per unit of land and water.

If such advice is given at least a few weeks before the sowing season, a proper match can be achieved between production and potential market demand. Uneconomic market interventions can then be avoided. The agro-ecological potential of every village can be utilized in an ecologically and economically optimum manner. Seed Banks of alternative crops will have to be established at the local level.

The reorganized Land Use Board should also be able to develop contingency cropping patterns to suit different rainfall and water availability patterns. Thanks to the long-range weather data available with the India Meteorological Department, it is now possible to develop computer simulation models of likely deviations in monsoon behaviour. These can be used for formulating land use advice based on GIS maps, which also take into consideration the moisture holding capacity of soils, physiological efficiency of crops, home needs and market demand.

We should promote land use based on considerations of both ecological sustainability and economic efficiency. Since land use decisions are also water use decisions, land and water care and use are best dealt with in a simultaneous and interactive manner.

There have to be structured linkages between the Virtual University and the State Land Use Board. It should however be recognised that the restructured Land Use Board will be able to offer only general advice to cultivators of perennial plantation crops, particularly with reference to inter-crops. However, it can provide more market, season and agro-ecology specific advice to farmers cultivating annual crops.

xiii) Organic Farming

The Government of India has decided to set up a National Institute for Organic Agriculture which will have the authority to undertake certification of organic products. Kerala is a national leader in the production and marketing of organic spices, tea, pineapples, banana, medicinal plants and other farm commodities. It also proposes to undertake the production of organic rubber specially for the manufacture of condoms for use in the fight against the dreadful HIV/AIDS menace. Therefore, Kerala is an ideal location for the proposed National Institute for Organic Agriculture and Certification and the associated certification agency.

About 200 hectares of land ideal for the location of this Institute is available with the Kerala Agriculture University at Thiruvazankunnu, Palghat district. It is suggested that GOK may offer to GOI land and other facilities for the proposed Institute. This will help to strengthen the organic farming movement in Kerala and help farmers to produce health foods and value-added farm products for internal and international consumption.

xiv) Clean Energy Sources

We recommend that **the Government of Kerala may prepare a project for financial support from the Climate Convention Fund, operated by the Global Environment Facility** for introducing on a large scale solar energy devices in drying plantation crops like tea, coffee, pepper, etc.

xv) Commodity Market and Commodity Exchange

There is need to amend the Forward Contracts (Regulation) Act of 1952, since it was enacted under conditions of serious food shortages. Our commodity markets, both physical and futures, need review. It will also be to the advantage of the farmers of India, if the Central and State Governments agree on an **Indian Common Market**, and remove all barriers relating to inter-state movement of farm commodities. This must be done after a consultative process amongst state governments, as interstate taxes are revenue earning measures levied by states in the Indian federal system. The Indian Common Market catering to a population of over a billion will serve as a buffer against violent price fluctuations arising from disturbances in the overseas markets.

xvi) Krishi aur Udyog Vigyan Kendra

There is need to expand facilities for a continuous updating of skills and information in relation to all aspects of production, processing and marketing among farm women and men. For this purpose, it will be useful to establish in every district a Krishi aur Udyog Vigyan Kendra, with specific capacity in imparting quality and trade literacy. There is provision in the Tenth Plan Budget of ICAR to establish one KVK in every district. It will be useful to develop the existing KVK's also to deal with non-farm employment with the help of CSIR and the Union Department of Small Industries. In view of the growing importance of Ayurveda and herbal medicines, it will be useful to set up a Krishi aur Udyog Vigyan Kendra at the Kottakkal Arya Vaidya Sala.

xvii) Consortium of Innovative Farmers for Kerala's Agricultural Transformation

A speedy method of stimulating the needed productivity, quality and value-addition revolutions in crops of value in home and external trade, is to build on successes. Numerous small farm families have adopted innovative methods of developing and adopting perennial-annual crop farming systems, which yield maximum profit from the available land, without ecological harm. Many of them have been recognised through awards given by the State Government, Commodity Boards as well as other prestigious awards like Malayala Manorama's Karshaka Shree. It will be useful to expand the extrapolation domain of the experience and skills of such innovative farmers. It will hence be useful to form a Consortium of Innovative Farmers for Kerala's Agricultural transformation to give leadership to the productivity, quality

and profitability revolutions in Kerala. The members of such a Consortium should be practising farmers with acknowledged mastery of innovative and sustainable agriculture and whose only livelihood is farming. The Consortium could be chaired by the Minister for Agriculture.

xviii) Establishment of a Virtual University for Agricultural Trade

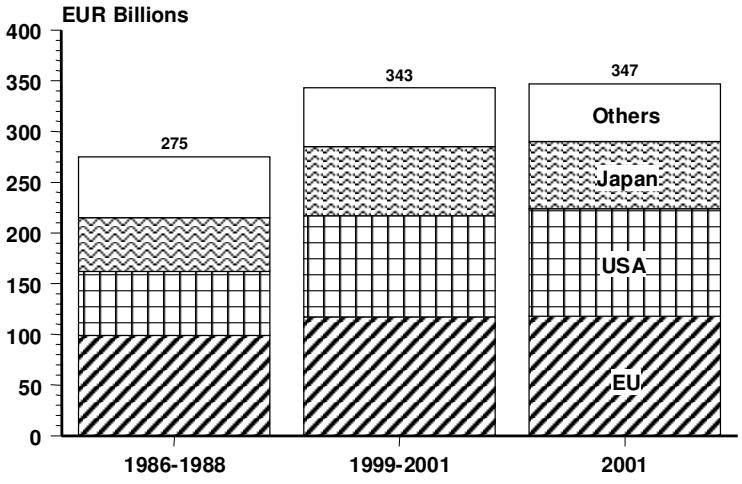
One consequence of trade liberalisation is that farming is becoming highly knowledge and information intensive. Enhancing trade competitiveness is a must. Hence, there is need for a continuous updating of the information available to farmers and planters on all issues relating to domestic and global trade. Information will have to be provided on quality related regulations such as sanitary and phytosanitary measures and codex alimentarius standards. Quality, trade and patent literacy will have to become widespread. **Such a knowledge and information empowerment programme in farm trade should reach every farm family in Kerala and should include the excluded in terms of information empowerment**.

To provide the knowledge and data inputs for all the above proposals we suggest **the establishment of a Virtual University for Agricultural Trade as a 21st century institution, based on the ongoing Information and Communication Technology revolution in Kerala**. A computer-aided and internet connected Virtual University can be established on a hub and spokes model. The hub can be located at an appropriate location like KAU, with the spokes being located in every district. The hub and spokes can be linked to Television Channels and Community Radio Stations, so that relevant information reaches every farm household every morning.

The effectiveness of the Virtual University for Agricultural Trade will depend upon the quality and timeliness of the dynamic (ie, time and location specific) and generic information provided to the stakeholders. The KAU has prepared a draft plan for the proposed Virtual University which is appended in Part II of this Report. It would be useful to convene a Brainstorming Workshop with the participation of **data generators and providers** (like ISRO, IMD, KAU, APEDA, NDDB, NHDB, Commodity Boards, Ministries of Agriculture, Commerce and Foreign Trade of GOI, ICAR, CSIR etc.), **data seekers** (farm families, planters exporters, womens' groups, traders, etc), **information managers** (ICT specialists, media representatives,

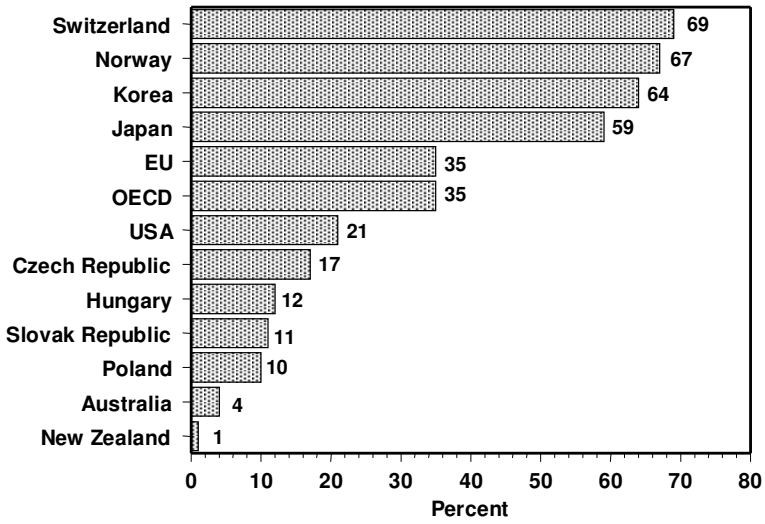
extension specialists, etc), **policy makers** (concerned secretaries to Government and Vice-Chairman, State Planning Commission) and representatives of UNDP and other potential funding agencies. A Business Plan may be finalised at this workshop. It will be appropriate to get the Virtual University for Agricultural Trade inaugurated by the Hon.Chief Minister on January 26, 2003, since the sooner steps are taken for the knowledge and information empowerment of producers, traders, exporters and consumers, the more speedily can an effective Trade Security System be put in place.

Fig.1 Total support to agriculture



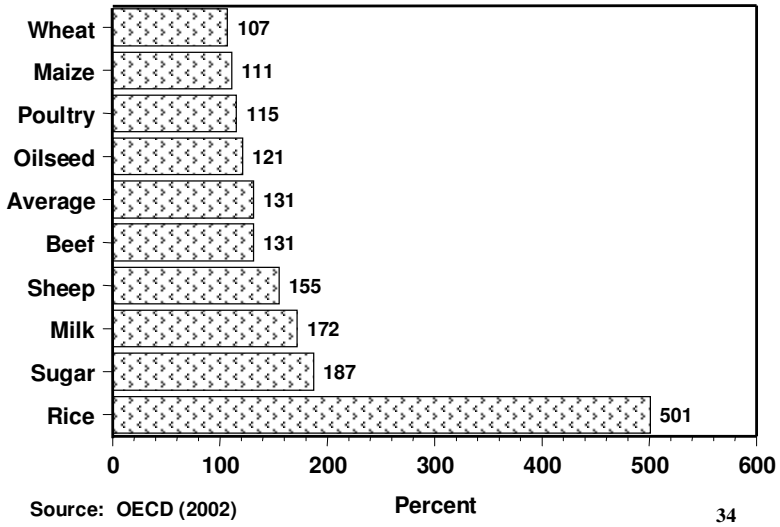
Source: OECD (2002)

Fig.2 Producer support in percent of total farm receipts



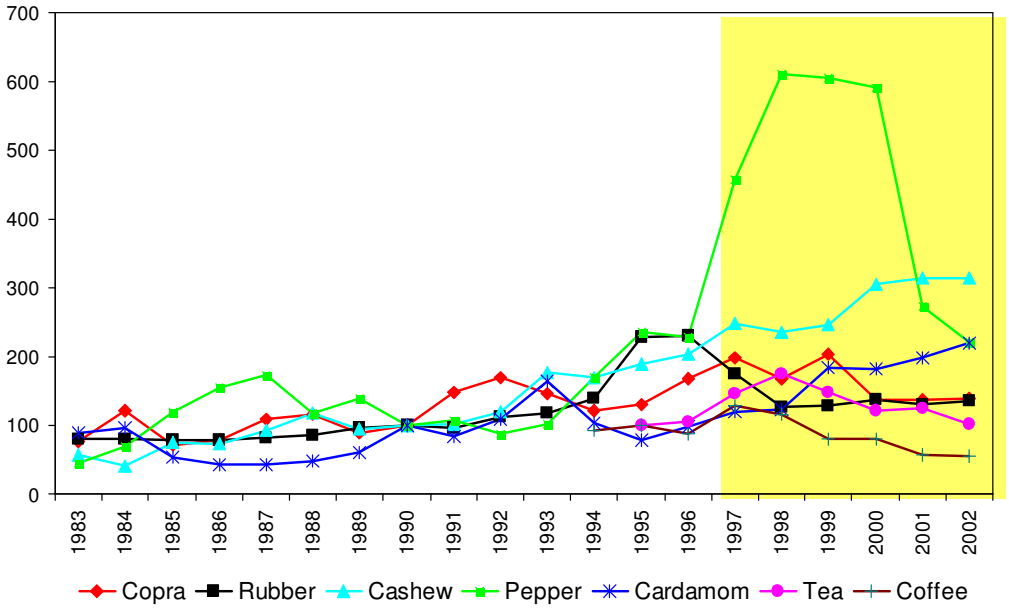
Source: OECD (2002)

Fig.3 **Average price received by OECD farmers in percent of border price at farm gate, 2001**



Source: OECD (2002)

Figure 4: Price Movement of Major Agricultural Commodities during 1983-2001



Detailed Report

1.1.0 The Back Drop and the Process

1.1.1.1 WTO Setting

India is a signatory to the Uruguay Round Agreement of the General Agreement on Trade and Tariffs (GATT). This *inter alia* mandates India and other member countries to open up their economies to the world market forces. The Uruguay Round, for the first time brought agriculture under multilateral trade regime through the World Trade Agreement (WTA), which has been institutionalised under the World Trade Organisation (WTO) on January 1, 1995. The specific agreement under WTA, which provides framework for multilateral trade in agriculture, is the Agreement on Agriculture (AoA). The three principal commitments incorporated in the AoA to establish fair and market oriented agricultural trading system and to more operationally effective GATT rules and disciplines are: (i) market access, i.e., the discipline on import restraints and import limitations (ii) domestic support, i.e., to rationalise the support allowed by the governments to domestic producers and to eliminate trade distorting supports, and (iii) export subsidies, i.e., to phase out the support given by governments on agricultural exports. Apart from AoA, a few other Agreements under WTA, such as the Agreement on Trade Related aspects of Intellectual Property Rights (TRIPS), the Agreement on the Application of Sanitary and Phytosanitary (SPS) Measures and Agreement on Technical Barriers to Trade influence the agricultural trade in varying measures.

1.1.1.2 The Kerala Context

The inherently vulnerable, predominantly commodity trade/market dependent economy of Kerala's agriculture has been undergoing unprecedented economic depression of great crisis proportions, since the last quarter of the 1990s, consequent to the crash in prices of most of the agricultural commodities. The first half of the nineties witnessed buoyancy in the farm economy of Kerala, which was reflected in the marked rural prosperity[1]. During this period Kerala's agricultural economy registered a higher growth rate than that of the national average. The buoyancy of the agricultural economy could be attributed, on the one hand, to the resurgence in production and productivity, although at a lower pace after a long period of stagnation during the 70s and on the other to a gradual increase in the price of almost all agricultural commodities, especially those constitute the raw materials for

[1] During the last two decades the State's agriculture grew at a modest annual linear growth rate of 3.73 percent and compound rate of 2.83 percent per annum kept close pace with the rest of the nation (Average for the country 3.00). The overall performance of agriculture of the State during the eighties at the annual compound rate of growth of 3.13 percent showed demonstrable recovery from the stagnation of the seventies. During the nineties there has been a slow down to 2.52 per cent per annum compound but higher than the national average 2.23 per cent per annum. This slowing down could partly be attributed to the telling impact on the agricultural economy of the state due to the steep fall in price of farm commodities especially during the closing years of the nineties from which the state is yet to recover.

industry and export until the mid-nineties. A close scrutiny of the commodity prices during the last three decades may reveal that the above said price movement suddenly accelerated to reach a pinnacle of all time high during 1996- 98. Since then, however, the farm commodity prices started declining and plummeted to the level prevailed prior to the end of the late 80s and early 90s. The price decline experienced during the late Nineties and its persistence since then had a devastating effect on the rural economy, in general, and that of the farmer economy in particular. Kerala's agricultural economy faced crises from time to time because of decline in farm commodity prices. But such decline did not simultaneously affect all commodities and generally when the price of some farm commodities fell, that of some others rose, which in the bargain did some kind of compensation through gains and losses. The heterogeneous product-mix had thus been providing an economic buffer when market prices of agricultural commodities do fluctuate across years. But what is unique about in the recent crash in prices, which continued unabated till recently has affected almost all commodities, whether domestically consumed or used as industrial raw material or exported. [See Table 1].

Added to this setback in commodity prices, considerable erosion in the purchasing power, incessant inflation though in slow pace and the increase in the prices of non-agricultural commodities and farm inputs, including labour costs, and cutbacks in the public distribution system, have deeply struck the very foundation of the agricultural economy of the state, viability of agriculture and the livelihood of farm families. While the Parity Index (rates of prices received to paid prices by farmers) during 1980 was unfavourable at 93, it declined through the eighties to 84 in 1990. Since then, saving 1991 and 1992, the Parity Index declined further to 78 by 2000 [see Table 2]. The drastic price decline largely contributed to the distress of vast majority of the population depended on agriculture in Kerala, because majority of the farmers owning only tiny, marginal and smallholdings[2] do not have resource capability to tide over such long price slump.

The crisis in the farm economy of the state after 1995, which coincides with India's period of accession to the World Trade Organization, though not wholly be attributable to the fall out of WTO-mandated measures, such as removal of QR's and restrictions to certain tariff lines in certain commodities. The process of liberalisation and structural adjustment in India, which began as early as 1991, has impacted agriculture in many ways. One consequence of the opening up of agriculture and import liberalisation has been exposure of agricultural commodities to international price fluctuations and shocks.

1.1.2.1 Seven Years of the WTO

Seven years have passed since the WTO was established and many of the agreements impinging on agriculture have started implementation. During this short period, it has become obvious that the WTO's principal objective of creating a fair and market-oriented.
global trading system free from restrictions and distortions, while be a promised panacea, is in reality a threat to the livelihood security of resource-poor farmers and agricultural economy of developing countries.

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[2] In 1995-96, out of 55 lakh individual farm holdings (excluding tiny holdings of less than 0.02 ha) 51 lakhs (93%) were marginal holdings of below one hectare with an average size of 0.18 hectares. When the smallholdings between 1-and 2 ha are added, the proportion rises to 98% (54 lakh holdings but still with only the average size of 0.23 ha).

Despite cross cutting trade interest, the developing countries are striving to defend the interests of their national agricultural economies at every WTO negotiation forum, while the WTO system penetrates and seeks to control newer spheres of national economic life. It was the promise of substantial national economic gain with an increased access and benefit from world trade that prompted many developing countries, including India, to sign the Agreements. This is a promise that has been largely belied during the seven-year track record of WTO-regulated global trade, as documented now in a large and growing body of empirical research and analysis. (For example, an FAO Study, published in 2001, surveyed the experiences of 14 developing countries during 1995-1998 and revealed that the increases in food imports into these countries have been far greater than the increases in their overall agricultural exports. World trade growth compared with that during the first half of 1990's was found slowing down and during this period of slump, whether caused by the WTO or not, synchronised with the existence of the WTO. Widening of the existing gap in economic and political strengths between the developed and developing countries and the enforcement of the WTO regime compliant national policy/legislative frameworks in developing countries are adversely affecting the livelihood and well being of low income and resource poor groups in the latter countries.

Nevertheless, developing countries including India are seeking avenues within the ambit of the WTO Agreements to reverse this adverse trend, and to take advantage of the opportunities offered by the Agreement to expand and diversify their domestic market through trade. Such efforts to be successful, demand a factual assessment of the actual impact of WTO-initiated policy on production, employment, food and livelihood security, ecological resources, and so on, at the national and state levels. These assessments would help to shape a national/regional response and a planned transition towards a more open and equitable trading environment.

1.1.2.2 Importance of a Sustainable Trade Security System for Kerala

Within India, the state of Kerala stands apart in respect of its sensitivity to changes in the national and international trade environment. Its agriculture is marked by the existence of a series of agricultural microenvironments suited to different kinds of mixed farming with large share for perennial crops in the agricultural production system. More than 80% of the agricultural commodities/products produced in Kerala are dependant on domestic and international markets[3].

The State accounts for 45% of the plantation crops in the country. Nearly 20% of its population depend on plantation crops for their livelihood. The major plantation and field crop of Kerala include paddy, tapioca, banana, rubber, coffee, cardamom, areca nut, cashew, pepper and coconut. Only a few of them are grown as monocrop, while many are grown in different inter-crop combinations. Kerala is again unique in the country by having a substantial stake in all four major plantation crops, namely. tea, coffee, rubber and cardamom. Share of Kerala in marine catch and international trade is again larger.

Following the initiation of trade liberalization in farm products, concurrent with the implementation of AoA from 1995, Kerala's agricultural products have encountered unprecedented price crash (see Figure 1). The brunt of this crisis has been borne by In order to assist the State Government in managing the crisis arising from the paradigm shift in the global farm trade regime brought about by AoA, a Commission on WTO concerns in Agriculture was set up by the Government on 31 July 2001, under the Chairmanship of Dr M S Swaminathan (see Annexure 1 for TOR). In a subsequent order dated 19 September 2001, the composition of the full Commission and the list of commodities of specific concern were set out (see Annexure 2 for Membership).

The Commission started functioning soon after the issue of the Government orders, with Dr K N Shyamasundaran Nair functioning as the Vice Chairman. The Kerala State Planning Commission kindly provided the secretarial assistance. The Commission had five formal sittings. The Report of the Commission was finalised at the fifth sitting held at Kovalam on 6-7 November 2002.

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[3] Coconut and rubber together, account one half of the cultivated land and two thirds of the value of the gross income generated from the Crop sub-sector: i.e. Agriculture -proper. Export crops listed above, together account for about one tenth of the cultivated land contributing a quarter of the gross income from crop sub-sector.

This report has two main components. The first component describes the process adopted in getting inputs for the Commission's work from all the principal stakeholders as well as the interim and final recommendations. The second component contains the detailed reports of the Working Groups set up by the Commission and special papers prepared for the Commission.

1.1.3 Methodology and Approach

1. The Commission from its very inception recognised that the magnitude of the task entrusted to it by the Government is both wide-ranging and complex. For appropriate addressing of this task, the Commission chose to tap available expertise through holding a series of consultations by way of sittings/public hearings and benefiting from the special papers prepared with the help of experts. The full Commission had four regular and one special sitting over a duration of sixteen months. In addition, it carried on a consultative process involving a wide spectrum of opinion from experts and professionals, representatives of political parties, farmers organisations, heads of institutions engaged in technology generation, extension and development, such as the departments and agencies of the State Government, and Commodity Boards and Development Authorities of the Central Government.

2. The Commission prepared a discussion paper describing the background of the emergence of WTO as a regulatory institution, the critical components of the AoA, the implications of the WTO regime globally to the economy of the developing nations, and specifically to India and the state of Kerala. This discussion paper was supplemented with questionnaire eliciting information, ideas and opinions on both the general aspects of a WTO-regulated trade regime, as well as its implications for and impact on specific commodity sectors. The discussion paper and relevant questionnaire were circulated extensively to reach out a wide spectrum of opinion makers apart from the participants in the series of consultations and sittings of the Commission. They included all the members of the State Legislature, Members of Parliament from Kerala, all the political parties represented in the State Legislature, farmers and agricultural labour organisations affiliated to various political parties, and editors of major newspapers in the State. It deserves to be

recorded that most of those to whom the questionnaire was sent did not respond. The Commission is, however, happy to note that the major 'kisan' organisations in the state did respond, both in writing and at a public hearing held by the Commission.

3. During the course of the Commission, four sets of interim recommendations were presented to the Government (see Annexures 4-7). These recommendations are incorporated in the recommendations of this report. The Commission is pleased to note that the Government took prompt follow up action on most of these interim recommendations.

1.1.4 Commission Sessions

1.1.4.1 Brainstorming Consultation: (25-26 August 2001)

Soon after the constitution of the Commission (but prior to the constitution of the full Commission), the Government of Kerala organised a two-day (25^{th}-26^{th} August) Brainstorming Session at Thiruvananthapuram, which was chaired by Professor M.S. Swaminathan. The objective of this consultation was to identify the impact of WTA and the emerging concerns on the economy of the state, in general, and on its agricultural economy, in particular and to gauge the magnitude of the threat to livelihood security of the dependent population. The Chairperson had extensive discussion with various interest groups. Prominent among them, apart from farmers, were representatives of the Commodity Boards and senior officials of the various departments and agencies of the Government of Kerala, who are involved with the production, promotion and export of the major farm commodities in the state. In fact, this process of consultation was pursued in all other sittings, except the final sitting held by the Commission. The consultations were wide ranging, which enabled the Commission to get a good feel of the broad spectrum of concerns both immediate as well as the long-term related to the sustainability of Kerala's major farm commodities. It also provided the wider public perception on the alluded impact of the WTO regime on the agricultural economy of the state and the priority the Commission should give in addressing the major issues. Based on the observations of the Chairperson emerged from this Brainstorming consultation, the GOK took the initiative in constituting a ten member full Commission reflecting expertise in various sub-sectors of the agricultural economy, and the commodities of special concern to Kerala's agricultural economy.

1.1.4.2 First Sitting: 09 October 2001

1. The full Commission held its first sitting on 9^{th} October**,** at Kozhikode. In addition to the Commission members, this sitting was attended to by the representatives of the Commodity Boards and departments and agencies of the Government for Animal Husbandry and Fisheries. It identified nine areas/commodities for in-depth analysis, both to identify the challenges and opportunities of the new trade environment and to design appropriate measures to deal with them. The Commission also recognised that coconut and rubber demanded urgent attention. The GOK in their Order constituting the Commission had authorised to induct expertise wherever necessary by constituting Task Forces with the intention of drawing the required and available expertise from the various institutions and organisations. In consonance with the order of GOK, nine task forces were constituted, each with a chairperson. However, all task forces the commission desired to constitute could not be set up on grounds of resource constraints. Hence, lead experts were identified to assist the Commission in some of the important domains and lead papers were got prepared for the benefit of the Commission.

2. At the specific request of the then Agricultural Production Commissioner, the Commission deliberated upon the important issues and concerns and provided a brief to

the Chief Minister of Kerala, who was attending the Standing Committee of the Union Ministers and Chief Ministers, which was held to decide on the national agenda for the WTO Ministerial Conference held at Doha during November 2001. The suggestions and recommendations offered by the Commission on this respect (10 October 2002) are annexed (see Annexure 4).

1.1.4.3 Second Sitting: 23 November 2001

1. The Commission held its Second Sitting at the Agro-biodiversity Centre of the MS Swaminathan Research Foundation at Kalpetta 23rd November 2001. Major agenda for this sitting were the issues emerging in the area of sustainable production and export of marine fisheries, livestock products and cashewnut. This sitting decided to constitute Task Forces for in-depth analysis of the issues and to suggest measures to overcome them. The Commission also discussed the report of the Task Force on coconut chaired by Dr. P. Rethinam, former Chairperson of the Coconut Development Board. A sub-group was constituted to study the report in depth and bring out appropriate recommendation for the consideration of the Government. Dr. John Kurien, Member made a presentation on the implication of WTA on fish trade, which reviewed the actual and potential impact of various WTO agreements to the fish trade of Kerala. Having this sitting being held at Kalpetta and Wyanad District being the largest producer of coffee and other plantation crops in the state, and home for more than one half of the tribal population in the state, the Commission felt it befitting to use the occasion to get exposed to the opportunities and challenges of sustainable agriculture of this socially backward but economically rich region of the State. Shri.M.P. Sanathkumar, Chairperson, District Level Expert Committee presented the proposals for Wayanad development formulated by a group consisted of scientists, experts, farmers and civic authorities.

2. Considering the urgency for taking remedial measures, that such measures may need financial backing and that the Government might like to provide the needed resource support in the 2002-03 Budget, the Commission presented another set of interim recommendations (26 February 2002) for consideration of the Government and inclusion in the policy statement which usually is reflected in the Governors speech and in the provisions of the state Budget (see Annexure 5).

1.1.4.4 Third Sitting: 18-19 July 2002

1. The Commission held its third Sitting at Thiruvananthapuram on 18th-19th July. During this sitting the Commission considered the draft annotated outline of the Report, reviewed the presentations of the Task Forces on Rubber, Organic Farming, Pepper and Spices, Tea and Coffee, Media, IPR and Biodiversity and also Agro export Processing zones. Presentations made included Dr. A.K. Krishna Kumar, Rubber Production Commissioner, Rubber Board on challenges and opportunities of Rubber under WTO regime; Dr. C.K. George, formerly Executive Director, Spices Board, and presently Advisor, Organic Products and Exports Division, Peermade Development Society on the scope, potentials and constraints on promoting organic farming in Kerala; Dr.S.Bala Ravi, former Assistant Director General (IPR), ICAR on IPR and biodiversity issues;

Dr. K.V. Peter, Member on Black Pepper and Spices; Dr. Parvathy Menon, Member on findings and recommendations of the Task Force on Media and Shri C.S. Srinivasan, Secretary Agriculture, GOK and Member-Secretary of the Commission on the scope and limitations of establishing Agri-Export Processing Zones. The Commission also utilized this sitting to hear the public views and interacted with the representatives of the various political parties and the farmers' organisations in the state.

2. On organic farming, the Commission felt, is a promising area for the state and the country offering new trade and opportunity. Recognising the importance of information on international trade trends and WTO concerns in this area the Commission decided to recommend to the GOK to establish a National Institute for Organic Farming in Kerala and also to establish a Virtual University in the state on International Trade. The Vice-Chancellor of the Kerala Agricultural University agreed to make available its facilities for the initial stages of establishing of both these institutions.

3. The Commission presented its third interim recommendation following its third sitting on 20 July 2002 (see Annexure 6).

1.1.4.5 Fourth Sitting: 11 September 2002

1. The Government sought the views of the Commission on issues related to market access in the context of WTO to enable the GOK to formulate their position for discussion with the GOI, who in turn is to present India's position at the Fifth Ministerial Conference of the WTO scheduled to be held at Cancun, Mexico during 2003. In order to formulate the views, the Commission met at Alwaye, Ernakulam District on 11th September 2002. Apart from the Members of the Commission, senior officials representing Rubber Board (Rubber Production Commissioner), Coconut Development Board (Director), Coir Board (Chairperson), Marine Export Promotion and Development Authority (Chairperson), KAMCO (Secretary), and Spices Board participated. The Commission circulated a discussion paper laying out a framework for identifying and elaborating the market access issues emanating from the WTO regime and implementation of its provisions since accession of India to the WTO. In addition, to facilitate focused discussion on specific issues with respect to the commodities, which are of significance to Kerala, especially coconut, rubber, pepper, coffee, tea and cardamom, a questionnaire was prepared and circulated. Information on specific commodities was sought from the respective commodity boards as they advise the GOI on its EXIM polices and implementation of the AoA in respect of these crops. Valuable inputs were secured from these bodies, which help in harmonising the subject matter perceptions of the state and central governments. Further, areas which are of specific interest to the farming community of the state and its agricultural economy and which need to be placed co-terminus with the farm policy of GOI were also identified with a view to seek remedial measures and safeguards to protect the interests of the farming community in the state, especially their livelihoods. The observations and recommendations of the Commission on Market Access were presented to the Government as the fourth interim report (see Annexure 7).

2. The issues related to market access identified for the consideration of the Union Ministry of Commerce are:

- Tariffication
- Removal of Quantitative Restrictions (QRs) on the import of farm commodities
- Recategorisation of the status of rubber from an industrial to an agricultural crop
- Application of bound rates
- Issues relating to sanitary and phytosanitary measures
- Common stand with our neighbouring countries particularly Sri Lanka and the formation of an India-Sri Lanka Rubber Producers Association.

3. The Commission is of the view that while trying the best to get changes made in the AoA, particularly with reference to Market Access, Kerala should not be complacent to domestic development programmes such as improvements in productivity, quality. value-addition, cost reduction and choicing post harvest technology for innovative value addition and product diversification, all of which aimed at sharpening the competitiveness of trade and bringing household and economic prosperity from the State's agriculture, particularly plantation crops, animal husbandry and fisheries.

1.1.4.6 Fifth and Final Sitting: 6-7 November 2002

The Commission held its fifth and final sitting at Kovalam, Thiruvananthapuram on the 6th and 7th November, 2002. The Commission, at this sitting considered in detail the Draft Conclusions and Recommendations prepared by its Secretariat. These conclusions and recommendations were developed by consolidating and analysing the observations and findings emerged during the deliberations at various sittings of the Commission, the studies and task forces commissioned and the wide ranging consultations the Commission had with various interest groups and stake holders. Recognising that agricultural trade is exclusively vital to the agricultural prosperity of farming families of Kerala, the Commission envisioned that its recommendations should lead in building a sustainable agricultural production and trade system for the state. The measures recommended by the Commission broadly fell into four categories: (i) concerns which are to be debated and got remedied at the forthcoming WTO Ministerial Conference scheduled in 2003 at Cancun, Mexico; (ii) those requiring interventions at the national level, especially through the Government of India; (iii) the initiatives required to be taken by the State Government; and (iv) the initiatives to be taken by other stakeholders, such as the farmers, traders and others engaged in the processing, marketing, and exporting of agricultural commodities produced in Kerala. Many of the conclusions and recommendations are generic, embracing the entire agriculture sector, while others are commodity or product or crop-specific. Members approved the

proposal that the Chairperson would finalise the recommendations and the draft would be circulated by early December for comments of the members. A national consultation on WTO related concerns in agriculture, which are not only specific to the state, but also addressing its national dimension, and structured to assist the GOI in its preparation for by the Cancun Ministerial conference, have been scheduled for mid- November by the GOI. The Chairperson was entrusted to present immediately the conclusions and recommendations to the GOK in order to facilitate timely reflection of the views and observations of the Commission in this national consultation.

1.2 From Marrakesh to Doha: Impact of WTA

1. Although seven years have elapsed between the conclusion of Marrakesh agreement on WTO in 1994 and the Third Ministerial Conference at Doha in 2001, very little effort seems to be happening for a comprehensive and systematic analysis of the WTO implications on the farm economy of Kerala. This section is an effort to explore through a rationally designed framework into the various concerns affecting or likely to affect, adversely or favourably, the agricultural economy of Kerala, with direct or indirect connectivity to national association with the WTO. The impact has to be assessed with due considerations to the instrumentalities, which the WTO follows in enforcing the evolved rules and regulations and to discipline the international trade on farm products with respect to domestic support to agriculture, market access, export promotion, sanitary and phytosanitary measures, and Trade Related Intellectual Property Rights (TRIPs) and the principles of Convention on Biological Diversity (CBD). The implications to India's agricultural economy at large and to Kerala's farm economy, in particular are analysed in the global backdrop of the developing nations. The analyses logically start from a period prior to the establishment of the WTO. Such a time frame, it may be argued, help in discriminating the inherent and fundamental issues associated with Kerala's farm economy, in addition to those imposed by the WTO regime.

2. The AoA through its Article 20 had mandated that the long-term objective of substantial progressive reductions in support and protection towards evolving a fundamental trade reform is to be achieved through the process of negotiations and that such negotiations shall be initiated one year before the end of the implementation period. Since 2000, the AoA has been in focus on account of the comprehensive review that has been taking place. The agreement is currently under review covering such aspects as the experience gained in implementing the various provisions of the agreement and commitment of Member countries, the impact of various measures on trade concerns and progress in further commitments. These negotiations are to be completed and the AOA is to put on a total implementation mode by January 2005.

1.2.1 Developing Countries

Since the negotiations have initiated, more than 126 proposals were submitted by member countries. These negotiation proposals from many developing countries, including India, while seeking for better market access and reduction of domestic support allowed in developed countries, the modalities suggested are at variance. The developing countries are also keen to gain access not only to developed country market, but also to the developing country market as\well. All these make negotiations very complex with over layering and conflicting interests among members. The AOA, by its

framework seeks binding commitments from member countries in the following areas: (i) market access, (ii) domestic support, and (iii) export subsidies.

1.2.1.1 Trade Liberalisation and Market Access

1. It is now an accepted fact that the last round of negotiations did not bring about trade liberalisation in agriculture with desired level playing ground. There were no significant reductions in both domestic support as well as export subsidies notably by the developed countries. Although the AoA achieved a great deal by defining rules for international trade, its success in terms of immediate market opening has been limited. The anticipated gains from agricultural trade liberalisation, therefore, have eluded the developing countries.

2. During the Uruguay Round, it was projected that pursuant to the AoA, distortions in agricultural trade would be reduced, which in turn would offer opportunity to developing countries to enhance their market access to developed countries. This remains largely unrealised. It was also expected that the contemplated fair trading regime would help the efficient producers in realising higher prices for their products. On the contrary, prices of most agricultural commodities are declining in the world markets. It was anticipated that due to the reduction in domestic support in developed countries, cereal production would shift from developed to developing countries. Empirical evidence, however, shows that developed countries, in fact, have increased their domestic support, which with the economic limitations of developing countries to even sustain their meagre domestic support is emerging as a major threat to the food security and livelihood of people depending on agriculture in developing countries, particularly with the dismantling of QR and reductions in tariff lines. Consequently, instead of the anticipated change in the pattern of world cereals production and trade, export of cereals from developed countries is increasing.

1.2.1.2 Vulnerability to Volatility of International Markets

1. The volatility of agricultural commodity markets, the inability of farmers in developing countries to face risks inherent from the violent fluctuations in international prices and emergence of a trade system where commodities produced under high domestic support and export subsidy can enter the developing country markets are real threats to the livelihood security of farmers from developing countries, who are not only resource poor but also lack domestic safeguards to protect their livelihood. It is also seen that the AoA obligations under the special and differential treatments to developing countries in respect of market access have not been fulfilled by the developed countries.

2. With these facts, it is difficult to consider that the WTO has actually helped in improving market access for developing countries and that products from developing countries are being able to compete in the global market on an even keel. Through manipulation of reduction commitments, mechanisms such as reshuffling of domestic support measures from Amber and Blue boxes to Green box, fixing base level tariffs at high levels with scope for high tariff escalation, (for example, Japan has fixed peak tariff at 2000 per cent for rice, while that in India is 100 per cent), continuance of whimsical non-tariff barriers, such as the sanitary and phytosanitary measures, tariff quotas, high levels of domestic support, etc., the developed countries, have succeeded to

a large extant in ensuring that the promised enlarged market access to agricultural commodities from developing countries does not materialise. In contrast, the markets of the developing countries have been opened up to the advantage of developed countries. The agricultural trade scenario continues to be uneven and non-transparent to the advantage of the economically strong. Benefits to developing countries in terms of increasing their exports will only occur from complete elimination of export subsidies and substantial reduction in domestic support in the developed countries. Fresh commitments should, therefore, have to be negotiated substantially to improve the market access of all products specific interest to developing countries in the ensuing negotiations under the WTO. The reiteration by the Doha Ministerial that "special and differential treatment for developing countries shall be an integral part of all elements of the negotiations and shall be embodied in the Schedules of concessions and commitments and as appropriate in the rules and disciplines to be negotiated, so as to be operationally effective and to enable developing countries to effectively take account of their development needs, including food security and rural development" has to be recognized as the mandatory bottom line in the negotiations. The ongoing negotiations on AoA, from India's point of view, offer the only and appropriate opportunity to take stock of the stark domestic facts and work in tandem with other similar-minded countries to effectively discipline the trade policies being practiced by developed countries. Necessary corrective action will have to be taken to allow the emergence of developing countries as equal trading partners.

1.2.2 The National Context

Being a signatory to the Marrakesh Agreement on WTO in 1994, along with 118 other countries, it has become mandatory for India and other member countries, to implement the provisions of the AoA. However, current negotiations give an opportunity for India to improve, its trade opportunities and to seek for suitable changes in the existing framework to build safeguard for the economic and livelihood security of Indian farmers, particularly those with marginal farming assets and engaged in production of crops related to food security and export.

1.2.2.1 Market Access

1. Among the three major aspects of the AoA, 'market access' (others being domestic support and export subsidies) will have far reaching implications as it contemplates removal of all import restrictions over a period of ten years, from 1995 to 2004. The participating countries are obliged to open up their internal market by allowing free flow of agricultural commodities (no quotas) and to reduce the import duties, and possibly to eliminate them by 2005. This means free flow of all farm commodities, including food grains and processed food into the country. Such market access would definitely pose unprecedented challenges for our commodities. The domestic prices, under competitive forces, are likely to come down considerably. Similarly, the traditional export commodities of the country may be in a position to sustain their share in the international trade only if they can effectively compete with other competing countries in terms of price and quality.

2. A structured market access, under AoA, envisages tariffication of all non-tariff barriers and then progressive reduction of the tariff levels. According to the

commitment India had undertaken during the Uruguay Round, the tariff levels have been bound at 100 per cent for primary agricultural products, 150 per cent for processed agricultural products and 300 per cent for edible oils, with a few exceptions (see Annexures 8&9). Within these limits, there is considerable flexibility to GOI for imposing appropriate tariffs to regulate import of agricultural commodities for protecting the interest of our farmers.

3. Quantitative restrictions (QRs) on the import of 825 agricultural products prevailed as on 1st April 1997 have been phased out and totally eliminated by 1st April 2001. India was compelled to take this action on grounds of favourable balance of payment and in compliance with a WTO dispute settlement decision, against complaint from USA.

4. The agricultural products generally attract a maximum slab of 35 percent applied import tariff. On a number of agricultural items, tariffs have been increased recently to safeguard the interest of domestic producers (See Annexure 10).

1.2.2.2 Domestic Support and Export Subsidies

1. Provisions of the AoA on domestic support measure to agriculture production and trade have two main objectives, namely, identifying non-trade distorting supports from trade distorting supports being practiced by member countries and to assess the trade-distorting supports with a view to discipline and eventually eliminate such supports. On the basis of the lack or the extent of trade distortion effected by a specific measure of domestic support, they are classified as Green box (no or least trade distorting), Blue box (least or little trade distorting) and Amber box (trade distorting) supports. While Green box supports are allowed, only a few supports under Blue box invite disciplining. All supports under Amber box are to be disciplined to a *de minimis* level and the rest eliminated by 2005. For determining the *de minimis* limit, which is 10 per cent and 5 per cent of the national agricultural GDP in the case of developing countries and developed countries, respectively, the Amber box supports are discerned as product specific (example, the MSP guaranteed for some crop producers) and non-product specific supports (example, the input subsidy). The *de minimis* on the basis of a complex method reckoning the domestic and international prices of each commodity, national agri-GDP, value of support given under product and non-product specific supports, etc. Support provided under both these categories together should be within the *de minimis* level. The current level of subsidy being given by the GOI and States may compute far below the *de minimis* level eligible to India under AoA. Hence, on consideration of compliance to WTO, there is no binding need on government of India or any state to dismantle any of the support currently allowed in agriculture. Moreover, according to Article 6(2) of the AoA, input subsidies given to low-income or resource-poor farmers in developing countries are exempted from AMS calculations. The AoA does not define the low-income or resource-poor farmers. Majority of farmers in India are essentially low-income category. In addition, there is scope under AoA for developing countries to directly or indirectly encourage agricultural and rural development as integral part of development programmes with investment subsidies, outside the scope of the stipulated *de minimis* level under AMS. The issue is the economic capability of developing countries to provide such assistance.

2. Export subsidies of the kind listed in the AoA, which attract reduction commitments, are non-existent in India. India offers that profits from export are exempted from income tax as under Section 80-HHC of the Indian Income Tax Act. This does not constitute an export subsidy defined in the AoA. The developing countries are free to provide certain subsidies, such as reduction of export marketing costs with adjustments in domestic and international transport and freight charges. India is extending this subsidy in certain schemes of Agricultural and Processed Food Products Export Development Authority (APEDA), especially for promoting export of perishable horticultural products.

3. The slow reduction of production subsidies by other countries is already opening new opportunities for export of certain commodities, India's increased export of rice being an example. Such exports, however, also pose danger of unrestricted out trading of food grains from domestic market leading to accessibility to food grains by the weaker sections more difficult. Thus export also requires effective domestic regulations.

1.2.2.3 Sanitary and Phytosanitary Measures

Most of the importing countries restrict their imports and protect their domestic markets by enforcing strict sanitary and phytosanitary conditions. As far as our country is concerned, we are yet to lay down strict quality standards and effectively enforce them, and as a result, liberalisation is likely to lead to dumping of sub-standard materials and cheaper substitutes to our domestic market which may exacerbate the risks to domestic producers from liberalised trade.

1.2.2.4 Export Performance

Keeping in general tune with the expansion of international trade during post WTO period, export from India in certain commodities such as rice, oil cake and marine products have registered substantial growth, whereas the export of several traditional commodities, such as spices, tea, etc. have been facing a slow down. The comparative advantage for commodity export is a dynamic concept and as such, it would be possible to secure the same for any commodity through introduction of new technology and management may improve productivity, quality and competitiveness in cost. The major constraints that restrict the scope for promotion of exports of Indian commodities include inconsistency in domestic policies; restrictions on external trade, *ad hocism* in export policy, excessive State interventions, poor infrastructure and lack of awareness about international quality standards and value-demand system in international market.

1.2.2.5 Intellectual Property Rights and Amendment to Patent Act

India's binding to put in place all commitments under TRIPs by 1st January, 2005 have necessitated appropriate amendments or revisions of existed legislations and to draft This amendment addressed all aspects of Indian Patent Act, 1970 to make it compliant with the *de minimis* requirements of TRIPS, except patent right on the products from pharmaceutical and chemical industries (see the tabular comparison below). The new

legislation enacted are the Geographical Indications of Goods (Registration and Protection) Act, 1999 and the Protection of Plant Varieties and Farmers' Right Act, 2001. Most recently the Lok Sabha and Rajya Sabha have also passed the Biological Diversity Bill, 2002.

Comparison of India's Patent Act 1970 with TRIPs in Essential Features

Indian Patent Act of 1970	*TRIPs*
Only processes not products in food, pharmaceutical and chemical industries are patentable subjects.	**Processes** and products innovated in all fields of technology are patentable subjects.
Among the subjects excluded from patentability included 'method of agriculture or horticulture'and'any process for medicinal surgical or other treatment of humans, or similar treatment of animals and plants to render them free of disease or increase their economic value or that of their products'.	**Exceptions** allowed are only: (i) those inventions whose working may affect public order, morally or damage life or prejudice to the environment, (ii) Diagnostic, therapeutical and surgical methods. (iii) plants and animals produced by essential biological process.
No patent for any living forms	**Patent** to be given to microorganisms and microbiological process and plant and animals produced by non-biological process. Plant varieties are to be protected by patents or effective *sui generis* system or by both.
Duration of patent is 14 years for all except process on chemicals and drugs,which will be for 5-7 years.	**Duration** of patents 20 years in all cases.
Compulsory licensing and license of right	**Restricted** compulsory licensing and no license of right
State has the right to check abuse of patented invention from public interest point of view.	**Offers** limited flexibility for state interventions in public interest.

1.2.2.6 Protection of Plant Varieties and Farmers' Rights

1. TRIPs mandate legislative and administrative framework in place in India to protect plant varieties, such IPR system could be either an effective *sui generis* system or a patent system or a combination of both. The TRIPS also offers scope to protect Indian goods and services by geographical indication, provided these are protected in India under due legislative framework. In view of these, GOI enacted new legislations on the Geographical Indications of Goods (Registration and Protection) Act, 1999 and a *sui generis* system under the Protection of Plant Varieties and Farmers' Right Act, 2001.

2. The Indian Act on Protection of Plant Varieties and Farmers' Rights (PPVFR Act, 2001) admittedly projects a model perspective for plant variety protection in a developing country endowed with rich biodiversity. This Act makes harmonious integration of the mandatory features of TRIPs and essential elements of CBD. While granting plant breeder's rights (PBR) to new plant varieties, the Act does not ignore or transgress the traditional rights of farmers and does recognize the historic contribution of generations of farmers in preserving, protecting and enriching the biodiversity, a

legacy of profound value to the modern crop improvement efforts. Another legislation on biological diversity, in concurrence with India's commitment to CBD, the Biological Diversity Bill, 2002 has also been most recently passed by both Rajya Sabha and the Lok Sabha. It provides for the establishment of a three-tier biodiversity management system with National Biodiversity Authority at the Centre, a State Biodiversity Board and a Biodiversity Management Committee at each Panchayath or local body level. The Act is designed to promote conservation, sustainable use and equitable sharing of benefits accrued from the commercialisation of products developed from national biodiversity.

1.2.2.7 Geographical Indications (GI)

The Geographical Indications of Goods (Registration and Protection) Act (GIGA), 1999 covers all goods, such as agricultural goods, manufactured goods and processed goods where a given quality, reputation or other characteristics of such goods is essentially attributable to its geographical origin. This GIGA puts in place an important legislative framework to take advantage of the GI in all qualified merchandise for trade gains and to protect the consumer from 'passing off' with goods of deceptive similarity. This Act may have profound impact on the trade of agricultural commodities like basmati rice, Darjeeling tea, Malabar pepper, certain varieties of mango, such as Ratnagiri Malgoa, Banganapalli, Dasseri, etc which are known for their quality and reputation appellated to the main production region. These and such other commodities could now be registered and protected to the advantage of farmers and traders. This Act is expected to remedy the disadvantage India had been facing in preventing other countries swapping traditionally reputed geographically appellated qualities of certain traditional Indian commodities. The implications of GI on commodity trade are more advantageous outside domestic circle. This advantage, however, cannot be accessed merely by enacting a domestic law, but only with successful bilateral or multilateral negotiations with concerned trading countries or through the TRIPs Council. The GIGA (1999) requires maintenance of a GI Registry, which is controlled and managed by the Registrar of GI. A GI can be registered in respect of any or all the goods in respect of a definite territory or a region or locality. The Act, however, precludes registration of GIs, which may deceive or cause confusion or whose use may contravene any of the law in force, or generic name or indications, which have fallen into disuse or false representations on the origin of goods.

1.2.3 Impact on Kerala's farm economy

1. The implications of the provisions of the WTA have to be seen not only against the national scenario but also more importantly in the context of Kerala's agricultural economy on account of its impact on the livelihood security of the vast majority of the farm population who by and large constitute small and marginal category (Refer foot note 3). Practically very little systematic analysis of the impact of these WTA provisions on Kerala's farm products has yet been done. There is urgency to undertake such analysis in view of the fact that two-thirds to three-quarters of our farm products of the state are either exported or have export potential. Although most of Kerala's farm products exported (pepper, for instance) do enjoy traditional market, there is scope to use this advantage to retain and enlarge the market with quality improvement and value addition (have to go with capacity building for stringent phytosanitary measures). Hence production, processing and trade of traditional commodities of Kerala have to be

strengthened with market vision. It could be said that eternal vigilance in ensuring quality and competitiveness in cost is the price for sustainable trade security.

1.2.3.1 Competition from Within and Outside

1. A study undertaken by the Government of India for assessing the comparative advantage of Indian commodities for international trade, revealed that none of the speciality commodities of Kerala, which constitute its traditional export items, do enjoy a comfortable edge over other competing countries, mainly because of the high cost of production. Vegetables and fruits as a group offer promise for enlarging international trade on a sustainable basis. It is reported that the study by the GOI did not cover spices and cashew. It is for the State Government to take up such studies to periodically assess the prospects of these commodities and to take actions to improve their competitiveness in domestic and international markets.

2. Removal of quantitative restrictions, reduction and eventual elimination of import duties and the obligatory import (not less than 3 percent of the domestic consumption of each primary product as between 1986 and 1988) could result in a greater flow of agricultural commodities and impact on the prices in the domestic market. Three of Kerala's major farm commodities are expected to face intense competition. They are rubber from Malaysia, coconut from Sri Lanka and Philippines and cardamom from Guatemala. The only obvious way out is competitiveness. In the case of coconut, the competition will be not only from imports (Kerala is in fact in the thick of this competition) but also from other coconut producing states (notably Tamil Nadu and Andhra Pradesh). In case of cardamom Kerala is in a relatively comfortable position. Production and trade being dynamic with high year-to-year variation, vigilance of production and market in competitor countries assumes strategic importance.

1.2.3.2 Aggregate Measure of Support

AoA limits the AMS, which is trade distorting, product-specific or non-product-specific, at level not exceeding 10 per cent of the GDP of agriculture origin, in the case of developing countries. From this point of view, there can be no threat to farmers on the ground that the subsidy being given is inadmissible. In general, the subsidy made available to Indian farmers (including the non-product-specific subsidies and price support through government procurement) is at present below the permissible limit. The dependence of Kerala farmers on non-product-specific subsidy is lower than the national average dispensation. The product-specific support to Kerala’s agriculture is again limited only to copra, which indeed is paltry when compared to the massive subsidy on procurement of food grains in the country. As far as export subsidy is concerned, none of the export-oriented agricultural commodities produced in Kerala enjoys the benefit of any product specific subsidies except the income tax remission granted on export profit (again it is a miniscule amount). So the total share of national subsidy on agriculture to the farmers of Kerala is very low in view of its specific pattern of agriculture and absence of price support to most of its major commodities.

1.2.3.3 Categorisation of Commodities

There are anomalies in the categorisation of commodities in respect of binding tariff peaks. The case in point is the overlap between industrial products and agricultural products, because these two groups of products are governed by two different domains of tariff rate under the WTO. The issue becomes intriguing when products classified under these two categories are industrial raw material. In the case of rubber, Kerala encounters a great disadvantage for having it classified as in industrial commodity from the early days of GATT and the inability to change its re-classification as an agricultural product when GATT transformed into WTO. This is causing serious economic disadvantage to the economy of Kerala and the market protection possible to the rubber farmers. As a primary agricultural product, the latex or rubber sheets could have been eligible to enjoy 100 per cent bound duty, while as an industrial product, it is eligible to only a maximum 50 per cent import duty. The paradox of this classification allows tariff rates bound to 100 per cent commodities like cotton, which is also industrial raw material but classified under primary agricultural products. Hence, in the interest of rubber producers in India, there is urgency to re-categorise rubber and all other similarly classified crop products as agricultural products, irrespective of their subsequent use. There is scope to reverse this categorisation through trade and political diplomacy, and thereby, bring rubber under agricultural commodity. The Government of Kerala has to take urgent steps to convince the GOI on the issue so that it may be accepted as a negotiation agenda. The Doha Ministerial Conference has decided to continue the negotiation process. There are also special and differential safeguard in AoA to protect the livelihood interest of farmers of developing countries.

1.2.3.4 Sanitary and Phytosanitary Measures

The biggest threat from WTO regimes to Kerala's exports is directly not in commodity quantity but in the quality standards of the commodity and the increasing standards of quality in international market, especially of phytosanitary nature, such as pesticide residue, mycotoxins, bacterial contamination, presence of foreign bodies, etc. These measures, from the manner by which they are applied with subjectivity in the definition of quality, are becoming a most important non-tariff barriers allowed under WTO. Many countries, particularly the developed set these measures at very high levels partly due to their health consciousness and partly devised to ward off imports from developing countries, who have low capability to create and maintain such high quality regimes. Some of these standards are subjective and arbitrary[4] as it had happened with the seafood exports
of the state 2-3 years earlier. The only two-fold approach is systematic quality upgradation as an essential component of production and processing and intervention of GOI at appropriate WTO forum to moderate the phytosanitary standards and prohibition

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[4] Although we are discussing now only about agricultural exports, seafood and other marine product exports, in future fresh water fish from rice-fish farming systems may become important for the state. So any discussion on the impact of WTO should reckon all export products from the state. Incidentally fisheries and forestry products have been taken out of the WTO, as there are other international organisations and accords to take care of the international trade in these commodities. However sanitary and phytosanitary issues are WTO concerns. In fact bacterial contamination arising poor sanitary and phytosanitary conditions through the entire process of fishing and value addition is the biggest threat facing apart from the resource depletion is the biggest threat the marine fisheries sector of the state is facing currently.

of discriminatory trade practices on grounds of SPM, when the commodity complies with the
set standards. From Kerala's point of view, agrochemical residue could be a problem for tea, cardamom, pepper, cashew nut and coffee. More vigilance and commodity-wise regulations in quality maintenance and capability building for maintaining and monitoring the quality have to be created as part of the preparation.

1.2.3.5 IPR and Biodiversity

1. Kerala is endowed with rich biodiversity. The new IPR regime offers opportunities as well as threats in using the biodiversity for wealth generation. Absence of clarity and clear-cut policy on this front has led to debates and demoralisation to those taking initiatives for safeguarding our biodiversity (for instance, Vechchoor cow, Aarogyapachcha patent, and most recently Chakkarakkolli). What is urgently needed is documentation and time bound priority research on discerning the active principles and development of commercialisable products and economic enterprises based on such products. A sense of urgency is needed on the part of the government in mobilising state's scientific and entrepreneurial resources to create trade and wealth from the rich biodiversity. This has to go hand in hand with liberal funding and vigorous effort in popularising IPR literacy and systematically codifying traditional knowledge.

2. Eligibility under Geographical Indications based on certain specific quality, reputation or other characteristics including appearance of the commodity or goods, which are due exclusively or essentially to the described three geographical elements, namely, geographical environment, biological factors and production or processing factors. These specific qualities and characteristics must be amenable for clear definition or mere description. For instance, it is generally perceived that the Malabar pepper, Cochin Ginger, Alleppey Finger Turmeric, Tellicherry Green Bold Cardamom (TGBC), etc., have high market reputation. This reputation in each of these produces could be attributed to certain tangible and intangible characteristics. The tangible characteristics have to be elaborately defined with the help of database, figures, photographs, etc. depending on whether the characteristics involve shape, size, colour and appearance, test weight, content and composition of chemical factors determining the intrinsic quality valued in the market parlour. The TRIPs regime and the national legislation on Geographical Indications empower the state in getting protection to these commodities, which are already known in market parlour over centuries for quality arising from the origin.

1.2.3.6 New Opportunities

New export possibilities are emerging on account of expected increased market access under AoA regime. New opportunities are there for flowers and tropical vegetables, especially preferred by ethnic consumers abroad. The state needs to develop adequate infrastructure facilities and cost-effective production technologies and ambience to promote competitive export-oriented production with state-of-the-art packaging, transport and trade capability. The employment and wealth it can generate are significant. Early lead can be of advantage in capturing this highly competitive market in the Kerala neighbourhood at the Middle East.

1.2.3.7 Government of India's Stand in the On-going Negotiations on Revision of Agreement on Agriculture

1. As far as Market Access is concerned, Government of India position is that obligatory tariff reduction should be minimal. Government of India do not agree to an across the board reduction of tariffs on all items. The bound rate of 45% for soya oil has to be increased up to the overall bound rate for edible oils. Further, industrialised countries should agree to a substantial reduction in tariff peaks in the case of commodities of importance to the rural economy of developing countries.

2. The present trade regime is characterised by large inequalities. Developed countries are giving high levels of both domestic support and export subsidy. Also, the green and blue box provisions are being used as cover for providing trade-distorting support. There is need for a more transparent and honest system of eliminating trade-distorting support. Also, developing countries in which over 50% of the population depend agriculture for their livelihoods should be allowed to raise tariffs within certain prescribed limits and to impose quantitative restrictions on imports, wherever there is clear evidence that such imports will erode or destroy the livelihoods of small farmers and aggravate poverty among assetless rural women and men.

3. Since agriculture constitutes the backbone of India's livelihood security system, protecting domestic agriculture and the livelihoods of farming families should be the bottom line in GOI's stand at the on-going negotiations. India should also keep in view the trends in our agricultural evolution towards increasing diversification and greater production of horticultural and animal products.

4. In the alignment of countries at the negotiating table, it will be prudent for India to work with those on the side of poverty reduction and rural well-being. India should be in a position to assure minimum income security for farming families, through appropriate tariffs and import restrictions. India should work with like-minded countries in ensuring that trade distorting subsidies and non-trade barriers are not used by developed nations under different pretexts, including the possible introduction of the concept of multi-functionality of agriculture.

1.3 Approach and Strategy

In this context it is important to stress on the need for a vision of how to address the crisis in the employment and production sectors of the state and to exploit the opportunities that the new trade regime might offer. Kerala with heavy dependence on domestic and export markets must necessarily draw on the special resources with which the state is endowed. Schemes for mass employment in Kerala, unlike most other parts of the country, can draw on a labour force whose members are literate, skilled, and are socially and politically conscious. A new phase of economic development must take advantage of these special resources, namely, a rich and varied natural resource base, a basic land reform, an educated, skilled and politically conscious work force, and unique achievements in the areas of health and education.

1.3.1 Sustainable Trade Security System for Kerala

The principal aim of the Commission is to propose a **Sustainable Agricultural Trade Security System for Kerala.** The Report begins with what Kerala's farm families, farm workers, plantation owners and the State Government and the Government of India can do to create the substrate conditions essential for building a sustainable agricultural trade system.

1.3.3.1 Substrate Conditions/Role of Different Actors

The substrate conditions relate to the following parameters:

a. **Proactive State Policy**, which while building a response to the WTO, must defend and extend the economic and developmental gains achieved through state intervention and public action in the past. The state cannot afford to withdraw from the new, WTO-regulated phase of development. It must continue to play a role in public investment (in agricultural extension, for example) as well as in protecting the lives and livelihoods of those, particularly the poor peasantry and agricultural labour, threatened by the new trade regime.

b. **Productivity enhancement** by bridging the prevailing gap between potential and actual yields with technologies on the shelf.

c. **Quality Improvement** through a quality literacy movement for farmers/farm labour producers and consumers, and by strengthening the infrastructure for sanitary and phytosanitary measures, for both domestic and export markets.

d. **Profitability Enhancement** through concurrent attention to production efficiency and higher factor productivity, as well as to improved post-harvest technology, value addition and agro-processing. Measures for value-addition will also include organic farming and the production and marketing of organic spices, tea, coffee, rubber and fruits.

e. **Sustainability Improvement,** through attention to the ecological foundations essential for improving productivity in perpetuity, such as soil health care, water harvesting and efficient use and forest and agro-biodiversity conservation.

f. **Stability of production and income** through proactive advice on trends in home and external markets and through appropriate public policy measures like market stabilization fund and insurance.

1.3.1.2 Domains of WTO Involvement

1. While the above steps are largely in the domain of Kerala's farming families, labour unions, farmers' and planters' associations and the State and Central Government, the following components relevant to a Sustainable Trade Security System relate to the AOA of the World Trade Agreement.

a. Domestic support
b. Market access
c. Export subsidy
d. Trade Related Intellectual Property Rights
e. Sanitary and phytosanitary measures
f. *Codex alimentarius* standards

2. It is important to understand the impact of the above on Kerala's farm trade and be proposed to the Government of India that such changes as are desirable in both GOI's Exim policies, as well as in the renegotiated AOA, a process which is currently underway. The bound rates for different commodities and the determination of import tariffs for the following items need urgent attention on the part of GOI. Even in the most recent Exim policy, the import tariffs on a range of products specific to Kerala have been fixed at levels well below the bound rate.

- Rubber
- Coconut
- Coffee
- Tea
- Pepper and other spices
- Cashewnut
- Medicinal plants
- Fish and fish products
- Milk and milk products
- Meat and meat products
- Processed foods

3. The impact of the removal of quantitative restrictions on the imports of agricultural commodities needs to be assessed objectively. Task Forces on each of these crops were set up under this Commission. They have made a preliminary analysis of the impact of the removal of QR's. While doing such a review, the fact that unlike in industrialised countries, agriculture (crop and animal husbandry, fisheries, agro-forestry and agro-processing) constitutes the backbone of the livelihood security system of our country should be kept in view.

4. Starting with the farm families themselves and extending up to the Government of India and WTO, there have to be appropriate action if a **Sustainable Agricultural Trade Security System** is to become a reality. Such an Agricultural Trade Security System is vital for Kerala's prosperity, since under the conditions of Kerala, if agricultural trade goes wrong, nothing else will have a chance to go right.

1.3.2 Strategy: Spatial Focus of Trade

Kerala's trade strategy should be based on the following three guiding principles.

First, enlarge **home trade** and pay greater attention to cost and quality for the home market.

Second, impart a **regional focus** with particular emphasis on SAARC and ASEAN countries, so that the trade relationships among neighbouring developing countries is based on a **win-win mode** for all. Kerala, in particular, needs to have mutually beneficial relationships in trade with Sri Lanka, Malaysia, Thailand, Vietnam, Cambodia and Indonesia.

Third, enlarge **global trade**, particularly with countries in the Middle East, Africa, European Union, Russia and CIS countries and North America. This will call for market intelligence and continuous updating of information by the Virtual University for Agricultural Trade (which this report has recommended) in relation to the quantitative and qualitative dimensions of demand and the price structure.

1.3.3 Instruments for Managing Change

Kerala's agriculture is in a phase of transition as a result of the impact of globalisation of economies and liberalisation of trade. As repeatedly emphasised in this Report, this will call for productivity, quality and value-addition revolutions. There is need for effective instruments for managing change, particularly in the following areas.

• Demographic Challenge	Attracting and retaining youth in farming
• Technological Challenge	Genetic Engineering, genetically modified organisms (GMOs) and Information Technology
• Ecological Challenge	Climate, Water, Soil, Biodiversity (Global Convention on Climate and Biodiversity)
• Economic Challenge	World Trade Agreement in Agriculture
• Ethical Challenge	Trade Related Intellectual Property Rights (TRIPS); FAO Treaty on Plant Genetic Resources
• Equity Challenge	Social and gender equity – Reaching the Unreached

1.4 Recommendations

We recommend the following steps for immediate consideration and appropriate action.

We have first listed a set of recommendations that have to do with strategies and demands that India must in its interest pursue in the post-Doha negotiations. This is followed by a set of Kerala-specific recommendations, categorised as (a) Immediate, (b) Short and Medium Term and (c) Long Term (institutional) change.

1.4.1 Post-Doha Issues relating to the Agreement on Agriculture (AOA)

1.4.1.1 Domestic Support : Sustainable Livelihood Box

1. It is well known that OECD countries provide subsidies to the extent of one billion dollars per day to their farmers. The USA has further increased farm subsidies in its Farm Bill of 2002. Obviously, these subsidies are being adjusted against Blue box payments and Green box measures. Their subsidies do not seem to fall within the preview of Amber box measures, which alone are considered to be trade distorting.

2. In the current Geneva round of negotiations, it may be useful to propose the following two alternatives:

First, all boxes may be abolished and the do's and don'ts with reference to trade distortion and unfair trade practices may be spelt out in clear and unambiguous terms.

Second, as an alternative negotiating principle, **a fourth box relating to Sustainable Livelihoods** (**Livelihood Security Box**) may be introduced, which will empower developing nations facing the challenge of providing livelihoods to the rural population to place restrictions on imports, where there is convincing evidence that such imports will erode job/livelihood opportunities in their countries. Since over 66% of the population of many developing countries including India depend upon agriculture (crop and animal husbandry, fisheries, forestry and agro-forestry and agro-processing) for their livelihoods, trade which leads to the destruction of rural jobs / livelihoods will further enhance poverty and hunger and will make the achievement of the UN Millennium goals in the areas of poverty reduction and hunger elimination, impossible. The result will be social disintegration because of a further increase in rich-poor divide. Globally, the continuation of the present situation where a few million farm families in industrialised countries, supported by heavy inputs of technology, capital and subsidy, compete with over a billion small farmers, having little access to technology, credit and adequate post-harvest infrastructure, will not help to make free trade an instrument of poverty eradication.

Trade **should not only be free but also fair** to the primary producers in predominantly agricultural developing countries. **The percentage of population dependant on agriculture for their livelihoods should be the major criterion for eligibility for using the provisions of the proposed Livelihood Security Box. The minimum could be 50% of the population**. The idea of a 'development box' has been suggested by a group of developing countries. Such a scheme would include measures that would provide market access for the crops produced by low income and resource poor farmers with higher levels of domestic support for these farmers in keeping with Article 6.2 of the AoA.

Third, domestic support to farmers is very high in OECD countries only because the subsidies fall in non-actionable areas. **We should avoid using the term "subsidy"** in relation to the very modest help being extended to millions of the small farm families. A range of domestic support measures like those relating to infrastructure development, and many other forms of public provisioning, are non-trade distorting and hence non-actionable. '**Support for sustainable farming', rather than 'subsidy', should be the terminology used to refer to the very modest help being extended to small producers, who are getting heavily indebted due to the unfavourable cost-risk-return structure of farming**. Policy makers in Government of India who deal with our interests in WTO should be sensitised in such issues, so that they do not refer to any and every help given to small farmers as "subsidy".

1.4.1.2 Market Access

All non-tariff barriers coming in the way of access to the markets of industrialised countries should be reviewed and removed where logical. At the same time, assistance should be extended to developing countries to improve their capacity in the area of sanitary and phytosanitary measures as well as the adoption of *codex alimentarius* standards of food safety. Unrealistically high SPS standards are often used to create trade barriers against developing country exports. India and other developing countries must become a part of the process by which SPS standards are decided upon. At the same time we must evolve our own SPS standards in our country for our domestic products as well as imports.

1.4.1.3 Trade-Related Intellectual Property Rights (TRIPS)

The revised TRIPS should be compatible with the equity and ethics provisions of the Convention on Biological Diversity and the FAO Treaty on Plant Genetic Resources for Food and Agriculture. In particular, it should contain provisions for the compulsory licensing of rights in the case of inventions of great importance to food and health security, and for benefit sharing with the primary conservers of genetic resources and holders of traditional knowledge. This will help to avoid fear and accusations of bio piracy and to promote mutually beneficial biopartnerships.

1.4.1.4 Geographical Indication

An objective system of including items in this list should be developed. Historical antiquity of product names, like "Malabar Pepper" should be an important criterion for eligibility to be included in such a list.

1.4.1.5 Trade Security and Farmers' Well being

Youth will not be attracted to farming, if agriculture becomes a gamble in the market. Therefore providing assured and remunerative markets for the 500 million farming families in the world should be a major aim of the revised AOA. Sustainable farming systems and satisfied farming families alone can ensure food security for the nearly 8 billion children, women and men who will inhabit our planet by the year 2030.

1.4.1.6 Multi-functionality of Agriculture

Agriculture influences the livelihood security of about 2 billion persons globally. At the same time, it has profound influence on ecological security and cultural security. However, the concept of multifunctionality of agriculture, being advocated by developed countries should not be used to enhance subsidies and erect non-tariff trade barriers in the industrialised countries. **A Code of Conduct relating to the use of the principle of multifunctionality should be developed, if this principle is to find a place in the revised AOA**.

1.4.2 Kerala-specific Recommendations

1.4.0 The Setting

1.4.0.1 Kerala *vis-à-vis* Other States: Nature and Magnitude of WTA Impact on the Farm Economy

Unlike the farm economies of other states in the country, especially that of the neighbouring states of Karnataka and Tamil Nadu who are competitors in the market for quite a few commodities (Tamil Nadu in coconut, rubber and tea; and Karnataka in coffee and cardamom), Kerala's farm economy (covering livestock and fisheries, apart from crops) is acknowledged as the most vulnerable to WTO and AoA related concerns in the country because a high proportion of trade dependence of the commodities produced. Consequently when other states give greater emphasis on the promotion of newer export products capitalising on the opportunities provided by WTA in exports, Kerala has to give far greater attention on defending her gains by warding off the adverse impact and on mitigative or protecting measures.

1.4.0.2 Government of India's EXIM policies

The EXIM policies have greater impact on the price regimes of the industrial raw material commodities. In fact long before the WTO regime came into existence, the market prices of the raw material commodities, for instance rubber, had been highly influenced by the EXIM policies pursued by the GOI from time to time, which alter the supply-demand balance. Import would depress the price regimes of the raw material commodities and in turn farmers' incomes. Before the advent of the WTO regime farmers and the State Government could exercise some influence on the price regimes as the EXIM policies are shaped largely on the basis of prevailing national political environment. Traditionally the Government of India used to mediate between farmers and manufacturers on the price regime in times of market stress and the problems arising used to get mitigated, though not to the satisfaction of very contenting stakeholders. The decisions of the Government of India could be influenced by farmers and manufacturers as well, depending upon the extent of persuasion or pressure both the interest groups could bring in to bear upon the GOI. With the WTA regime coming into force, especially the removal of the quantitative restrictions on the import of agricultural commodities since April 2001, interventions would have to be within the provisions of the AoA agreed upon and accepted by the Government of India, and thereby whatever little restraint which the farmers and the State Government could exercise in the past is considerably eroded. The loss of this manoeuvrability is the single important implication of India's entry into WTO and signing AoA to the farm economy of Kerala as the two commodities, which are vulnerable to EXIM policies, namely, coconut, and rubber account for two thirds of the GDP arising from the agriculture sector.

1.4.0.3 Lessons Learnt

It is inevitable that opening up of India's agricultural sector to the world market will have implications on prices, incentive structures and various forms of protection. It is time that the country take stock of the experience and performance so that the nation can prepare adequately to meet the challenges ahead as well as cash in on the opportunities opened up. The concerns, which would have implications on sustainable agriculture and ensuring the livelihood security of the farmers, include factors that enhanced obligatory market access such as tariffication of non-tariff regulations, removal of technical barriers to trade, transparency in sanitary and phytosanitary

regulations; minimising domestic support without eroding the livelihood security of the vulnerable groups; that promoted export competitiveness; IPR regime that safeguards the interests of the farmers and the conservers of biodiversity. It needs reiteration that if one goes by the short experience that the country hitherto gained, every measure should be taken to safeguard the livelihood security of the farmers, the vast majority of whom are resource-poor operating small and marginal holdings, and the rural poor. What is appropriate at this juncture of nation's history is that while being fully conscious of the various implications of the nation's participation in the WTO, prepare the nation to take advantage of the opportunities offered by the WTO and to meet the emerging challenges. The experience in Doha is an indication that well-informed and prepared participation with wider involvement would pay dividends. India succeeded in getting the review of its major concerns in the negotiation agenda and even in getting a breather to make national preparation for the new agenda of the Singapore Round.

1.4.0.4 Kerala's Special Needs

It has been argued in the beginning of this section of the report that among the farm economies of different states in the country, that of Kerala is the most vulnerable, and far more pervasive, to WTO and AoA related concerns because the high proportion of trade dependence of the commodities produced. The state hence has to give far greater attention on defending her gains while capitalising on the opportunities provided by WTA. Apart from this basic substratum, the very nature of the implications of provisions of AoA and WTO to the farm economy of the state is different (in some cases, contrasting) from the rest of the states in the country, resulting in divergence (even conflicting) in interest with that of the rest of the country (in the limited sense of the adverse impact on the livelihood security of the dependant population) because of the specific and unique characteristics and features of the state's farm economy. They are:

- Being predominantly based on perennial tree crops (80% of the net cultivated land), flexibility in the cropping pattern to adjust with market conditions is limited, in fact practically nil in the short and medium term. Adjustment is slow and demands longer term and hence cost reduction rather than productivity increase when commodity prices are falling should be the strategy;

- High proportion of unproductive tree crop population due to over age and endemic disease infestation results in low productivity. This needs correction with substantial investment of longer duration for increasing productivity through replanting and rehabilitation;

- Over the period, cultivation is extended to agronomically less suitable areas partly due to irrational price regimes and partly prompted by state policies (which are often for increasing production to further the state's interest rather than the benefit of the farming community). This approach needs to be reviewed and rendered producer-friendly;

- Vast majority of the holdings are small and tiny (85% of the total of 54 lakh holdings is below half hectare, with an average size of 0.137 ha), hence of

low risk bearing ability and highly vulnerable to income loss due to price decline and significant deprivation of livelihood opportunity, more so if such fall arises from imports;

- High degree of instability in price regime (in comparison with cereals and other foodgrains) on account of the export and raw material orientation of the commodities produced rather than food for subsistence;

- Endowed with a national market (of export or raw material), which is beset with oligopolistic tendencies, wherein a few buyers exercise control over the market. (In a sense centralisation of market is not necessarily through the physical command of the stock of commodities). Hence ability of the farmers to influence price regime is low (unlike foodgrains producers), unless there is a strong will on the part of the governments, particularly the Government of India;

- There are inherent conflicts between the interests of the farmers (seeking always a higher price) and that of the manufacturers who utilise the raw materials accessible at low price, and exporters who gain from international trade. Hence the inability to forge a consensus on price regimes;

- Most of the crops (coconut, rubber, black pepper, cardamom to mention the important ones) grown in Kerala are chosen to suit to its unique natural resource endowments, such as high rainfall, undulating topography and variations in altitude at short spatial distances. While these crops are of considerable significance to the economy of the state, they do not enjoy strategic advantage in the national context on food security (in contrast to cereals such as rice, wheat or commercial crops as cotton or sugarcane). Fluctuations in production or price regime in Kerala's commodities are not capable of causing serious consequence to the national economy. Hence the adverse impact arising from fluctuations in production and price in these commodities are not capable of capturing national interest in a manner and dimension to receive mitigative measures at critical levels to alleviate the attendant hardships and economic erosion of the farmers (contrast with wheat-rice farmers of Punjab and Haryana and rice farmers of Andhra Pradesh);

- Surpluses in the market get accumulated over a period in the national market, largely due to increasing production from other states, in certain wherein commodities Kerala had once enjoyed exclusivity in productions. This has forced up on a new domestic trade paradigm with producers facing the brunt;

- Relatively low proportion of family labour participation in farming and resulting high wage labour component in the cost of production, render Kerala's agriculture costly and debilitate its competitiveness, despite favourable climatic conditions especially high rainfall. The entailing built in rigidities in the cost structure makes to it difficult to adjust at times of price fall.

1.4.0.5 Framework of Recommendation

Recommendations relate to two broad groups. **First**, those related to minimising/ mitigating the adverse impact as they call for immediate action. **Second**, those help in converting challenges into opportunities and maximising the opportunities, especially the newer ones. The recommendations are made in concurrence with India's obligations arising from WTO, particularly from the five major domains, namely, Domestic Support, Market Access, Export Promotion, Sanitary and Phytosanitary Measures, and TRIPs as well as its commitments under the CBD. They are also seen from the point of the obligations of the principal stakeholders, namely, the farmers as individuals or communities, the Government of Kerala including their departments and agencies; the Government of India including their departments and agencies, principally the Commodity Boards/Authorities, and the WTO (with a view on the Cancun Ministerial). The last two categories may appear repetitive as they have been already covered in a generic sense but in this section only specific applications are referred to. The Commission wishes to impress upon all the stakeholders that each one of them have roles to play and obligations to fulfil, and actions to perform, like members of a symphony orchestra. The recommendations made by the Commission in its interim reports have also been incorporated in this section for cogency and completeness of the task but they are indicated at the relevant places and appropriately. The recommendations are presented in a three-tier format. First, those recommendations common to the agriculture sector, irrespective of commodities; second crop/commodity-specific interventions, including newer opportunities; and third infrastructure and institutional mechanisms to sustain in deference to the WTO concerns, so as to enable the state to be proactive in mitigating adverse impacts and to effectively, capitalise on opportunities.

Immediate

1.4.1 Constitution of a High Level Standing Committee on Agricultural Trade

Change in the trade environment can be managed effectively if there is synergy and convergence in planning and action among all the principal stakeholders. They will have to function like members of a **Symphony Orchestra**. To create an Agricultural Trade Policy Symphony in Kerala, we recommend creation of a symphony orchestra conductor with the constitution of a **Standing Committee on Agricultural Trade**, under the chairmanship of the Hon'ble Chief Minister, with the Hon'ble Minister for Agriculture and Coir serving as Co-Chair. All the principal stakeholders within the State like Farmers', Planters' and Labour Associations, Commodity Boards of the Government of India, Kerala Agricultural University, ICAR and CSIR, Consumer Association, Mass Media (printed, electronic and internet) and all the concerned Departments of the Government of Kerala should find a place in the Committee. In addition, the Ministries of Agriculture and Commerce of the GOI may be requested to nominate senior level officers dealing with WTO issues to serve as ex-officio Members. The following could be the principal terms of reference to this Committee.

- To bring about convergence and synergy among all on-going programmes supported by State and Central Governments and by bilateral and multilateral

agencies with view to derive the maximum beneficial impact from the available resources, from the point of view of trade competitiveness.

- To monitor trends in home and external markets.
- To initiate proactive action, particularly to avoid / mitigate distress to farm and labour families.
- To take steps to shift to an era of precision farming in order to maximise factor productivity and minimise cost of cultivation.
- To promote trade and IPR literacy through the mass media.
- To provide policy oversight to the proposed Virtual University for Agricultural Trade and to reconstitute State Land Use Board.
- To suggest steps on an on-going basis to strengthen the livelihood security of small farm families and agricultural labour.

1.4.2 Professional Support to the Standing Committee

The Standing Committee will not be effective unless it has a permanent secretariat with top-level experts (Agronomist, Agricultural Economist, International Trade Economist, IPR and IT experts and Statistician) all at the minimum level of Professors in academic training and in professional experience. Induction could be on deputation or otherwise for a period of three to five years. Commission envisages this essential support as a highly professional input-oriented to advice the administration. The Member-Secretary could be either an eminent authority on agricultural trade or a senior member of the civil service knowledgeable in this field.

1.4.3 Monitoring the Plantation Crops Sector

1. The plantation crops (rubber, cardamom, coffee and tea) are very significant economically for they together cover one fifth of the net cultivated area of the state and contribute one third to state GDP of agriculture origin. They are also ecologically important as they are grown on the most ecologically sensitive foothills and slopes of the Western Ghats. Yet Government of Kerala in its development perceptions of the State's agriculture have not given adequate attention to this important sub sector of agriculture. State Plans do not incorporate development of plantation crops. Historically this development is mandated to the Commodity Boards administered by the GOI. The departments or agencies of the State (Agriculture or Kerala Agricultural University) are neither mandated nor professionally equipped to handle the development of these crops. Hence these crops suffer from at best benign neglect. Conventionally and legally the growing of these crops is treated as an industry, although the growers include several small and marginal farmers. Given the large-scale operation, monocropping, and huge initial capital investment, wage labour employment and historic evolution from the colonial period, their management is more akin to industry than seasonal agriculture. They are also exempted from land ceiling law while other crops including coconut, pepper, cashew nut and arecanut, though are considered plantation crops, and are subjected to land ceiling laws. The only institution in the state concerned with plantation crops is the Plantation Labour Relations Committee under the Minister for Labour as the concern of the state on plantation crops is only labour welfare associated with its production, processing and trade.

2. On a number policy issues, apart from the present crisis with which this sector is undergoing, even the sustainable development of this sub sector is at stake due to lack of investment, environment destruction, inappropriate land use, employment, including infrastructure development. Further, in the context of the reforms many development and marketing functions performed by the Commodity Boards are being slowly dismantled leaving a vacuum. Considering the vital interest of the state in this sector, a system to monitor the concerns of the sustainable development of plantation crops, not only production and competitiveness, but also ecological, land use, taxation, international trade and other related issues, needs to be put in place and be institutionalised. The Department of Agriculture could be mandated to provide extension and development support, the Kerala Agricultural University on research and technology and at the government level a cell in the Secretariat or State Planning Board for policy and long term planning. As plantation crops are the most sensitive to WTO regime, the proposed Standing Committee is bound to get involved with plantation concerns. It would be appropriate if the monitoring of the plantation crop sub sector is also included in the mandate of the Standing Committee.

1.4.4 Mitigative Measures

1.4.4.1 Mitigating Distress

1. The Commission had recommended in its first interim report that the State should seek the assistance of the Government of India for initiating a **Food for Wage and Employment Stabilisation in Plantation Crops** programme under GOI's 'Sampoorn Gramin Rozgar Yojana'. Under such a programme, part of the wage will be paid in the form of rice to labour in plantations facing severe economic stress, to avoid retrenchment and closure. We are happy that the GOK has already taken steps in this direction.
2. Another immediate step is tax and excise duty exemptions to reduce the loss being incurred by plantations and farm families. Again, this is an area where we are pleased that the Government had already taken action.

1.4.4.2 Ensuring Fair Share of Consumers' Price and Well-being of Farmers

1. The Commission recognises that the bottom line for the well being of the farming family and Kerala's economy is marketability of produce at fair price. One possible support measure to mitigate the hardships arising from the price collapse is to design and put in position instruments and organisations that ensure farmers and growers get a fair share of consumers price

2. There are two outstanding success stories of recent times (correspond to the crisis period consequent to the fall in prices during last 3-4 years) in Kerala, wherein farmers' initiatives have succeeded in ensuring a fair share of the consumers' Rupee. The Cooperative Society of the Coconut Farmers at Thiruvambaaty, Kozhikode District through direct participation in marketing, processing and utilisation of by-products have managed to maintain the price level prevailed before the price crash. The network of Rubber Producers Societies have similarly through direct marketing, processing of latex

and engaging in export have succeeded in bringing better income to the member growers.

3. Another success story of group effort is the case of the Kerala Horticultural Development Project (KHDP), an EEC supported initiative for the promotion of vegetable production, which turned out to be a sustainable livelihood security opportunity for the resource-poor agricultural labour and marginal farmers. The participants are organised into autonomous self-managed groups in selected potential areas for vegetable production, and these groups were given timely and appropriate technical advice, easily accessible timely and cheap credit, assured quality input supply and support for infrastructure in marketing of produce, all as an integrated package. The most important factor for success has been fostering group action and ensuring full involvement of the participants in management in return for identifiable, visible and measurable increased income.

4. The state also have had nearly a quarter century of experience in group approach for increasing the production of major crops, especially paddy, coconut and pepper. Unfortunately, many of these institutions stopped functioning and the rest are languishing since the government support was withdrawn. Focusing largely on production but almost neglecting other dimensions such as processing and marketing without appropriate technological interventions, promotion of group action, such as integrated pest management and water management, systematic promotion of self-help, total involvement of the member participants in management could be attributed to as some of the reasons for the failure of these initiatives as the instruments of creating self employment and enhancing income, including a larger recovery of the market price.

5. The Commission recommends the acceptance of group action and initiatives as an integral part of the agricultural development strategy by learning from the successes with the experiences of the KHDP, Rubber Producers Societies, the isolated but successful experience of the Thiuruvambaaty and Perambra cooperative societies and failures of the group farming societies including marketing societies such as the KERAFED. The institutions, which have demonstrated exemplary performance, have succeeded in commanding member participation. Such activity-centered small organisations through networking can serve as an alternative to the present trading system. The experience of these organisations is to be evaluated and determined efforts should be made to bring the farmers and growers in the network of autonomous producer associations. Ensuring full participation, granting autonomy and ownership, and providing tactical resource support especially for infrastructure might provide a way forward.

1.4.4.3 Continue Support for Export of Plantation Crop Products

One of the major reasons for the unprecedented decline in price of Kerala's farm commodities such as rubber, coconut, etc. is the increased supply arising from production accumulated over time, which again is accentuated by imports under liberalised trade (a bitter consequence of removal of QRs). In the short run, it is not possible either to cut back on production or raise internal demand substantially. One temporary and quick yielding possible measure is to export these commodities by supporting the export efforts through compensating the differential between the internal and external (export) prices (similar to the wheat export model). Central support for

transport assistance announced in the 2002-03 budget and institutionalised in the 2002-07 EXIM Policy (a WTO compatible measure) should be extended to cover all crops including plantation crops and assistance extended to handling and packaging.

1.4.4 Long Term Measures

In the long run, Kerala's farm commodities have to be competitive both in the domestic market (in which other states are competing in commodities such as coconut, cardamom, coffee and tea) and international market (black pepper, cardamom, cashew and marine products) for achieving sustainable farm trade security and farm based economy. Competitiveness has to be acquired both price-wise and quality-wise. Price-wise competitiveness obviously depends upon the productivity per unit of land and cost-effectiveness through the efficient and economic use of resources, material and man power. Qualitative improvement is pervasive from production (free from residues of insecticide/fungicide/herbicide/fertiliser), harvesting, handling, and processing, including drying and all other post harvest operations, packaging and marketing, in and out. Apart from awareness creation, and capacity building at producer-processor-trader levels, institutions and infrastructure including communication system, storage, certification and monitoring, port handling, etc and systems and incentive mechanisms for rewarding quality maintenance should be put in place.

1.4.4.1 Massive Rehabilitation and Replanting Programme for Tree Crops

1. Reference has already been made that nearly four fifths of the cultivated land in Kerala is put under perennial crops which principally include coconut, rubber, cashew black pepper, cardamom, coffee and tea). Substantial proportion of the tree stand is over-aged and even crossed the productive phase. (The situation varies from crop to crop, possibly one quarter to one third of coconut, one third to one half of pepper, tea and coffee, one half to two thirds of cashew). It is only in rubber systematic replanting is done at a 30-year cycle, thanks to the replanting subsidy and other incentives granted to growers). Secondly, significant areas are endemically disease infected needing urgent replanting. One quarter of the area under coconut (mostly in the districts of Pathanamthitta, Aalappuzha, Kottayam and Ernakulam districts) is afflicted with root wilt disease. Similarly one fifth to one quarter of the area under pepper (in the highlands of Idukki and Wayanad districts) is getting devastated with quick wilt. Vast majority of the plantings under these crops (except rubber) are of traditional non-descript varieties of low productivity. Inter-planting in coconut gardens is unsystematic and haphazard resulting in wasteful use and under-utilisation of land. Pepper is predominantly an inter-crop among other crops (coconut) and miscellaneous trees. All these contribute to low productivity per unit area. In the long run productivity increases in the perennial crops of Kerala can primarily arise from replanting with high productive and disease tolerant varieties after replacing the unproductive and diseased trees/plants and optimal use of the land.

2. A massive programme for completing systematic replanting and rehabilitation of the perennial (tree) croplands in Kerala within a period 15 to 25 years has to be launched. The programme should be confined to the targeted crops but extend to

utilising the full production potential of the land devoted to these crops, by utilising the land intensively with systematic intercropping with other compatible crops, integrating activities other than cropping, especially livestock rearing and conservation measures to protect the land from soil and water erosion, water harvesting for augmenting moisture supply and irrigation, wherever slopes and water sources permit In addition to production, local value addition should be integral part of the package. The aim is not only to increase income from enhanced productivity of the targeted crops but also to link production to on-farm or off-farm value, processing and product conversion with prescribed quality.

3. The resources required for such a programme can primarily be mobilised through institutional financing and pooling the various development programmes both under the state government and the Central government. Support extended under the watershed management programme could be pooled to support soil and water conservation measures. Food aid programme is another support source, which could be used to defray the loss while removing the old and diseased trees and to overcome the income deprivation during the gestation period. It is well recognised that the banking system in Kerala has a low credit: deposit ratio and one of the reasons attributed is the lack of viable projects. A massive programme for replanting and rehabilitation could be one of the most viable opportunities for the utilisation of institutional finance and for re-founding a competitive, sustainable and dynamic agricultural production system in Kerala.

1.4.4.2 Kisan Credit Cards

Easy access to timely and adequate credit is another means by which production can be increased by enabling the acquisition of necessary production inputs. Given the multiplicity of crops and land-use (integrating crops and livestock into the system), production activities in the farms are spread almost through out the year. So is income generation. Kerala's farming is more like small business enterprises, where expenditure incurred and incomes generated are spread out, saving initial gestation period in plantation crops. The generally practiced crop credit system of one or two time disbursement is inadequate to meet the credit needs (not only in quantum but timeliness and easy access) of Kerala's farms. Kisan credit card system is a most suitable credit mechanism for ensuring farmer-friendly credit access. Quite a few banks in the state have already introduced the system. With the extensive banking system in place (every panchayath in the state is covered by more than one bank, both commercial and cooperative), it should not be difficult to provide adequate reach. The widespread initiative in fostering group action and inducting the support of the extensive dispersal of extension networks together should enable the banking system to reduce the transaction cost of servicing farm credit in Kerala. The farmer groups, the banking system and the government should come into a consortium in providing the credit input for a productive and sustainable farming in Kerala.

1.4.4.3 Crop Insurance

Being dominated by perennial crops and endowed with relatively high rainfall, Kerala's agriculture is less vulnerable to production instabilities. But production loss is significant largely due to disease/pest incidence. So also income loss is substantial due to price fluctuations and quality deterioration because of the greater involvement in external trade. At present crop loss is compensated through a miniscule crop insurance programme run by the state government. The National Crop Insurance Scheme (NCIS) does not cover the speciality crops of Kerala. One of the reasons often quoted for this omission by the NCIS is the lack of adequate baseline yield data across sufficiently long period. It is a vicious circle. Without investment data cannot be generated. While critical use is not made out of data generated, efforts are not mounted to collect the data. Crop insurance is a critical relief measure to reduce the inherent risks in Kerala's farming. The Government of India should be persuaded to expand the coverage to include crops largely grown in Kerala. The state government should make special investment in data generation to satisfy the requirement of the national crop insurance programme. Instead of frittering away the limited resources in pursuing the state sponsored insurance programme, which in any way reaches only a miniscule of the agricultural production, it will be more prudent to invest the limited resources in creating the necessary conditions for attracting the NCIS coverage on plantation crops. Only a national insurance programme will have the capability and wherewithal to reach out the state across all major crops.

1.4.5 Market Access

1.4.5.1 Barriers to Trade: Tariff as well as and Non-tariff

Both tariff and non-tariff barriers seriously limit access to the markets of industrialized countries. While tariff barriers will be subject to some discipline, non-tariff barriers especially the sanitary and phytosanitary measures for these measures are not only set to high levels by the importing developed countries, but also applied arbitrarily on the commodities from the developing countries. More frequently the high SPM set by some of the developed countries are far beyond the rationally admissible health requirements and hence outside the scope of developing countries to meet them. How ever, SPM has become a legally admissible non-trade barrier from the point of developing countries.

1.4.5.2 Market Access Concerns to Kerala

Market access concerns of Kerala are not only limited to the international markets but also extended to the Indian markets in respect of competing with agricultural raw materials from other countries under the *de minimis* import stipulation of the AoA and possible flow of commodities under liberalised trade. In order to overcome the disabilities arising from Market Access provisions under AoA, appropriate negotiated changes have to be brought in the implementation of AoA apart from appropriate governmental policies and programmes at national and state levels.

1.4.6 Tariffication

1.4.6.1 Tariffication Code and EXIM policies of the Government of India

1. In the short run, measures need to be taken to overcome the trade disabilities arising from the removal of QR and obligatory imports (*de minimis*). The implementation of WTO provisions has necessitated a need for restructuring of Kerala's agriculture. As nearly 80% of the land is put under perennial/tree crops, adjustment period required is longer and also demands high investment support. In order to readjust and reallocate resources and thereby ensure a level-playing field, Kerala's farmers need a breather anywhere between 5-10 years along with additional investment support. During this period, the safeguards provided under WTA in terms of imposition of tariff and such other measures should be invoked and made use of. This will give farmers reasonable time to acquire the necessary trade capabilities. Resources can get reallocated to enhance competitiveness.

2. The negotiations preceding the final Uruguay Round had not considered the wide changes occurring in the tariff rates. Low tariff rates for palm oil and soybean oil which have an adverse impact on coconut oil, and in turn the price of copra and coconuts is the case in point. By accepting the maximum bound tariff rate at 45% for soybean oil, it has become impossible to levy a higher rate for palm oil, which itself is competing with coconut oil. Any increase in the tariff rate of palm oil alone would not help coconut oil trade, but would only cause a switch over from palm oil to soybean oil.

3. Also affecting Kerala's economy are the low bound rates and applied tariff rates for rubber (40% and 25%, respectively). Measures are to be taken at the national as well as WTO levels to develop a Tariffication Code, based on principles of equity and the livelihood security of small farm families. This is also connected to re-categorisation of rubber as an agricultural commodity.

1.4.6.2 Re-categorisation of Agricultural Commodities/Crops

1. Protection in the short run is provided through tariff on imports. The mechanism of bound rates established by WTO is used in imposing tariffs on imports by the member nations. Special protection is granted against the import of agricultural commodities by imposing tariff rates, which are relatively set at higher levels than on industrial raw materials. So categorisation of farm produces as agricultural produce or industrial produce/raw materials has critical relevance in using this permitted tariffication device to regulate domestic market and protect the domestic producers.

2. This classification in the case of rubber has created anomalous situation after the establishment of WTO. As natural rubber had been classified as processed product and being treated as industrial raw material, the maximum permissible tariff rate on this (the bound rate) 40 per cent. However, other farm produces classified as agricultural produce, although some of them may serve as industrial raw material as is the case of cotton or sugarcane, the bound tariff rate in India is 100 percent. This classification of commodities done by the Government of India during early GATT days warrants re-classification in the context of agricultural trade coming under WTO. Other similar cases are coir and jute. This has encouraged import of rubber, coir and jute when the differences between domestic price and international price cross certain limits. Such

imports have rendered hundreds of thousands of people in the coastal of Kerala, most of them belonging to BPL and depending on employment connected to coir production, lose their only means of livelihood security. These human and economic problems of huge dimension can be solved in the short term, by re-classification of rubber and coir as agricultural products.

3. India is getting another opportunity to correct this anomaly. The Doha Ministerial Conference, which was expected to take up such issues, has postponed this consideration for another year. The third phase of the AoA (March 2002-March 2003) is on and the next review meeting by the Ministerial Conference is scheduled for at Cancun. The Commission urges the governments in the States and Centre to initiate steps to get reckoned all agricultural commodities used as raw materials for industry such as jute, rubber, coir etc. as agricultural. commodities on par with cotton. A very large number of small and marginal farmers are dependent upon these commodities for their livelihood and the present classification is unfavourable to them is an additional ground for this reclassification.

Short and Medium Term

1.4.7 Domestic Support Measures

A range of measures on the trade and domestic production-support fronts need to be designed to offer income support to cultivators, especially the small and marginal. Such measures are needed not only as price relief and stabilisation measures, but also as measures designed to support and increase production. This package of measures must include the following:

- Statutory MSP to be extended to field and plantation crops in Kerala. As has been recommended for the continuation of the MSP-based system of procurement of food grains by the Food Corporation of India by the High Level Committee on a Long Term Grain Policy for India headed by Prof Abhijit Sen, there is need for similar WTO compatible measures to safeguard the livelihood of small and marginal plantation crop farmers, during periods of non-remunerative market price.

- With respect to trade, there is scope to use variable tariffs to protect cultivators against sharp fluctuation in international prices and import surges. Similar measure has also been recommended in respect of food grains by the Abhijit Sen Committee.

- Re-imposing QRs is to be pursued in AoA negotiations within the framework of a Livelihood Security Box. Indeed, there is an argument that direct import control measures, like QR's on agricultural products, is pursuable by the developing countries under the existing framework of AoA in relation to food security and rural development.

- Introduction of a range of policy measures intended to improve production, which may contribute towards a sustainable income generation by farmers. These could include crop insurance, a range of imaginative rural credit services,

new forms of providing agricultural extension services, facilities for marketing, storage and processing, and encouraging post-harvest processing, value addition and marketing cooperatives.

- Expert multi-disciplinary policy oriented research must be initiated on (a) the various forms of domestic support that are required to provide continuous buoyancy to Kerala's agriculture and agricultural trade, (b) the compatibility of such measures with WTO stipulations, and (c) crafting negotiating strategies which will strengthen national capability at periodic WTO negotiations.

1.4.7.1 Direct Support to Production: Special Case for Kerala's Agriculture

1. The largest quantum of domestic support extended to the farm sector in this country consists of subsidy on non-product specific inputs, especially fertilisers, farm energy, irrigation water, etc. The commodity specific support is fixation of MSP and governmental procurement at MSP. Both these supports are trade distorting and fall in the Amber box. While support on fertiliser and commodity procurement at MSP is largely borne by the Central Government, the support on farm energy, irrigation water, etc. is borne by the respective state governments.

2. There are some inherent weaknesses in the existing disbursal of domestic support to agriculture in the form of fertiliser subsidy and procurement price. They both accentuate inter-regional disparities. Although fertiliser subsidy is not commodity specific, the ability to avail this support is influenced by other factors, such as irrigability, crop choices (for instance major cereals or cash crops), etc. Rainfed areas, non-food grain or non-cash crop producing regions in the country are restricted from making gain from this kind of support.

3. Procurement price support being commodity specific, this support goes to those areas where these commodities are produced with marketable surplus. Here again, irrigated states like Punjab and Haryana and parts of Uttar Pradesh (Western) and Andhra Pradesh (Coastal districts) make larger gains. Further even in these regions or states procurement price benefits only those who have marketable surplus while those who are subsistent farmers are not benefited although cost of production remains the same for all sections of the farming community (in contrast, input subsidy offers comparatively better equity). In Kerala, given its landscape, constraints are built-in to limit food grain cultivation in only less than one fifth of the land, which is relatively level. Here the fertiliser intake is low, largely due to low fertiliser use efficiency (due to poor water control). Hence Kerala's inherent limitations in benefiting from the support extended through fertiliser subsidy. As there is hardly any surplus in the cereal crop, which is rice, the state is unable to avail the benefit from MSP on grains as well. The only other commodity, which is brought under the price support, is coconut in the form of copra procurement under MSP, which is AoA non-compatible. In short, crops grown on four-fifths of the arable land (rubber, coconut, black pepper, cashew, cardamom, coffee and tea) in the state are not able to avail any or substantial part of the domestic support extended by the Central Government.

4. While continuance of domestic support for agriculture by the Central Government is imperative, there is need for restructuring the support system to ensure

equity among all regions and states in the country; within the regions/states, and different socio-economic groups among the farming communities. Since Kerala's agriculture (not only that of Kerala but of many regions and states which are inherently constrained because of the resource endowments such as the mountainous/hilly states of the Sub-Himalayan region, north eastern states, states with large extents of rainfed areas in the country) is inherently incapable of absorbing the present form of domestic support, it needs restructuring to suit to the specific production pattern of state's agriculture (for that matter for similarly resource constrained areas).

5. Kerala's specific problem is the replanting and rehabilitation of a significant proportion of its perennial tree crops, which need major support. Apart from long term capital investment required, farmers participating in the massive replanting and rehabilitating programme need support to tide over the interim non-producing gestation period, varying from 5-10 years, and to compensate the loss of production due to removal of income yielding through less productive over-aged or diseased trees. There is a strong case for Kerala for this support, which needs to be pursued. The changing perceptions on support to agriculture in this country are persuasive enough to put a claim on such specific assistance required.

6. Historically support to agriculture was confined to infrastructure development such as public irrigation utilising surface water. Later support was extended to utilisation of ground water through tube-well irrigation under both public and private. Support to private land was extended to soil conservation in rainfed areas. In recent times further public support is extended to activities of land development other than soil conservation on private lands under the National Watershed Management programme, as well as the Waste Land Management Programme. The inherent principle is to extend support to agriculture through resource development, land as well as water, for improving the livelihood security of the farmers. The support to be sought for development of land under perennial crops is only another form of support for ensuring livelihood security for the dependent population whose only means of survival is growing perennial tree crops, which their limited land is capable of.

1.4.8 Quality improvement

1.4.8.1 Improving the Competitiveness in Cost and Quality

1. The strategy in overcoming the challenges of Market Access under AoA (for both competing with imports within the country and exports to other competing countries) proposed in the long run is to make products and commodities of Kerala competitive, both in price and quality. Competitiveness in price is achieved by reducing the cost of production which in turn by adopting cost effective production methods (not by improving productivity at <u>any</u> cost but at <u>a</u> cost that is competitive) by improving the efficiency of inputs such as material inputs, labour, management maintaining low inventory and infrastructure including credit.

2. Cost effectiveness has much to do as productivity enhancement in improving competitiveness. Long-term competitiveness can be brought by relevant and appropriate technologies especially for augmenting input efficiency. For generating production technologies additional investment is required. The present investment in technology generation has to be substantially improved while rationalizing research and

technology programmes with focus as much on cost-effectiveness as on productivity increases.

3. Certification facilities (ISO 9002, ISO 14002 etc) are to be developed. Extension education on the need for hygienic production, support for marketing systems where differential pricing is introduced to reward quality production, support for infrastructure such as copra driers.

4. Investment support has to come for higher TSR levels in rubber, organic impurities in pepper, aflotoxin in coconut oil cakes, and such other quality aspects in the commodities, which have export potential. Similar attempts are called for in the case of animal products especially beef and marine products. Certification capability and facilities are to be developed. The experience of the MPEDA in bringing about quality and phytosanitary measures at the cost of the industry itself is an emulatable model.

1.4.8.2 Facing the Challenge of Quality Standards

The Commission recognises the urgent need for quality improvement both in the interest of domestic consumption and export. At the same time, the Commission also feels that setting of unrealistic standards in respect of agricultural commodities and marine products must be countered by effective participation in standard setting exercises of *Codex alimentarius,* IPPC, etc. Capacity building of technical personnel by Government of India and ensuring their participation in standard setting exercises in the multilateral bodies require immediate attention. The plant quarantine infrastructure of Government of India must be made more effective and stringent in enforcement along with comprehensive quality standards set for import of each commodity. Government of India should extend generous assistance to upgrade the existing quality grading and certification laboratories in the States to internationally acceptable evaluation standards and to establish new state-of-the-art quality laboratories with competence to provide internationally acceptable quality certification.

1.4.8.3 Incentives and Investments to Match Quality Improvement

Just by reciting quality as a 'mantra' would not be helpful. The past efforts (exhortation on quality improvement as in pepper for instance and rubber yet another one) have not succeeded in bringing about significant changes in quality of products sold by farmers. Because, in the market there is no premium (in the retail market especially where farmers take their produce for first disposal) for superior quality. The price offered is average. The only exception is fluid milk (even illiterate dairy farmers are quality conscious, at least with respect to fat content). Further, the quality specifications are subjective and arbitrary (colour for instance in rubber, moisture in pepper and ginger, oil content in coconut unlike fat content in milk not easily measurable). Often such standards are used arbitrarily to depress the price eligible to farmers. Unless concurrent mechanisms are put in place for rewarding quality production in terms of price, measurable specifications and market channels, education alone may not bring about the desired quality improvement. Government and institutional support (Commodity Boards, etc.) be extended in making infrastructure to facilitate disposal of quality products. In the initial stages, generous support by way of production subsidy and subsidised infrastructure, compensation for losses incurred, etc., should be extended to

institutions undertaking marketing that rewards quality such as offering differential pricing to reward quality.

1.4.8.4 Value Addition

India's export share of spices is 55 per cent in terms of volume, which earns only 10 per cent of the trade value. Countries, such as Guatemala are just the opposite, because they export 99 per cent of production at lower prices. The emphasis should be both on volume and value, the latter improved through value addition. This will have spin off to farmers to augment their income from the same farm holding. Value addition is one of the key approaches for increasing the competitiveness

1.4.8.5 Agri-Export Zones

Kerala has already developed with support form the European Commission six Agricultural Wholesale Markets with excellent infrastructure. The success of these zones will depend upon the effectiveness of the backward (producers) and forward (consumers) linkages put in place. In order to develop these zones quickly, an over-all management agency, characterised by vision, efficiency and low transaction cost, needs to be established immediately. Also, **strategic alliances** will have to be struck with appropriate public and private sector agencies for ensuring the economic success of these zones. The National Dairy Development Board can help to develop one Agri-Export Zone, as partner. Hindustan Lever and the National Horticulture Development Board could be considered for association with two other Zones. The overall management could be entrusted, if considered appropriate, to a revitalised, reorganised and re-tooled State Small Farmers' Agri-business Consortium Society (SFAC). The Agri-Clinics and Agribusiness Centre programme of NABARD, Central SFAC and MANAGE could be taken advantage of for the purpose of attracting young entrepreneurs in the Agri-Export Zones. To discuss such issues and finalise the launching of the Zones, it is recommended that a one-day brainstorming session may be held soon, involving all the stakeholders. It would be beneficial to involve bilateral agencies, like the Netherlands Government.

1.4.9 Marketing

1.5.9.1 Supply Management the Key to Ensure Farmers' Income

1. The Commission recognises exploitation of the farmers by middlemen engaged in the market through various factors, which significantly cut into income of the farmers. While recognising this factor in depressing the income legitimately accrued to the farmers, the Commission consider it necessary to bring in some correctives in the generally prevailing perception on identifying and the role played by middlemen/ middle women (this is significant in retailing), especially given the nature of the agricultural commodities (coconut, rubber, pepper, coffee, tea, and cardamom)

generally covered in this exercise and the marketing system got established over time for these commodities.

Firstly the marketing system is fairly well established with traders specialised in each of these commodities and not as 'mandi' for other crops and rest of the country.

Secondly the chain consists of traders/processors at the primary level (several with in a village/panchayath), traders/commission agents at wholesale/secondary market and commission agents at the terminal market who are not many and supply the commodities to the manufacturers if it is industrial raw material (coconut, rubber) and to exporters if export commodities (pepper, ginger, coffee, tea etc). The price is determined by the manufactures and exporters (depending upon the international market), who are very a few (that is significant factor in controlling the commodity physically and the price financially) operators in the terminal market. Further these commodities are ultimately channelised and centralised at limited locations, unlike foodgrains or other consumable commodities, which are dispersed in storage. Hence they exercise control (though not physically) over the trading of the commodities and hence the price. As far as the price is concerned, it is given to the actors down the line (the wholesalers, retailer and ultimately the farmers) rather than those actors dictating any decisive role. Some work done in pepper has shown that the price movements at all points in the chain run in parallel with the terminal market prices rather than fluctuations within. It is at this terminal market, therefore, interventions are required. By and large this network is extensive and hence relatively easily and quickly accessible, on account of the. extensive road network in Kerala. Hence, however, small quantity the produce it may be, it can be disposed of.

Thirdly, price variation for a given commodity is more pronounced between different periods rather than between markets (of the same level such as, primary and secondary) for the same period (day/week/month).

Fourthly, most of these commodities have comparatively longer shelf life so that these are less vulnerable to distress sale.

Fifthly there is some intermediate processing involved and some actors in the chain contribute in terms of value addition (very significantly conversion of copra from raw coconuts, coffee berry to beans, tea leaves for example).

Sixthly the farmers in the state are well versed with market information through the media (especially of the print media) and lack of information on market situation is not an exploitative deterrent as is made out to be. (The problem is basically that the inability to move the commodities from one market to another even if the price offered is better. An exception is with respect to marine products. Boat owners are able to move from one landing to another depending upon the price quotations, so long as they are on the seas. But once landed on the shore they are as captive as the farmers).

1.4.9.2 Supply Management through Participatory Buffer Stocking

Given these characteristics of the markets, the generally prevailing perception is that the primary traders and processors are the exploiters and manipulators. However, corrective measures (most commonly elimination) taken at this level have not yielded resounding success. The services rendered by the intermediaries in value addition, such as transport and semi-processing, are ignored and efforts in replacing them have only resulted in greater loss. Further, those engaged in marketing and processing at the primary level are economically not much better of than the farmers (not referring to the small and marginal). The real problem (of price manipulation) lies with actors at the terminal markets (raw material dealers or exporters). Their decisions are in turn depend upon the supply of commodities (internal production and imports). The critical factor in determining the price is the demand supply balance and interventions required to maintain the price level. They include supply management through buffer stocking and/or import/export regulations. Production controls have very little role (unless long term) in supply management as the crops are perennial and acreage adjustments are not possible in the short run. What is possible is reduction in production through regulating inputs and cultural management inputs (reduced number of interculturing, weeding, tapping, etc.). But such measures will entail more time for recovery resulting in loss in future. Given these peculiar characteristics inherent in the commodities and the marketing system, the Commission proposes to examine the possibility of a feasible supply management system so that the flow into the market is moderated (regulated) so that undue price fluctuations are avoided. Holding the stock for these commodities are feasible because of the longer shelf life (from six months and upwards). By building a network of warehousing at the levels of farmer associations, cooperative societies (primary and marketing), public warehousing corporations, together it should be possible to hold critical quantum of supply. But all these would be successful only if there is an understanding between the farmers, primary traders/processors, manufacturers/exporters and the government operating as a mediator that price stability is in the best interests of all concerned. The interests of all concerned need to be harmonised through mutual appreciation of each ones roles and contributions. The experience in holding paddy prices at reasonable levels in Kuttanad and Palakkad is illustrative of what farmers' organisations along with critical intervention (announcement of price support) by the government could do to ensure reasonable price during harvest even though the government hold only a small quantity of the harvested produce.

1.4.9.3 Regulation of Public Markets for Ensuring Transparency in Transactions

Prima facea, the establishment of institution of farmers' markets established in Tamil Nadu (uzhawar chanthai), Karnataka (raithu market) and Andhra Pradesh (raithu bazaar) are unlikely to totally prevent the exploitation of farmers by middlemen/middle women. For other crops such as vegetables and fruits, which farmers grow, such markets might be helpful. The problem with marketing of the commodities (vegetables, fruits, etc.) is not the lack market facilities as all such markets are owned (not managed) by people's own institutions (panchayaths and municipalities), but it is the inability of these institutions to enforce good management practices and regulations already on the statute.

1.4.9.4 Commodity Market and Commodity Exchange

There is need to amend the Forward Contracts (Regulation) Act of 1952, since it was enacted under conditions of serious food shortages. Our commodity markets, both physical and futures, need review. It will also be to the advantage of the farmers of India, if the Central and State Governments agree on an **Indian Common Market**, and remove all barriers relating to inter-state movement of farm commodities. This must be done after a consultation process amongst state governments, as interstate taxes are revenue-earning measures levied by states in the Indian federal system. The Indian Common Market catering to a population of over a billion will serve as a buffer against violent price fluctuations arising from disturbances in the overseas markets.

1.4.10 Compensating Loss from Price Fall and Price Stabilisation Fund

Another intervention is the creation of a price stabilisation fund or alternatively a mechanism for compensation of loss arising from price fall for these commodities. Although the Commission does not have full information, some initiative launched by the Government of India needs to be commended and the State Government should actively campaign and make its own contribution.

1.4.11 Export Promotion

Two sets of issues are arising as a consequence of the implementation of the WTO regime in this country. Those problems facing exporters and those arising from import of agricultural commodities, but both are be seen the separately.

1.4.11.1 Strengths and Weaknesses of Kerala in Exports

1. One of the major strengths of Kerala's agriculture is its long tradition of export, which has bequeathed a chain of institutions and networks for collection and transport, from the farm to the port through itinerary merchants, and retail traders at the villages, wholesale traders at the thaluk and district towns and commission agents and exporters at the ports. The orientation of the farmers to sale of commodities for export, access to market information, the external links established over generation are all assets, and survived the vicissitudes of time.

2. Though the system is resilient, it is inadequate to meet the challenges posed by the WTO regime especially international competition from emerging competitors (new players such as Viet Nam in black pepper and Guatemala in cardamom). Secondly the traditional methods of production, storage and processing are increasingly short of international quality requirements. Third weakness is that most of the products exported are without value addition. Fourth the system is not geared to capitalise on the opportunities offered through opening up new markets as sequel to the market access provisions of AoA. All these can be overcome through concerted and determined efforts.

3. Unlike many other competing countries which themselves are mostly developing nations like India, the state does not have a cost advantage in the products in which Kerala is competing, arising from low wages, because the wages prevailing in Kerala are relatively high. More and more low cost countries such as Vietnam are entering as competitors in this field. Kerala may not be able to maintain its competitiveness through low wages, but only through higher productivity, which many of these newly emerging competitors have already achieved. Determined efforts are needed to achieve cost-effective productivity increases such as launching a massive systematic replanting with highly productive (which are indeed available) planting materials and adoption of management practices for the tree crops has already been elaborated earlier.

4. In order to maintain its advantage in the globalised environment, Kerala has to resort to product differentiation through labelling, creation of brand equity, etc. Kerala has enormous opportunity in the production of organic foods with eco-label, which has a ready market in developed countries. For realising this market, surveys are to be conducted in developed countries where Kerala's products are already in demand. Internationally recognized certification and labelling agencies may have to be created, to step up exports of environment friendly organic products. The certification criteria will have to be reviewed by setting up a special task force and periodically updated.

5. Though small at present, the developing countries, especially those in Africa offer opportunities for the traditional export commodities of Kerala. These opportunities are to be harnessed.

1.4.11.2 Preventing Misuse of Import for Re-export

A major threat to the internal price and the primacy of Indian exports in the not so long run is the imports for re-export with value addition, apart from imports under the obligations under AoA. While in principle such imports are desirable, this provision is being abused in the case of coffee and tea, much to the detriment to the interests of the Indian producers and the country at large. It is reported that low quality materials (tea for instance) are imported from competing countries and re-exported with nominal value addition to our traditional markets by making use of the loophole in the law that does not stipulate any minimum addition of value should be provided to prevent the misuse/abuse of the provision of allowing imports of agricultural commodities for re-export in order to earn foreign exchange through value addition. It should be ensured that value addition is significant, at least to the extent of import duty. Misuse at least in a few instances, has resulted in the loss of image of Indian products due to import and

re-export of low quality products. Further, such re-exports cut into Indian share of the market, which has serious economic backlash especially in the case of surplus in products such as tea and coffee, which the Indian producers are struggling to dispose off. As such loss of markets in turn compels reduction in production and employment in the country. There is also need to specify the authorities, who are empowered to issue certificates of origin of materials. The Commerce Ministry should study this issue carefully in consultation with the Commodity Boards. While importing at least the quality standards prescribed under the Food Adulteration Act should be insisted upon if there is no superior standards prescribed in the statute.

1.4.11.3 Data on Imports

Information and data on imports should be posted regularly in the websites of the Ministries of Foreign Trade and Commerce, so that proactive action can be taken to ensure a balance between demand and supply. Lack of access to reliable information and near absence of wider consultation in the various stages of GATT Round of negotiations have been primarily responsible for the poorly informed debate and emotional out bursts on the whole issue of India's entry into WTO and subsequent implementation of the AoA. The situation got retrieved to some extent around the Doha Ministerial Conference. This should be an object lesson of the imperative need for informed debate and taking people into confidence on so vital issue, such as the entry into WTO, the implications of which are pervasive.

1.4.12 Establishment of a Virtual University for Agricultural Trade

1. One consequence of trade liberalisation is that farming is becoming highly knowledge and information intensive. Enhancing trade competitiveness is a must. Hence, there is need for a continuous updating of the information available to farmers and planters on all issues relating to domestic and global trade. Information will have to be provided on quality related regulations such as sanitary and phytosanitary measures and *codex alimentarius* standards. Quality, trade and patent literacy will have to become widespread. **Such a knowledge and information empowerment programme in farm trade should reach every farm family in Kerala and should include the excluded, in respect of information empowerment**.

2. We suggest for this purpose **the establishment of a Virtual University for Agricultural Trade as a 21st century institution, drawing strength from the ongoing Information and Communication Technology revolution in Kerala**. A computer-aided and Internet connected Virtual University can be established on a hub and spokes model. The hub can be located at an appropriate location like KAU, with the spokes being located in every district. The hub and spokes can be linked to Television Channels and Community Radio, so that relevant information reaches every farm household every morning.

3. The effectiveness of the Virtual University for Agricultural Trade will depend upon the quality and timeliness of the dynamic (i.e., time and location specific) and generic information provided to the stakeholders. The KAU has prepared a draft plan for the proposed Virtual University, which is, appended in Part II of this Report. It would be useful to convene a Brainstorming Workshop with the participation of **data**

generators and providers (like ISRO, IMD, KAU, APEDA, NDDB, NHDB, Commodity Boards, Ministries of Agriculture, Commerce and Foreign Trade of GOI, ICAR, CSIR etc.), **data seekers** (farm families, planters exporters, women's' groups, traders, etc), **information managers** (ICT specialists, media representatives, extension specialists, etc), **policy makers** (concerned secretaries to Government and Vice-Chairman, State Planning Commission) and **representatives of UNDP** and other potential funding agencies. A Business Plan may be finalised at this workshop. It will be appropriate to get the Virtual University for Agricultural Trade inaugurated by the Hon'ble Chief Minister on January 26, 2003, since sooner steps are taken for the knowledge and information empowerment of producers, traders, exporters and consumers, the speedier can be the founding of an effective Trade Security System to the state.

1.4.13 Sanitary and Phytosanitary Measures

1.4.13.1 Quality Literacy Movement

The GOI should participate actively in the process of determining a just and fair **International Standards for Phytosanitary Measures**. Otherwise, the standards may come in the way of our exports. In addition, the following steps are needed urgently.

- Strengthen post-harvest infrastructure.
- Improve the sanitary conditions under which food is processed and milch and meat animals are reared.
- Strengthen the capacity of State Government Institutions in relation to quarantine measures, sanitary and phytosanitary measures and *codex alimentarius* standards of food safety.
- Launch a **Quality Literacy Movement**, and train at least 2 men and 2 women members of every Gram Panchayat as **Quality Managers**.

1.4.13.2 *Codex Alimentarius* Standards

Factors relating to FAO *Codex Alimentarius* standards of food safety, that inhibit market access can be overcome only by strengthening post-harvest technology and sanitary and phytosanitary measures. Infrastructure for Sanitary and Phytosanitary Measures and *Codex Alimentarius* Standards needs urgent strengthening.

1.4.13.3 Prevention of Unconscious Introduction of Pests and Diseases and Invasive Alien Species

Numerous new pathogens, pests and weeds are coming into the country as a result of mass imports of pulses, oil seeds, poultry products and other agricultural commodities. The National Bureau of Plant Genetics Resources (NBPGR) of ICAR at New Delhi has sounded an alarm about the threat, which such invasive alien species pose to our agriculture. The poultry industry is also threatened with new diseases through imported poultry products, as had happened in the case of the prawn industry in Andhra Pradesh. There is need for urgent vigilance and action to prevent the unconscious introduction of such serious threats to our agriculture.

1.4.13.4 Disease-free Zones of Livestock for Export

Creation of disease-free zones for livestock production can improve the market access for livestock products. The programme of the Department of Animal Husbandry deserves to be supported. Support has to be extended for modernisation abattoirs and slaughterhouses.

1.4.14 IPR and Biodiversity

1.4.14.1 Indigenous Knowledge and Trade Related Intellectual Property Rights (TRIPS) and Biodiversity

Along with the concerns associated with WTA such as domestic support export subsidy, phytosanitary measures, the provision on Trade Related Intellectual Property Rights (TRIPs) reiterates the need for urgent measures to make gains from possible geographical indications of our commodities and from the rich biodiversity with the help of relevant domestic legislations. The ongoing negotiations in the TRIPs Council are expected to harmonise IPR with basic principles of CBD on access to biodiversity and indigenous people's knowledge, equity and benefit sharing. It is notable, in this context, that the Indian legislations, PPVFR Act and the Biological Diversity Bill have provision for equity and benefit sharing. Particular attention should be given to tribal wisdom and knowledge system and the IPR associated with this has to be recognised, protected and rewarded.

1.4.14.2 Protection of Plant Varieties and Farmers' Rights Act and the Biodiversity Act

1. The Biodiversity Board established in Kerala should undertake an intensive programme of **Genetic Literacy**, in order to acquaint primary conservers on their rights relating to recognition and reward from the provisions of the Plant Variety Protection and Farmers' Rights Act, as well as the provisions relating to prior informed consent and benefit sharing provided under the Biological Diversity Bill (passed by the Lok Sabha and Rajya Sabha). It would be useful to promote a cadre of "**Barefoot Legal Advisors**" to help to spread such Genetic Literacy among the tribal and rural families engaged in the conservation and enhancement of agro-biodiversity. This will help to avoid biopiracy and promote symbiotic biopartnerships.

2. Kerala is endowed with rich biodiversity and has rich medicinal plant resources. People in the state have inherited thousands years of knowledge in Ayurveda and traditions in herbal medicines. The new IPR regime offers opportunities as well as threats in profiting from the rich biodiversity and patenting biological products. What is

urgently needed is documentation and research on finding the active principles. A sense of urgency is needed on the part of the government in mobilising state's scientific resources, liberal funding and vigorous effort in promoting patent literacy. Urgent steps should be launched to take advantage of the provisions to secure benefits from the National Gene Fund to be set up under the PPVFR Act. Vigilant measures are necessary to protect IPRs of the indigenous people.

3. Government of India is the signatory of International Treaty dealing with genetic resources, plant varieties, intellectual property rights, etc. It is imperative that the implications of these agreements with reference to agriculture policies and their impact on agriculture sector need to be understood by the State Governments, as the day to day administration of agriculture is under the domain of the state. Towards this end Government of India should establish a mechanism of consultation and interaction with States and put in place also familiarisation programmes for State agricultural officers on the legal and technical issues involved. The ICAR may also regularly update the State agricultural universities on these agreements and upgrade their capacity to advise the State Governments on these matters.

1.4.14.3 Geographical Indications

Eligibility under Geographical Indications based on certain specific quality, reputation or other characteristics including appearance of the commodity or goods, which are due exclusively or essentially to the described three geographical elements namely geographical environment, biological factors and production factors. These specific qualities and characteristics are clearly definable or merely describable. For instance, it is generally perceived that the Malabar pepper, the Cochin ginger, Alleppey Finger turmeric and Tellicherry Extra Green Bold (TEGB) cardamom have high market reputation. This reputation in each of these produces could be attributed to certain tangible and intangible characteristics. The tangible characteristics have to be elaborately defined with the help of data base, figures, photographs, etc. depending on whether the characteristics involve shape, size, colour and appearance, test weight, content and composition of chemical factors determining the intrinsic quality valued in the market parlour. The TRIPs regime and the national legislation on Geographical Indications empower the state in getting protection to these valuable, which are known for centuries with geographical appellations attributing to their origin in Kerala. Urgent measures are to be taken to identify geographical indication of products of Kerala to protect them under IPR. Apart from pepper and cardamom, Kerala can claim more commodities for securing their GI for trade leverage in accordance with Geographical Indications of Goods (Registration and Protection) Act of 1999.

1.4.15 Regional and Domestic Strategies

1.4.15.1 Understanding between India and Developing Nations of Asia

Competition from developing nations in South Asia and South East Asia and a few African nations are emerging in many crops on which Kerala's farm economy is depending. India's rubber has to compete with that of Thailand, Indonesia and

Malaysia, coconut with Philippines and Sri Lanka, Tea with Sri Lanka, cardamom with Guatemala. black pepper with Viet Nam, etc. Competition is among developing nations in the neighbourhood to acquire the market share. The beneficiaries are the developed countries. Hence it is desirable and necessary to forge unity with these competing nations and develop understanding to the benefit of all.

1.4.15.2 Consultation with States

Agriculture is a State subject under Constitution of India. The brunt of the implications (adverse impact on the livelihood security, income erosion, etc.) of the decisions of the Central Government has to be borne by the state governments (not only the consequent political unrest but the financial/resource loss/liability as well). Therefore, there should be adequate prior consultations (continuous) on such vital actions such as the accession to WTO and signing of the Agreement on Agriculture before decisions are taken. More over such consultations could be of considerable benefit to the Central government as the State governments are better aware and informed of the ground realities. Kerala's agricultural wealth is based on trade, since most of the farm commodities produced in the State are for trade within or outside the country. Kerala's experience with global trade is hence particularly relevant to the formulation of the national policy.

1.4.15.3 Compensatory Mechanisms for Protecting Livelihood Security

Even though the commodities that Kerala produces are the mainstay of the agricultural economy of the state; in the national context they are of not much significance to the economy of the country. Hence when decisions are taken on the import and export of commodities to fulfil bilateral or multilateral obligations, concerns of states, not only of Kerala, but some other states as well, are not generally seen adequately taken care of (in case of jute- West Bengal, soybean- Madhya Pradesh, for instance). Many a decisions of this kind taken in the national interest, (import of copra from Sri Lanka under SAARC, import of palm oil under a rail project deal with Indonesia, etc.) has had adverse impact on the economy especially on the livelihood security of the dependent population. The suffering that has resulted from the signing the treaty is often due to lack of in-depth preparation apart from even consultation with states, which may be adversely affected by such diplomatic decisions. Therefore, when such decisions are taken prior consultations should be held with the concerned states. Concurrently a compensatory mechanism has to be built-in and bargained for to mitigate the hardships of the affected population groups. Considering the unique crops and circumstance under which they are grown, special protection for Kerala’s agriculture need to be given in order to maintain the livelihood security of those who are severely affected by the implementation of provisions in WTA

1.4.15.4 Consultation among the Interested Groups of States

Kerala, Karnataka and Tamil Nadu on, coconut, tea and coffee; Kerala and Tamil Nadu on rubber etc. compete with each other in the national market. Many concerns are common, for instance, the control of mite infestation in coconut, procurement of copra,

etc. Common approaches to common concerns are necessary. The meetings of the South Zone Council could be an ideal forum for such consultations.

1.4.15.5 Harmonising the Interests of Various Stakeholders

Farmers, manufacturers and the government are to forge a consensus to generate a win-win situation to all stakeholders. There should be a realisation that there is strong mutual dependence between the farmers and the manufacturers/exporters. Farmers are to produce raw materials to sustain the industry. Manufacturers are to buy the commodities and thereby provide a demand for the produce. A sustainable market is as important to farmers as an assured source of raw material for the manufacturers/exporters. If the commodity price is depressed beyond a limit farmers would be compelled to grow alternate crops and uncertainties would set in the supply of raw materials, which would put the industry in jeopardy. Farmers would lose the market demand if prices go abnormally high, as the manufacturers would find difficult to run the factory. The loss of market for rubber in the foam mattress industry to polypropylene foam and the loss of market for coconut oil in the soap industry to other vegetable oils are lessons to be learned. It should also be remembered that import of agricultural commodities also means import of unemployment and loss of income to the nation. Forging understanding between various interest groups before negotiating international treaties, such as the AoA and WTO is very critical in keeping up nation's interest ahead.

1.4.16 Areas of Priority Concern in Relation to Research and Infrastructure Development

The potential high growth areas for Kerala, associated with agriculture and biodiversity, deserving special attention are the herbal medicine and ayurveda and tourism linked to health (ayurveda), spirituality (like Sabarimala, Guruvayoor, Malayattoor, Cheramaan Mosque at Kotungalloor) and nature (game sanctuaries, sea resorts etc.). In addition, there is scope for promoting eco-tourism like "Holidays on the Farm" "Green Travel" in plantation and Kuttanad areas, where nature offers picturesque landscapes and biodiversity. This may provide urban youth opportunity for experiencing farm operations, farm life and fresh environment. Some of the steps needed to promote these are described below.

1.4.17 Herbal Medicine and Ayurveda

1.4.17.1 Genetic Resources Conservation and Sustainable Use

A priority step relates to the strengthening of *in situ* and *ex situ* conservation of medicinal plants and the establishment of Seed Banks for these plants, which are in demand for commercial use. Due to direct collection from their native habitats, many medicinal plants move to the Red Data Books of the Botanical Survey of India, indicating that they are threatened with extinction. The cultivation of plants in demand in the Ayurveda system of medicine by tribal and rural families on contract with appropriate pharmaceutical companies will help to foster organised sourcing of raw material. This will also help to strengthen the livelihoods of tribal and rural families and standardised raw material for medicinal use. The cultivation of medicinal plants for

which there is a market, based on assured buy back arrangements, and could be an important component of Kerala Governments' programmes for tribal families.

1.4.17.2 Maintaining the Purity and Authenticity of Ayurveda

Steps will have to be taken to promote quality control and certification in the case of Ayurvedic medicines. Research will be needed for the validation of claims and for ensuring that the claims printed on marketing labels are rooted on scientific data. Medicinal rices like *Njavara* can be marketed abroad, if verifiable characteristics are discerned and listed on the label. If there is an effective certification agency, a suitable brand name can be given, as for example "Herbal Cures from God's own Country".

1.4.17.3 Growers' Associations

In order to give the power of scale to small growers of medicinal plants, Medicinal Plants Growers' Associations, each covering about 100 ha, could be formed on the model of self-help groups. Capacity building in the areas of cultivation and marketing will have to be organised. Such growers' associations can enter to a Memorandum of Understanding with companies with regard to sourcing of raw material for drugs. Herbal estates could also be promoted for bringing about an end-to-end approach in relation to medicinal plants and herbal medicine.

1.4.17.4 Herbal Sanctuaries

Areas rich in medicinal plants can be developed into **Herbal Sanctuaries**, so that this unique biological wealth can be safeguarded and conserved for posterity.

1.4.17.5 Herbal Biovalley

It would be desirable to develop the region extending from the Silent Valley Biosphere Reserve up to Wayanad as an **Herbal Biovalley**, on the model of the Silicon Valley for computer software. The Herbal Biovalley will provide the biological software essential for a dynamic medicinal plant industry. The infrastructure necessary for seed multiplication including tissue culture facilities, establishment of nurseries of elite material, validation and certification and producer-oriented marketing and other centralised facilities to facilitate efficient decentralised production, will have to be provided in the Herbal Biovalley. We suggest that GOK may constitute a Project Design Team consisting of experts from Kerala and representative of the Central Medicinal Plants Board, and Bioresources Board, as well as NABARD and APEDA to prepare a Business Plan for **the world's first Herbal Biovalley**. Kerala's goal should be the marketing of herbal medicine worth US $ 5 billion per year by 2010.

1.4.18 Tourism

Kerala's unique advantages in tourism are well known. It is the only State in the country capable of launching a dynamic programme of home and global tourism, which caters to the needs of health, spirituality and eco-tourism. The infrastructure and service standards in all these areas need enforcement or strengthening. Specialist groups can be set up in these three areas of tourism to draw up detailed Business Plans.

Again the aim should be to earn at least US $ 5 billion per year by 2010 from home and global tourism.

1.4.19 Organic Farming

The Union Minister for Agriculture, Shri Ajit Singh, recently announced the decision of the Government of India to set up a National Institute for Organic Agriculture, which will have the authority to undertake certification of organic products. Kerala is a national leader in the production and marketing of organic spices, tea, pineapple, banana, medicinal plants and other farm commodities. It also proposes to undertake the production of organic rubber specially for the manufacture of condoms for use in the fight against the dreadful HIV / AIDS menace. Therefore, Kerala is an ideal location for the proposed National Institute for Organic Agriculture and the associated certification agency.

About 200 hectares of land ideal for the location of this Institute are available with the Kerala Agriculture University at Thiruvazankunnu, Palakkad district. It is requested that the Hon.Chief Minister and the Hon. Agriculture Minister may write immediately to Shri, Ajit Singh, and Union Agriculture Minister, offering land and other facilities in Kerala for the proposed Institute. This will help to strengthen the organic farming movement in Kerala and help farmers to produce health foods and value-added farm products for internal and international consumption.

1.4.20 Clean Energy Sources

Drying the harvested crop presents great problems in plantation crops like coffee, pepper, etc, with the result mycotoxins develop due to high moisture content. Considering the acute shortage of energy especially in the plantation sector for preparing products, especially through drying enabling to improve quality to meet international standards, a large programme of renewable energy has to be mounted. We recommend that the Government of Kerala may prepare a project for financial support from the Climate Convention Fund, operated by the Global Environment Facility for introducing on a large scale solar energy devices in drying plantation crops like tea, coffee, pepper, etc. The Ministry of Non- Conventional Energy Sources (MNES) should launch a dynamic programme for setting up community drying centres using solar energy. This will help small producers to get the harvested crop dried properly

1.4.21 Enlarging Exports of Marine Products

The following steps are urgently needed:

- Enhance the quality of domestically consumed fish and launch a quality awareness campaign among fishers, traders and consumers.
- Undertake a multi-stakeholder study of the current subsidies prevailing in the fishery sector, so that support, which is non-actionable under the SCM agreement, can be provided for fostering sustainable resource rejuvenation and management programmes.
- Create an updated database that can help in taking well-informed decisions.
- Initiate **aquarian reforms** that will restrict the rights to own fishing vessels only to those who actually fish.

- Undertake measures for environmental protection and sustainable management.
- Retrain the Fisheries Department staff in eco-fisheries and **low external input sustainable aquaculture.**

1.4.22 The Role of the Media

The media has a special responsibility in reporting on the WTO and its impact, and in putting this information in the public domain. This is particularly so in a state where newspaper readership and media consumption are so widespread, and the media already so highly sensitised to the livelihood concerns. Unique to this Commission, which would normally be expected to represent government/private concerns, is its recognition of the media as a critical agency that is a part of the strategy to meet the challenges that WTO-regulated trade regime. Some of the measures which could make for a productive media-government engagement include:

- The setting up of a WTO Media Cell, which could perform/coordinate more than one task. It could handle regular media contacts plus perform the role of a clearing-house of information pertaining to the WTO and Kerala. The Virtual University and concerned departments and ministries could feed information to the cell, which could be made available to interested media through regular information briefs, and which can also be put on a web-site.
- For the general media, the Media Cell must put out briefs, hold regular briefings in different parts of the state, make officers and specialists available for comment and/or interviews. In a state with such innovative and evolved channels of communication, the Cell could use a variety of techniques to inform writers and journalists across a range of publications.
- Over the long term, the Media Cell could also help to build and train a core group of specialist WTO writers. This would help the development of strong and informed writing on WTO related issues and their global, national and regional dimensions.
- Documentation of publications on the WTO, including books, journals, newspaper reports, magazines, etc.

1.5 Crops/Commodities

1.5.1 Coconut

1.5.1.1 The Crisis and Dimension

The crisis is characterised by steep fall in price of coconut and drastic decline in production resulting from the coconut mite infestation. The fall in prices was from about Rs.500 per hundred nuts during 98-99 to less than Rs. 300 by the mid-2000, which largely continues to persist. The primary cause of this price crash started with steep decline in coconut oil prices, which dropped from the ruling prices between Rs. 5387 and Rs.5588 per quintal during 1997-99 to Rs. 3251 in 2001 [see Table 1]. The decline in production (in quality rather than in number) was largely caused by the widespread infestation with Eriophyd mite during 1998. This loss in production coupled

with loss in price created a crisis of unprecedented proportion to the coconut economy of the state and to the farmers largely depending on it for their livelihood. The human dimension of the crisis, directly affected the livelihood of nearly one million of the farm households, representing almost 20 per cent of total farm holdings of the state, and indirectly another two lakhs households, who solely dependent on the processing coir, a by-product of coconut, for their livelihood. While majority of the coconut farmers affected are small and marginal owning less than one half to one hectare of coconut gardens, the affected workers in the coir sector largely belonged to the BPL group.

1.5.1.2 The Oil Market Connectivity

Nearly 60 per cent of the coconut produced in the state is consumed at household level and the rest goes to oil extraction. Again a good percentage of the oil is consumed as the primary cooking oil. It is estimated that around 14-15 per cent of the oil produced in the country is used by the soap and toiletry industries. Yet, it appears, the shot on the prices of coconut oil is being called by this industry. Thus, the farm prices of coconut are depended on the supply-demand situation of vegetable oil in the country and edible oil prices. The cardinal elements of this supply-demand relationship are the domestic production of vegetable oil, quantity of annually imported oil and the market off take. Over the years, production of coconut oil has been increasing while substitute oils have also been systematically making inroads into the national vegetable oil market. Here, the relative cost differences of different vegetable oils of various origin come into play and determine the periodic market preference. Continuous availability of alternate oil at low prices diverts long time users of coconut oil to such low cost oils. This virtually erodes the pre-eminence and indispensability of coconut oil in industrial sector, which was once considered to be depended on coconut oil. The case in point is the entry of palm oil and soya oil in the national market and the role of liberalised import of these oils to the disadvantage of domestically produced vegetable oils. In this competition, it is obvious that among the domestically produced oils, the one, which is the least dear in cost, shall bear the brunt, unless such high cost is linked with a unique quality indispensable to the industry.

During the last decade, coconut production in the country registered 35 per cent increase and that of coconut oil by 60 per cent, from 2.81 to 4.49 lakh tons. This increase in Kerala was over 26 per cent for nuts, although the share of the state to national production declined from 47 per cent to 42 per cent. This increase in production with increased availability of cheap alternate oils shifted the preference of industry away from coconut oil. In the absence of alternate demand creation, the slump was set in. While, there is a continuing national deficit in domestic vegetable oil production, the singular policy, which largely contributed to the price fall, is the import policy on edible oil and the committed low tariff line on soya oil. To what extent this price crash was encouraged by this policy is evident from the following import trend since 1995-96 (please note the coincidence with the establishment of WTO). While there is a justification for the import of vegetable oil to augment the domestic production, the level of import allowed seriously affected the domestic production sector, causing concern to the livelihood of thousands of farmers, who traditionally cultivate the oil-producing crops. Here again, while farmers growing annual oil seed crops have chance to move to alternate crops, the perennial oil seed crop farmers, like the coconut farmer, are forced into an economic trap.

During 1995-98, the average annual import of edible vegetable oil (predominantly palm oil and soya and sunflower oil to lesser extent) was about 1.2 million tonnes. This was increased to 2.4 m tonnes during 1998-99 and 3.05 m tonnes during 2000-01. During 2000-01, palm oil accounted for 72% of the imported edible/vegetable oil. This escalation in import by the Government of India and traders under the QR-less free trade regime, abetted with a low tariff rate, illustrates the high vulnerability of domestic agricultural production system, at variable degrees and the associated dangers to the livelihood of the depended population when the WTO regime becomes fully operational on domestic agriculture and agricultural commodity trade changes to the anticipated low or no tariff rate.

1.5.1.3 Strategy Proposed

The only immediate strategy to make coconut production to promote sustainable livelihood for the producers is appropriate intervention in the coconut oil market by regulating the import to maintain remunerative price to the domestic producers. The medium and long-term strategy should be management of production to bring down cost of production, where the government policies can play critical role.

1.5.1.4 Recommendations

Short term measures

1. **Regulating tariff rates:** Regulation of import under a trade regime without QR can be achieved only through periodic adjustment in tariff rates. Under the AoA commitment, tariff on edible oils could be increased upto 300 per cent. However, when the bound peak tariff rate of soyabean oil is at 45 per cent, there is little prudence in increasing the tariff rate on palm oil above 45 per cent. The current tariff rate on 'Edible grade crude palm oil and its fractions' is only 15 per cent. This has to be raised to a rate at or below 45 per cent, so that the tariff rise shall benefit the domestically produced vegetable oils rather than the soyabean oil being imported. This readjustment in tariff is the only immediate way out to solve the coconut farmers from their distress.

Long term measures

The long-term measures can have a two fold approach; first, increase the demand for coconut oil and second encourage by-product diversification to expand the demand for coconuts. Increase in demand may be possible by promotion as edible oil and popularising healthcare advantages in using coconut oil in the toiletry industry. There are several avenues to diversify the use of coconut as listed out subsequently.

2. **Promotion of coconut oil as edible oil:** National demand for edible vegetable oil is increasing at high rates with domestic production not able to cope with. The contribution of coconut is less than 4% of the oil seed production. Coconut oil is used as edible oil only in Kerala. It is not popular outside Kerala on palatability and health considerations. Palatability issue can be addressed through refinement, provided this process is cost effective. The dogma that coconut oil promotes cholesterol concentration is being challenged by modern research. On the contrary favourable properties, including bactericidal properties are being detected by research. Hence, there is scope to promote its use as edible oil through continuous campaign by the Coconut Development Board and the Kerala Government as part of development process. This has to be matched with appropriate measures to reduce the cost vis-à-vis that of other edible oils.

3. **Diversification to products with massive use potential:** Diversification strategy rests on the contention that commercial market of coconut built largely around oil is the major cause for decline in price and remunerative income to producers. Hence, diversification means, uses other than for oil extraction. A number of coconut-based products, traditional and non-traditional include coir, toddy, desiccated coconut, coconut milk, coconut cream, coconut honey, Nata-de-coco, sweet toddy (neera), jaggery from neera, soft drink, coconut water concentrate, coconut jelly, vinegar from coconut water, activated charcoal from coconut shell and handicrafts. Although technologies for these uses are developed, their cost-effectiveness at commercial scale is not evaluated. It is rational to examine these large varieties of uses and to identify commercially viable ones and to promote them. Here again, the rock bottom line price of raw material becomes critical for the commercial viability, as much as the potential

size of market. All possible support, institutional, infrastructure, organisational, and financial may be extended to initiatives in ventures and enterprises on diversification, particularly by farmer groups. Creation of a single window system for promoting such ventures could act as a catalyst.

4. **Promotion of sweet toddy as a health drink and jaggery making:** Sweet toddy may command massive demand potential and it is a health drink. Production of jaggery appears promising on consideration that a coconut palm has capacity to produce about 50-75 kg of jaggery a year, which is equivalent to 10-15 tonnes/ha/year (200 trees). The limitation is the availability of manual labour for tapping, which is a skilled operation, and the existing legal restrictions. Like in Karnataka, Kerala should lift all restrictions on tapping coconut by farmers for promoting diversification to sweet toddy and jaggery products.

5. **Promotion of coconut oil as edible oil:** The safety and taste of tender coconut water as a nutritional soft drink are widely recognised. This demand is on the increase. The hitch is in packaging, transporting to urban markets and supplying as fresh from the tree. The Government may actively pursue the market potential from this use with the help of big players in the soft drink market, who have the resources and marketing expertise, especially in creating a marketing strategy without undue competition with other soft drinks. Innovations may be required to reduce the transportation cost and to maintain palm-fresh quality.

6. **Coconut oil as lubricants in two-stroke engines:** Recently claims have been made that auto-rickshaws are being run with an admixture of petrol and coconut oil, the latter as a substitute for lubricant oil, in two stroke engines. This lead is worth pursuing on commercial scale, if the claim is substantial on technical grounds. This, if

proved successful, may create additional demand for oil from a lucrative sector, in and outside Kerala. It is recommended that the Agricultural Engineering faculty of the Kerala Agricultural University or other competent research group be requested to undertake validation of this claim in all aspects, including efficiency, wear and tear and cost-effectiveness. Adequate and specific support from the Government of Kerala or the Coconut Development Board is imperative for this research.

7. **Massive programme for replanting and rehabilitation (Integrated Coconut Development projects):** This aspect has been discussed elsewhere under Kerala-specific recommendation in this report. Productivity of coconut gardens in Kerala is less than one half of Tamil Nadu and even below the national average, despite Kerala being endowed with high rainfall and other favourable conditions for coconut cultivation. The poor management, the debilitating root(wilt) disease, the more recent Eriophyd mite infestation and the extension of cultivation to agronomically less suitable areas, such as upper slopes and hill tops are the major reasons for the low productivity. One quarter to one third of the tree stand is over aged. A massive programme to systematically replace old and low yielding palms with pedigreed planting material during a period of 15-20 years is recommended. Such a programme should also aim to optimally utilise the land for maximisation of income per unit land with scientific inter-cropping and mixed farming. This can be linked with the integration of production, processing and marketing, as components of maximisation of income to the farmers.

8. **Continuation of minimum support price and copra procurement by NAFED:** As long as unrestricted oil import is continued and market price of coconut oil is less than the production cost, the minimum support price and procurement through NAFED has to be continued. The procurement can be made more participative by a system comparable to the rice procurement, milling and marketing in Andhra Pradesh.

9. **Price stabilisation fund:** Recently the Government of India have announced a price stabilisation mechanism for the plantation crops. The possibility of extending the scheme to coconut cultivation has to be explored. There is high commonality among all plantation crops in their management by agronomic practices (all are perennial tree crops), and vulnerability to internal and external markets and consequent high fluctuation in price regimes. It is a misnomer to consider that all plantation crops are under large estates. Many small and marginal farmers grow these crops in regions where these crops are common in the State. The division of plantation crops including

coconut for administrative purpose by the Government of India across its different Ministries also create discrepancies in policies governing this crop sector. There is need to correct all these maladies of the past in a regime of liberalisation and globalisation, with a view that the domestic agriculture, whatever be the sub sector, does not suffer and the livelihood of the farmer is not threatened. In this context policies like price stabilisation has to be applied with a dynamic and appropriately differential concept without discrimination.

1.5.2 Black Pepper

1.5.2.0 Pepper in Kerala

Black pepper (hence forth just pepper only) is Kerala's advantage crop. Traditionally it is an export crop. Kerala accounts for 98 percent of the area and production of pepper in the country. Karnataka is the other state, which produces pepper. In 2000-01 pepper was cultivated on nearly 200,000 hectares of land, from which nearly 47500 tonnes of pepper was produced. Pepper is predominantly a small farmer crop and grown all over the state, especially in the foothills of the Western Ghat and the laterite midland belt. Idukki district with one third of the area, Wayanad with a quarter and Kannur with one tenth, are leading pepper-producing districts in the state. The productivity of pepper is highest in the Idukki and Wayanad districts with about 400 kg per hectare, which is two thirds higher than the state average yield 240 kg. The relatively higher yield in these two districts is attributed to larger holdings, and also to the cropping system evolved with pepper as the principal crop.

India is the largest producer of pepper in the world accounting for a little over one third (34%) and Indonesia is the close second with 28% (during 1989-98). Other major producers are Brazil, Malaysia and Viet Nam. India' productivity per hectare is the lowest among the competing nations (322 kg) while that of Malaysia is 7 times higher (2124 kg) and Vietnam three times (1085 kg).

India with 32000 tonnes of average annual export (ranging from 19000-47000 tonnes during the last decade) continues to be a significant exporter of pepper. During the 10 years between 1991 and 2000, exports exceeded 47000 tonnes in 1993 and 1999 and touched the low of 19000 tonnes in 1991 and 1992. Of course fluctuation in export of this kind, is true of other major pepper exporting nations in Asia, Indonesia and Malaysia. But in case of Brazil exports declined steadily from 50000 tonnes in 1991 to 20000 tonnes in 1999 while that of Vietnam steadily increased from 15000 tonnes in 1993 to 36000 tonnes in 2000.

1.5.2.1 Price fall

Pepper experienced the largest fall in prices, both in proportion and magnitude, during the second half of the nineties along with other agricultural commodities grown in Kerala. During 1991 and 1993 pepper prices hovered around Rs. 50 per kg. Since then it moved upwards to touch Rs. 106 in 1995, jumped to Rs. 191 in 1997 and peaked the all time high of Rs. 251 in 1999. Since then price fell to Rs. 86 in 2001, further to Rs. 70 in the early months of 2000, and remaining at around Rs. 80 with

fluctuations. The implications of the fall in pepper prices is far more pervasive though next only to coconut, as it is one of the most widespread crop grown in the farms of Kerala and is well integrated with several cropping systems.

The domestic price movement of pepper is in sympathy with the international prices, as predominantly pepper is an export-dependent crop. Two thirds to three quarters of the pepper produced in India is exported. The proportion is much higher, around 95% in Malaysia, Vietnam and Brazil and 75% in Indonesia. World prices of pepper doubled during 1996 to 1997 from US$ 1.14 to US$ 2.02 per lb. It steadily increased to US$ 2.53 in 1999 and since then started declining to US$ 2.32 and downward slide continued since then. The international price is supply dependent. Decline in production of pepper in Brazil and Indonesia is attributed mainly for the spurt in price experienced during 1997-1999.

1.5.2.2 Implications of AoA

Pepper like other spices has been brought under the purview of AoA of the WTO. From April 2001 quantitative restrictions on the import of pepper has been removed. The bound rate for pepper is 108%. The applied rate is placed at 70% (as on 01.03.2002). Import to the extent of 3 percent of the domestic consumption would have to be permitted under the provisions of the AoA and hence import of pepper cannot be averted. Even otherwise also, pepper could be imported as a raw material for re-exports after value addition as in the oleoresin manufacturing, which in fact is taking place. Vietnam is developing into a competing player in the world market with its dramatic productivity increases since early nineties. With its significant advantage in productivity Vietnam could be a strong competitor in the domestic market itself apart from threatening India's position in the external market.

1.5.2.3 Challenges, opportunities and strategies

Strengths and weaknesses: Favourable climatic conditions especially the intense prolonged southeast monsoon (known as ***thiruvaathira njaattuvela***) is the traditionally acknowledged as the strength of Kerala for sustaining pepper cultivation for centuries in Kerala. Pepper is traditionally cultivated as part of an integral part of the farming systems and cropping patterns prevailing in various parts of the state, primarily making use of various kinds trees as props and standards. Pepper cultivation is therefore is widespread and extensive. However, increasingly pepper is becoming specialised and a principal crop in the cropping systems of the districts of Wayanad and Idukki, especially in the settler areas. The integrated status is strength as well as a weakness of pepper cultivation in Kerala. It is strength because it is cost-effective and weakness as the management of pepper is least attended if not neglected.

Cost-effective increase in productivity: Despite very favourable natural resource endowments the productivity of pepper in Kerala is one of the lowest among the competing pepper producing countries. Increasing productivity is the major challenge. The extensive experience of testing the technology package of technology for increasing productivity under on farm conditions, has amply demonstrated that at least doubling productivity from the present level of around 240 kg per hectare is possible and very cost-effective. The technology package is relatively inexpensive consisting

of high yielding and disease tolerant varieties appropriate to the agroclimatic endowments from a large collection of materials evolved, simple agronomic management practices and biological control of diseases.

Rejuvenation and replanting: It is reported that from two fifths to one half of the pepper vines in the pepper gardens of the state is in declining phase and needs urgent replanting, and rejuvenation. Another major concern is the incidence and spread of the devastating quick-wilt (Phytophthora foot rot) disease in areas where pepper has emerged as the principal crop in the cropping system, especially in the districts of Wayanad and Idukki.

Expansion of domestic market: Pepper is traditionally an export-oriented crop. Fortunes of those who are dependant on this commodity have always been therefore, tied to the vicissitudes of the international market for pepper. Over the years a strong domestic market is emerging. Since the early nineties domestic market has expressed an annual grown of 9-10 percent in demand for pepper. As it happened in the case of cardamom, expansion of domestic market will act as a cushion to absorb the shocks from international price fluctuations.

Quality improvement: The increasing quality consciousness and consequent rigorous insistence on phytosanitary stipulations especially pesticide residue, being a product ultimately destined to consumed directly as food, is a major threat to expanding the export markets for Indian pepper. Major consumers of the Indian pepper are the developed countries such as the USA (21%), Singapore (16%) Germany (8%) The Netherlands (5%) France (5%) Japan (3%), all countries practicing stringent food standards.

1.5.2.4 Strategy

Instability in pepper prices and the uncertainties arising from the increased threat of competition both in the external and internal markets, in the latter from imports as a consequence of India's entry into AoA, are the major constraints in converting the advantage Kerala has in pepper production for improving the livelihood security of the farmers for whom pepper is an integral part of the farming system. It is the instability in price that primarily dissuading pepper farmers from undertaking long term investment in rejuvenation and replacing old low productive plants with superior and productive clones, which is an imperative measure in building competitiveness for Kerala's pepper.

In the short run it may not be possible to protect pepper farmers from the fluctuations in price as this commodity is heavily dependent on external markets. As in case of any commodity for export, the market is centralisesd (in transactions and to some extent in the physical possession of the commodity) and controlled by a limited number of players. Further, being historically an export crop, the marketing system is well established. Hence market intervention by the state has its own limitations, as its institutions are not adequately equipped to intervene in the market strategically, more so in the terminal market.

However it is possible to face the challenges of competition both in the domestic market from imports and in the external market, by improving cost competitiveness by

increasing productivity through cost-effective technologies and practices. A two-pronged strategy is proposed. First taking advantage of pepper as part of the existing farming system, improve the productivity of the existing plants through rejuvenation. Second, in areas where pepper is the principal crop and the cropping system is centred around pepper, rehabilitate pepper gardens, which have been devastated by the quick-wilt of disease through replanting.

In the long run, stability in pepper prices could be brought about significantly by increasing pepper consumption in the domestic market as it happened in the case of cardamom. The expansion of the Indian economy and consequent increase in income provide the opportunity for promoting pepper consumption within the country.

World over increasingly processed extracts such as oleoresins are replacing unprocessed spices. Kerala is a pioneer in the country in oleoresin extraction from pepper. Such value addition can help increase the consumption, and income from pepper several fold.

Quality improvement of Indian pepper and adherence to phytosanitary stipulations would not only help promote Indian pepper but even necessary to stay on in the international market.

Cost-effective production or value addition through processing need not always result in benefits to the farmers in the existing marketing system with its monopsonic tendencies (limited number of players) because the interests of both are not necessarily co-terminus. Farmers' organisations could be encouraged and supported to enter decisively in the internal market by acquiring a strategic share of the internal market.

1.5.2.5 Recommendations

1. The initiatives and programmes proposed under the Pepper Technology Mission, which has taken a comprehensive look at the sustainable development of pepper in the state, be accelerated and put in operation immediately.

2. A systematic and targeted campaign with focus on revitalising and rejuvenating the existing low productive and over-aged pepper wines in the homesteads using a package of practices consisting of replanting with appropriate high yielding disease tolerant wines, fully making use of the trees and other live standards for increasing the pepper stand in the farms, agronomic management practices including regulation of shade of existing trees used as support, organic manure application and biocontrol of diseases. This initiative needs more than financial investment, a dynamic extension system and access to sufficient quality planting materials. The resources currently made available under local self-government institutions for agricultural development can be effectively mobilised in support of this programme.

3. Similarly a targeted and systematic log-term investment programme be launched for rehabilitating and replanting the disease affected pepper gardens in areas where pepper based cropping systems are practiced especially in the Wayanad and Idukki districts, mobilising resources from NABARD and such other long time financing institutions.

4. Support, especially institutional credit and incentives, be given to groups (especially women groups) and individuals in order to establish a net work of nurseries including tissue culture propagated ones, from where reliable quality planting materials could be accessed by the farmers to meet, rejuvenation and replanting needs of pepper gardens. The institutions under the Kerala Agricultural University and Indian Institute of Spices should be able to provide the necessary back up especially in supplying high quality parent materials for propagation.

5. The Kerala Agricultural University may develop a package of practices suited to different agroecological zones for rehabilitating pepper wines and pepper gardens taking a holistic view of the resource system that sustains pepper in such systems.

6. Programmes be initiated to promote consumption of pepper in the domestic market in order to help minimise instabilities in the price regime. Promotional efforts especially with focus on medicinal qualities can help expand the domestic market.

7. Farmers organisations be encouraged and supported for initiating value added ventures to enable them to secure a higher share of income from such ventures.

8. A campaign for quality improvement with appropriate institutional support to reward the quality production, at farm level be launched. The farmers and their groups engaged in quality pepper production should be encouraged and rewarded.

9. Opportunities for organic pepper production be explored. Projects are to be formulated on area basis. The experience of NGOs such as the Peemade Development Society could be profitably used.

10. The Malabar Pepper is attributed to be unique to Kerala. Immediate steps be taken to get the special qualities and characteristics identified and defined under geographic indicators to protect them under the new IPR regime.

1.5.3 Cashewnut

1.5.3.0 Cashewnut in Kerala's economy

Both in the cultivation of cashew and processing of cashewnut, Kerala is the pioneer in the country. Over decades the State has developed advantage in the processing industry in the form of skills in processing and knowledge on the external market for cashewnut exports, all are indeed invaluable assets. The processing industry provides livelihood security for over one-lakh workers (though only 32000 are registered workers for welfare) mainly in the southern districts especially in the Kollam district.

Country's net (less of import of raw cashew nuts) foreign exchange earning from processed cashewnut (including the shell liquid a by product of processing) ranged between Rs. 600 crores in 1996-97 to nearly Rs. 1400 crores in 1999-2000. Value addition is almost 100 percent. One major constraint in fully utilising the potential assets is the shortage of raw cashewnut for processing. Substantial quantities of raw nut are imported annually to meet the needs of the processing industry. During 1999-

00 and 2000-01, annual import of raw cashewnut into the country averaged 2.5 lakh tonnes valued at Rs. 1000 crores The corresponding figures for Kerala are about 1.5 lakh tonnes valued at over Rs. 500 crores.

Area put under cashew in the state is declining steadily from 1.2 lakh ha in 1990-91 to 0.9 ha in 2000-01. Concurrently production also declined from 1.03 to 0.62 lakh tonnes and productivity as well from 890 kg to 720 kg. However area under cashew has been increasing in the country from 5.32 to 6.86 lakh ha, production from 2.95 to 5.20 lakh tonnes and productivity 554 kg to 758 per hectare. Thus Kerala had to give away its lead enjoyed in the production of cashewnut. Since 1998-99 productivity of cashew in Kerala registered is lower than the national level. Most of the cashew holdings in Kerala are of small size. Cashew cultivation in Kerala is predominant in the northern districts. Kannur has the largest area of nearly 30%, followed by Kasaragod 24% and Malappuram 11%. Contribution of production is also from that part in the same order: Kannur 44%, Kasaragod 19% and Malappuram 8%. Kannur district has the highest productivity: 883 kg against the state average of 601 kg (1997-98).

1.5.3.1 Price movement

Cashew is only the crop other than cardamom, which has not been subjected to the general fall in the price of farm commodities in Kerala. In fact the price of cashewnut has been rising steadily from Rs. 11.55 per kg in 1990 and more than trebled to Rs.36.39 in 2000. The imported price of raw cashewnut ruled higher ranging from 26.83 in 96-97 to 40.93 in 1998-99. As the price of processed cashewnut (kernel) price is declining in the international market, it is likely the raw material prices would follow suit and domestic prices of raw cashewnut might decline. The kernel price declined from Rs. 265 a kilogram in 1999-00 to Rs. 230 in 2000-01, to Rs. 207 in April-July 2001 and further to Rs. 189 in April-July 2002.

1.5.3.2 WTO Implications

Even though a raw material used for processing, cashewnut has been brought under the purview of AoA of the WTO. From April 2001 quantitative restrictions on the import of cashewnut has been removed. The bound rate for cashew 108%. The applied rate is put at 70% (as on 01.03.2002). Import is inevitable since internal production (about 48000 tonnes) is less than one third of the Kerala's import (one fifth for the country) to meet the needs of the processing industry, which is a significant foreign exchange earner and source of employment. But imports of raw cashewnut need not necessarily adversely affect the domestic price as locally produced raw nut has a premium on account of its size and boldness. During the post Doha period, import of raw nuts into Kerala increased three times the local production. Still the domestic price has been on the increase till 2001 (Rs. 36 per kg), although since then the decline has set in. That slump in price is more attributable to the decline in kernel prices in the international market rather than to imports of raw nuts.

1.5.3.3 Challenges, opportunities and strategy

Time for a big push in chew development: The basic challenge facing cashew cultivation in the state is that of meeting the raw material needs of the processing industry. Notwithstanding the steady increase in the price of raw cashewnut (price increased three times since 1990) there is an all-round decline in cashew cultivation: in area, production and of late in productivity. Research institutions under the Kerala Agricultural University and the Indian Council of Agricultural Research have realised significant developments in technology, in terms of high yielding varieties (suited to a variety of agroclimatic conditions), agronomic management (especially the high density planting), and plant propagation. With profitable technology on the shelf and a price regime incentive enough to profitable returns, the economic environment is ripe enough for a big push in cashew production but for lack of long-term investment and focussed programme.

Strategic instrument for regional development: Cashew development in the context of Kerala has to be seen not just fulfilling the needs of the processing industry but as a strategic major instrument to trigger of agricultural development in the northern districts of Kasaragod, Kannur and Malappuram, which are relatively poorly endowed with natural resources. Even though these districts receive high rainfall (about 4000 mm) it is concentrated in 3-4 months leaving 6-7 months of prolonged dry period. The topography in these districts is undulating with alternating massive hills and narrow valleys. Landscape is that of extensive flat laterite formation with a thin over burden of gravely soil, which is inherently of low moisture holding capacity. In such harsh environment cashew is the most suitable crop to productively utilise the poor land resource endowment. That is why cashew cultivation is seen concentrated in these districts. Better-endowed lands within these districts are put under crops such as coconut, which require more congenial agronomic environment. A cashew-based agricultural development programme would make a substantial dent into the agricultural economy of these districts.

Quality improvement and environmental concerns: Quality improvement, especially adherence to SPS (sanitary phytosanitary) measures assumes great significance for the very survival of the processing industry as cashew kernel, the output of the processing industry, is directly consumed as food. Presence of pesticidal residue is of grave and sensitive concern. It is not only that the final product should be free from any harmful chemical residue or other materials, but also that the process through which the product is produced should be environment-friendly. Environmental concerns in the production process are under close scrutiny in the developed countries, which are the principal markets for Indian cashew kernels. Some times such controversies could also be used against the product as non-tariff barriers. It is in this context that the disturbing reports and the controversies that had arisen on the application of insecticides on cashew for pest control in the Kasaragod district has to be viewed and avoided, apart from the human dimension concerns. In fact, it is very vital for the sustenance of the cashew industry itself that such controversies are resolved convincingly and proactive steps are taken to forestall their recurrences. Determined efforts are called for to convince that cashewnut in the state is produced through environment-friendly processes. Good agricultural practices could be promoted through certification.

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Environment hygiene and health hazards of women workers: Another concern that could affect cashew kernel export is the preservation of hygienic conditions, and

attending to the health hazards to workers, a vast majority of whom are women. Hazards are associated with some aspects of cashewnut processing, such as breaking fried nuts and peeling, which are skill, demanding but vulnerable too. Again, poor hygiene conditions and the health hazards could be used against cashew exports in the future. The commendable tradition of labour welfare measures provided to the labour in the cashew industry should be seen as a positive measure for the long term sustainability of the cashew industry in the international cashew kernel market, and not as the burden inflicted on the processing industry. Among others, labour-friendly production practices could be used as a means for promoting Indian cashew, as products produced under labour-unfriendly processes are being discouraged by consumers in the sophisticated markets of the developed countries to which cashew kernel is targeted.

1.5.3.4 Strategy

A two-pronged strategy is proposed for increasing the production cashew in the state. First rejuvenate the existing cashew trees in the state and wherever necessary replace them with new high yielding varieties. Second in the cashew concentrated areas in the initiate a cashew centred area development programme encompassing the total development of the land resource endowment. In these areas the existing cashew trees are replanted with high yielding cashew varieties and cashew cultivation is extended wherever suitable land is available.

1.5.3.5 Recommendations

1. Time bound targeted programme for the rejuvenation of old cashew trees, with high yield varieties appropriate to the agroclimatic zone, be launched all over the state. For the cashew growing farms in the districts of Southern and Central Kerala early maturity should be a criterion as the dry period is short, and early incidence of pre monsoon showers result in poor quality nuts. Resources needed for the programme could be mobilised from the development plans of the local bodies and women's groups such as the Kudumbashree could be mobilised.

2. Systematic, time bound targeted cashew based area development programme for the rehabilitation and replanting of existing cashew garden and extension area to suitable lands in the Kannur, Kasaragod and Malappuram districts be formulated and implemented. This project could be taken as a developmental initiative for these districts with the inclusion of other crops also, rather than a project for cashew production promotion alone. High density planting, high yielding varieties, soil and moisture conservation, intercropping for the premature period, environment friendly pest control should become the integral technology package. Replanting could be done in such way as the existing trees be removed only after new plantings start bearing so that loss of income from removal of yielding trees can be minimised. Farmers be provided with technology support, access to planting materials and long term credit. Resources for investment could be pooled from NABARD, Commercial and Cooperative banks, development funds of the State and central governments (Cashew Development Council of the Ministry of Agriculture, GOI). If merged with area development then the resources available for Wasteland Development and Watershed Management could also be pooled.

3. The possibility of creating a cess fund for cashew development on the lines of in rubber cess, imposed on the raw material used (domestic and imported) may be explored. The cashew development is also meant as a support for the industry, which gains from value additions. The meagre support from government budgets is far inadequate to meet the developmental needs of cashew.

4. A network of nurseries for producing and making available high yielding planting material in support of the replanting effort be launched concurrently. Women's group such as the Kudumbashree could be involved by providing then with adequate training as was demonstrated successfully by the Kerala Agricultural University at its cashew research facility at Vellanikkara. The University should be able to provide the necessary back up including training and quality planting material for multiplication.

5. Not only out of the anxiety to sustain the cashewnut processing industry and its international market, but recognising the need for removing convincingly the environmental concerns associated with cashewnut production (for that matter production of any agricultural commodity), it is suggested that the Kerala Government may take steps to institute a permanent set-up such as the initiative of the Royal Society of London in commissioning a study on the side-effects of GM (genetically modified foods) which helped dispel public apprehensions. By doing so issues are resolved at the very beginning itself before swelling into a national controversy. For this initiative, the support of ICAR or other such institutions could be mobilised.

6. A programme be initiated to cover cashew cultivation through environment friendly pest and disease control measures, in order to demonstrate and assure the consumers that the products produced are safe. Support specifically for this could be sought from the industry that ultimately benefits the most.

7. Studies be undertaken on the nature and magnitude of the health hazards of women workers engaged in the cashew industry, in order to design appropriate remedial measures so that health related concerns should not lead to a barrier (non-trade) in promoting Indian cashew kernel in the sensitive international market.

1.5.4 Plantation Crops

1.5.4.1 Holistic comprehensive policy framework for the sustainable development of plantation crops

Plantation crops defined under Sec.2 (44) of the Kerala Land Reforms Act, 1963 (tea, coffee, rubber, cardamom, cocoa, or cinnamon) historically evolved under unique socio-political, economic and ecological conditions. Of these, the development and management of the first four are governed by Central Acts and agencies appointed (Commodity Boards) appointed under them. Over the past one-century of evolution and more so after independence, various interventions to meet the objectives of the development of these crops prevailing during those times have been attempted. Several legislative measures including the Kerala Land Reforms Act, Land Utilisation Act, and the latest (June 2000) in the series the Vesting and Management of Ecologically Fragile Lands although not directly enacted for the development of this

sub-sector of Agriculture have serious implications to the development of these crops. Similarly the various taxation measures both by the Centre with respect to income tax and excise duty and the State Government with agricultural income tax, sales/purchase tax, land tax etc. including the various taxes imposed by the local bodies are levied on this sector. Labour laws both under industrial and other domains, are applied for the welfare of the workers involved. The very roles expected to be played in the economy by the crops in this sub-sector have changed. Also considerable economic, social and demographic changes have occurred in the area in which these crops are grown. Finally with the WTO regime coming into being the economic environment has drastically changed. All these have led to the present economic and social crisis gripping this vital sector affecting the economy of the state. The Commission is of the view that a holistic perception on the development of this sector should be evolved and operationalised for its sustainable development and it is time that the State took the initiative in evolving a comprehensive policy direction embracing all aspects including production and productivity, investment support, land use and land reform, ecology and environment, trade and marketing, labour and management, legal institutions, taxation, centre, state and local body responsibilities and commitments. The Commission recognises the imperative need for an initiative of this kind, but leaves it to the government as to the manner in which such a holistic comprehensive policy could be evolved and implemented.

1.5.4.2 Review of the mandates of the Commodity Boards

The various Commodity Boards came into being over five decades ago under the sanction of various Central legislations enacted by the Parliament. Various mandates were vested with the Boards on the basis of the then prevailing national and international situations, and demands of the national economy on these commodities such as meeting the internal demand and or earning foreign exchange etc. The socioeconomic conditions in the country have changed since then. Structural changes in production have also occurred. The share of the organised estate sector declined in production while that of the small growers has increased substantially. Production has moved out of the traditional areas and expanded to newer areas. Similarly the international economic and political environment altered drastically with the collapse of the socialist world, globalisation of the national economies and the installation of the WTO regime in the international trade.

The mandates of the different Boards varied from crop/commodity to crop/ commodity. In the case of Rubber Board development and research were the focus and very little on marketing. So too the then Cardamom Board and now Spices Board. In case of Coffee Board marketing and price control were the centrepiece of the activity. Tea Board laid emphasis on marketing and promotion of Indian tea abroad but not significantly on research and development. It is understandable when tea was the largest single foreign exchange earner, emphasis was given on export promotion. Now the situation has changed. Value addition and processing have assumed great significance in all commodities. With international competition cost-effective production rather than just increasing production under a safe and secure domestic market has become imperative even for survival. International trade, production shortage, expansion to other areas are converging the interests of the governments with the livelihood security of the farmers / growers engaged in production. The state

government institutions engaged in R & D have gained considerable strength. Further state governments are increasingly compelled to take responsibilities for the fall out actions and initiatives under the WTO regime while accrual of resource originating from these commodities still continue with the Central Government. Against this emerging scenario, the Commission is of the opinion that the time has come to have a second look on mandates of the Commodity Boards so that they can be geared to face the challenges of the future and the nation can be proactive rather than reactive.

1.5.5 Rubber

1.5.5.0 Rubber in the economy

Kerala accounts for 84% (4.75 lakh ha in 2001-02) of the area under rubber 92% (5.80 lakh tonnes) of the natural rubber production in the country. The crop occupies almost one fifth of the total cultivated area in the state. Apart from ensuring livelihood security to 9.13 lakh holdings, 2.82 lakh workers involved in production in the state, and 3.7 lakh workers employed in the industrial sector based on rubber in the country. This crop brings in Rs. 250 crores revenue to the State Exchequer by way of purchase tax and agricultural income tax (one of the very few crops that attracts agricultural income tax) and over Rs.80 crores (in 2001-02 Rs. 81.10 crores) to the national exchequer by way of excise duty on rubber (cess). The rubber plantation crop sector therefore has tremendous socio-economic implications to the economy of the Kerala state.

Rubber is overwhelmingly a small growers' crop as 98% of the holdings are of 2 hectares and less, cultivating 88% of the area with average size of 0.5 hectare, which contributes 88% of the production, while the estates sector (above 20 hectares and numbering 316) accounted for 2% of the area and 12% of the production in 2000-01.

Commendable performance of the NR sector: In spite of the predominance of small farmers, the productivity of NR attained in Kerala with 1612 kg per hectare of tapped area in 2000-01 (1222 kg by including immature area also) is the highest among the major NR producers of the world against 1456 kg of Thailand, 679 kg of Indonesia and 881 kg of Malaysia. During the past two decades rubber production in the state, more than quadrupled from 1.40 lakh tonnes in 1980-81 to 5.80 lakh tonnes in 2000-01, planted area nearly doubled from 2.54 to 4.74 lakh hectares and tapped area from 1.80 to 3.60 lakh hectares. This commendable performance has been made possible thanks to the diligent and enterprising group of growers and planters who were found ever eager in adoption of technology and embracing innovations, a vibrant rubber industry consuming the entire NR produced, imaginative policies of the government implemented through the Rubber Board that provided sound research and development support, efficient network of extension and most important of all, a remunerative and fairly stable price regime through balancing supply and demand by timely market interventions including procurement and regulating imports.

1.5.5.1 Price fall

Following the liberalisation policies adopted by the Government of India, which triggered a spurt in industrial growth, the domestic price of NR rose steeply to reach

the all time high of Rs. 5,000 plus and Rs.6, 000 plus per quintal (Kottayam price of RSS4 sheet, the grade mainly used by the automotive tyre manufacturers) during 1995 and 1996. Since November 1996 price started declining. In 1997-98 the price averaged to Rs. 3580 and fell further to Rs. 2994 during 98-99. Although increased marginally during 99-00 but again further declined to Rs. 3036 during 00-01. The recovery is apparently slow, as a host of factors have affected the fluctuations in NR price, which are not domestic alone, but international too.

Reasons for the fall in price of NR

Accumulated surplus due to imports: The price fall is attributed to excess supply during the years 97-98 to 2000-01. The stock of NR as at the end of March 2001 was 183,900 tonnes, almost one third of the total production (630,405 tonnes in 2000-01). After providing for 105,000 tonnes required as stock reserve for two months' consumption needs in the country, the accumulated surplus at the end of March 2001 was around 79,000 tonnes. Even though production of NR matched with consumption needs of the industry, massive imports were permitted during the second half of the nineties under a variety of import schemes. (As much as nearly 1.5 lakh tonnes during the period from 1995-56 to 2000-01 when the country had surpluses though marginal).

Decline in international prices of NR: Apart from the accumulation of surplus in the domestic market and its depressing effect, the downward trend prevailing in the international market, accentuated the fall in the price of NR experienced in the domestic market. The price of NR in the international market shows a declining trend with marginal ups and downs. The average price of RSS3 grade in Kuala Lumpur market was 5030 per quintal in 1955. Since then the price declined steadily to touch the low of Rs. 2644 in 1999 although improved slightly in 2000 with the average of Rs.3007. All along the nineties, the domestic market price of NR was moving in tandem with the international price although the latter was slightly lower than the former. As the global recessionary trends are likely to stay for some more time the NR prices may not show any improvement in the short run. The lower international price hindered the export of NR as route to improve the domestic price.

1.5.5.2 WTO Implications

Natural rubber is not covered under WTO Agreement on Agriculture (AoA) thereby making the commodity ineligible for availing the softer provisions of the agreement. Prior to the removal of QRs April 2001, the import of NR was through the following routes:

- Against a license issued by the Government of India or in accordance with a public notice issued on this behalf with the rate of duty as fixed by the Government of India;

- Advance License, a facility available to exporters of rubber products who can bring in rubber equivalent of the quantity of rubber in the products exported (This is banned from February 1999);

- Special Import License (SIL), a facility which has been withdrawn;

- Import in the Export Promotion Zone and by Export Oriented Units;
- Under OGL in accordance with the SAARC agreement; and
- Under the Bangkok agreement with a duty concession of 5 per cent.

With quantitative restrictions completely removed, NR can be freely imported in to the country at will by the manufacturers as it comes under OGL. Unrestrained imports can, and do, depress the domestic market price of NR affecting adversely the livelihood security of the rubber growers who are overwhelmingly small holders.

Thus the removal of QRs and free access to domestic market is the single most important impact of WTO as far as NR is concerned. Other dimensions of WTO implications do not appear to be of significance to the NR production in the country. India is not an exporter of NR of consequence in the international market although the country exported a little over 13,000 tonnes during 2000-01 and nearly 7000 tonnes during 2001-02. NR production increases, at the same time did help curbing imports considerably thereby conserving foreign exchange when it was relatively scarce. Rubber products however have been an export earner (more than Rs.2150 crores during 2001-02) although only a small fraction as the Indian export. Sanitary and phytosanitary measures as it is not very threatening although certain stipulations are brewing which can impinge upon the demand for NR the world over, but not restricted to India alone (this aspect will be discussed later).

1.5.5.3 Challenge and opportunities

Need for sustaining rubber cultivation: India ranks third in production and fourth in the world in consumption of natural rubber (NR) with 630,000 and 631,000 tonnes respectively. In India NR constitutes 79% of the rubber consumption against the global pattern of 59%. Automotive industry is the largest single consumer of NR with a little over 46% followed by cycle tyres and tube industry with 13% and the footwear nearly 13%. The rubber industry with a turn over of approximately Rs.15, 000 crores, annually producing over 35,000 products ranging from the tiny rubber band to the massive truck and aviation tyres, and employing nearly 400,000 workers is significant strategically and economically. The sustainable development of this industry depends upon on reliable supply of NR, the vital and critical raw material.

Given the present growth trends, both in NR production and dependent industry, the deficit in the availability of NR from internal sources, is estimated at 229,000 tonnes (ranging one fifth to one quarter of the consumption) against a production of 781,000 tonnes and consumption of 1,010,000 tonnes of NR by 2010-11.

The growth rate in NR production in the world has not been maintaining the same rate as in the previous years. Globally short supply of NR is forecasted in the years to come. One of the big league producers, Malaysia is moving away from the rubber sector. Production of NR has come down from the peak production 1.53 million tonnes in 1980 to 615,000 tonnes in 2000. (India overtook Malaysia in 2000 with a production of 629,000 tonnes). Thailand also is likely to follow the same trend. Indonesian production is hovering around 1.5 million tonnes during the second half of the nineties. Between these two countries 55% of the world production in NR is

accounted for. Short supply in India and globally is forecasted. There are other factors also which contribute to these countries shifting away from rubber. The global trend in production and consumption indicates that chances of NR prices going down to very low levels are very limited and it is very likely that price regime will improve in favour of growers in the medium to long run.

Imperatives of continuing rubber cultivation in Kerala: For a number of reasons continuance of rubber cultivation is imperative for Kerala state. Majority of the land put under rubber, which incidentally is agronomically the most suitable for rubber cultivation being highly productive, is ecologically the most sensitive land in Kerala. By and large these lands are located in the foothill of the Western Ghats (the Malayoram agroecological zone). The physiography is highly dissected and endowed with very high rainfall (over 300 cm annually), incidence which together render these land highly vulnerable to soil erosion. Only perennial crops, which do not require seasonal and annual tilling alone, can be cultivated safely and sustainable, as disturbance of surface would result in severe soil erosion. Both coconut and pepper, the other two alternative crops, failed in this zone due to the incidence of diseases, root-wilt in the former and quick wilt in the latter. In addition, market for these commodities is far more vulnerable and unstable than rubber. Further, long term investment on a perennial crop can be economically attractive, if only a steady and secure return is inherent and ensured. Only rubber fits in with these criteria in this agroecological zone of Kerala. Another factor, which is significant environmentally, is that with the current level of replanting, 1 million cubic meters of rubber wood is produced annually in the process, which is equivalent to having at least one half on million hectares of land under forests or wood/timber plantations. How significant this contribution to the environment and the economy in a country, which is extremely short of timber and short of land to put under forests, needs no elaboration. At present rubber cultivation provides livelihood security for over 9 lakh families who are overwhelmingly small and marginal growers and in addition 3.7 lakh workers. Every one lakh tonnes of import of NR tantamount to import of unemployment for one half of one lakh workers. Reference has already been made about the contribution to the state exchequer from this crop. All these reinforce the imperative of sustaining rubber cultivation in the state for the socio-economic stability of Kerala.

Providing a level playing field for the NR growers: Expectation of a reasonably stable income flow is crucial in taking investment decisions on perennial crops. Stability in market, both in terms of price offered and assurance of the quantity demanded is basic to providing stable income. Like the seasonal and annual crops, production adjustments either through acreage shift or productivity changes, in tandem with the market environment, is not possible in the short and medium and in the long run prove costly because of the long term nature of the crops (gestation period to start production and optimum use of the production potential) in the perennial crops. Sustainability of rubber cultivation in Kerala primarily depends upon ensuring a remunerative and relatively stable (free from uncertainties and vagaries of the market, especially in the domestic market) price regime, which was the key input in establishing rubber cultivation a success story in the country. For reasons of transient benefits of profits for the industry and the complacency arising from the present buoyancy of foreign exchange (when foreign exchange is short every tonne of additional NR production is equivalent to foreign exchange earned) should not be allowed to erode the strong base painstakingly built up over the past five decades

since independence. Already the warning signals are there in this sector. The depressed price since 1997 have led many farmers to neglect cultivation, and even a few have been compelled to venture in to shifting their land to other crops. The annual replanting that averaged 7000 hectares all through the boom years of the nineties has dropped to 4500 hectares in 2000-01. Similarly new plantings declined from around 10000 hectares to 4000 hectares.

1.5.5.4 Strategies

The strategy therefore proposed is to ensure a relatively stable income to natural rubber growers in order to continue to stay in this enterprise by providing a level playing field vis-à-vis the international competitors by:

Firstly, securing a breather till the Kerala rubber growers are enabled to face the challenges in the future by making use of the provisions under WTO; and

Secondly, enhancing the competitiveness in the domestic market and even globally through:

Cost-effective productivity increases; and

Enhanced income through improvement of quality and value addition to the product

1.5.5.5 Recommendations

Short and medium term

1. **Raising Bound rate of tariff:** Reasonable stability in the domestic market for NR was largely made possible in the past due to import restrictions, and occasional market interventions through the operations of STC of the Government of India. With the removal of the QRs under the WTO regime and relative ineffectiveness of STC procurement operation under open licence regime (at best it could temporarily help hold the price-line but price tumbled because of the periodic off loadings which are necessary to get rid of old stocks rendering the, domestic market more vulnerable). The immediate remedy is to make imports of NR less attractive by making it more costly making use of the provisions available under AoA and WTO regime. But there are some constraints, which need to be overcome.

Steps should be taken by the Government of India to negotiate with the member countries to raise the Bound Rate of tariff for processed dry forms of NR (specified as smoked sheets and technically specified rubber) from the present rate of 25% (which is also the Applied Rate for import) to 40%. It remains inexplicable that the country agreed to a Bound rate tariff of 25% instead of 40% which should have been the bound rate, if the principle of duty structure that prevailed as on 1st January 1990 (60%) is taken the criteria for fixing the bound rate for industrial products, was followed. There are a number of convincing and justifiable arguments for putting at international negotiations, in favour of raising the Bound rate of NR. Most important

is that the countries such as Thailand, Sri Lanka and China tariff lines for NR is 'Unbound', and in Indonesia and Brazil higher bound rates prevail. Within our own country-applied rate for latest is 70%, bound rates for synthetic rubber and reclaimed rubber is put at 40%, and higher bound rates (100-150%) and applied rates as well (40-45%) are put on other plantation crops such as tea, coffee and cardamom. Increase in the bound rate would definitely help making import more costly and thereby ensuring a level playing field to the growers.

2. **Recategorisation of NR category**: Mention has been made earlier that NR is classified under WTO regime as an industrial product and not an agricultural commodity. Concurrently with the efforts to achieve higher Bound rates of import tariff of NR, the first strategic intervention should be to bring NR under the AoA regime so that it is subjected only to relatively softer provisions as well as rendered eligible for protection that are applicable to agricultural commodities. (This proposal is discussed and argued at length in para 1.5.5.6 and hence not repeated. Further, this is one concern the Commission has suggested to the GOK to take up with the GOI for negotiation at Cancun). To sum up, considering the agronomic, managerial and socio-economic aspects of NR production there is a strong case to argue for re-categorizing this commodity as an agricultural commodity and bring it under the AoA. Plantation crops such as tea, coffee, pepper etc. are classified as agriculture commodities and the protection on account of this is relatively better. Consensus will have to be arrived at first with the NR producing countries especially the major players (Thailand, Indonesia and Malaysia together contributing three fifths of the world production), and subsequently with other members of the WTO. Further, in general the domestic industry is enjoying certain degree of protection and it is known that WTO Agreement on Subsidies and Countervailing Measures (ASCM) is not very kind to the domestic support extended. As NR is considered as an industrial product it is subjected to this rigorous treatment unlike an agricultural commodity, which is eligible for some protection under AoA.

3. **Use of WTO measures to protect from NR imports:** **WTO** regulation can also be used to provide protection the production in the country through measures such as imposing countervailing duty in lieu of the cess, imposing antidumping duty, imposing stringent quality inspection measures, insistence on importing only designated ports for the entry of the material to keep track of imports, are all could protect. There is pressure from the rubber-based industry, to include more ports for import, which has to be resisted in support of the domestic production on of NR.

4. **Participatory buffer stocking operations**: Market intervention operations through procurement and buffer stocking operations by the STC did make positive impact during the period prior to the removal of QRs. Holding the excessive stock temporarily from 3-6 months should be helpful to minimise a glut in the market and thus minimise the chances of a price fall. Given the relatively longer shelf life (rubber can be stocked for 6-12 months under normal storage facilities). The net-work of Rubber Producer's Associations, the cooperative marketing organisation and other farmers organisation are mobilised and brought into a consortium with support of the State Warehousing Corporation, the ETC, NAFED and financial institutions such as the Cooperative and Commercial banks it should be possible to organise a participatory buffer-stocking system which is economically viable and sustainable. (Refer to para 1.5.9.2 for more details).

5. **Export of NR:** **It** has already been argued at length that it is the transient surplus in the market created through imports has been responsible for the depressed price regime with adverse consequences to the livelihood security of the small and marginal NR growers. Given the oligosponic consumers (few consumers, especially the less than a dozen auto tyre manufacturers who account for nearly one half of the NR used in industry) who exercise command over stocks through centralisation at distribution points, small surpluses disastrously influence the price obtained by the growers. This is proved by the production-consumption balance prevailed during price depression period since 1997. Although consumption kept pace with production increases with only marginal surpluses of less than 10,000 tonnes (less than 2% of the production) in any year since 1997-98, the domestic price of NR did not recover from the precipitous fall after November 1997, primarily because of the annual imports of 20-30 thousand tonnes of NR. In order to strengthen the bargaining power of the grower's vis-à-vis the industry and to safeguard the manipulative elements in the market and thereby to provide a level playing field, the growers have to find a stable outlet. That is possible only though export of NR to the extent of 10-15% of the production (between 50-75 thousand tonnes) every year. It is true that India is not a traditional exporter of NR and all the traditional markets are already occupied by the major producers (Thailand, Indonesia and Malaysia). But there are several small NR consumer countries especially in Africa and Latin America, which should provide opportunities. Recent efforts, though desperate and belated, and with support from the State Government, and the Rubber Board, the Rubber Marketing Federation, have succeeded in exporting over 13,000 tonnes in 2000-01 and 27000 tonnes of NR during 2001-02 (till September).

6. **Continue the incentives for export of NR offered by the GOI:** Government of India have started a scheme to provide incentives for export of NR since 17th September 2001. This is to compensate the cost incurred for transportation, quality upgradation, quality certification, packaging which are all within the permissible support under the WTO regime. The rate of incentive offered include is Rs. 3.50 per kg of sheet rubber, Rs. 4.50 per kg wet weight for latex, Rs. 5.00 per kg for crumb rubber. The above incentives are available to all exporters including those in the private and cooperative sectors. This incentive should be continued till the country is able to secure a stable footing in the export market so as to serve as leverage in stabilising the internal market prices.

7. **Direct income support measures for NR:** Kerala Rubber growers have responded handsomely to government efforts to increase rubber production. NR Production tripled not only through area expansion but also more commendably through productivity increase. One of the incentives has been making available a remunerative but also reasonably stable (fluctuating within largely seasonal fluctuations) and substantially compensating the commensurating cost of production increases through market interventions by the government about which a reference has already been made. The success episode of rubber is a contradiction in development experience. Notwithstanding significant productivity increases (nearly doubled within two decades) applying available technology, Kerala rubber growers

are not able to compete with counterparts from major producing countries. That signifies that no just increasing production alone will not help to be competitive but cost-effective production would be. The much concern generally shown with high labour wages prevailing in Kerala does not fully explain the inability to compete as the labour wages in major producing countries. Thailand (33% of global production) and in Malaysia (8%) are very much high. Apart from the favourable biophysical resource endowments, especially rainfall distribution, one major factor that enables these countries to compete with India is the direct support extended to NR producers in those countries. For instance Thailand offers still substantial support for replanting. They are keeping the tariff rates unbound. Indonesia has kept the bound rate at the higher rate of 40%. On the contrary that the support extended as an incentive for adoption of technology for rubber has been scaled considerable from almost 100% in the late fifties and early sixties to 16% at present. The Indian NR producers are thus denied the level playing field. The Commission strongly urge that the support given for NR production should be continued. Similarly the reduction in replanting subsidy should also be restored. Resource crunch should not stand in the way in continuing this vital support. The needed resources could be found from the Cess collected by the Rubber Board, which is currently being used largely for production enhancement (and much of it is being under-utilised). The sector generates a cess of Rs.80 crores annually which has to be ploughed back for supporting scientific development during the post WTO regime. The burden of this cess falls ultimately on farmers although it is collected from the industry. The support for replanting can be interpreted a support for ecological preservation in a sensitive area. It could also be justified under WTO. It should be considered some thing like a capital investment support for industry or a substitute for infrastructure support extended to food crops.

8. **Monitoring the support mechanism available with WTO regime: It** is a fact that the developed countries have been subsidising the production sector heavily, particularly for infrastructure development, research and extension to achieve the present level of growth standards in an impractical time frame and adopt the polices prescribed by WTO. The predominance small holders in NR production are another justification for extending direct support measures as a compensation for imports that deprives them of income security. Direct measures are restricted and discourage under the WTO regime. This however does not mean that the Indian rubber plantation sector should be left on their own to fend for themselves, once QRs are removed. Definitely there is a chance of the marginal farmers being subjected to vagaries of fluctuating prices for which a mechanism through interventions at appropriate stage have to be evolved. However there is need for relentless follow-up considering the fact most of the plantation crops are now dominated by smallholdings. Assistance is required for the small holding sector, considering the socio-economic relevance for building up of infrastructure to meet quality standards for which provisions do exist under the WTO regime too. One needs to closely examine the safeguard measures, which are available for protecting the domestic industry.

9. **Safeguard measures under WTO:** Safeguard measures can be applied to sectors, which are importing in excess of 5 per cent of the domestic production and rubber qualifies to be considered under this category for the safeguard measures. These provisions could be studied and gainfully utilised by coffee, tea and spices. Rationalisation of tariff and QR will definitely impact the industry. Even today

though one is not extremely sure about the impact of this on a macro scale one can see definitely the challenges ahead.

10. **Ensuring participation in income security measure of the GOI:** Though WTO is not inclined to producer support schemes there are provisions under WTO agreement on Agriculture (Article 7 of Annexure II), which provides for government finance to participate in 'income assurance' and 'income safety net' to be exempted from calculations on AMS in the event of 30 per cent of income loss incurred by growers. The Commission takes note of the income assurance programme for the plantation crops proposed by the GOI and urge the Kerala Government to do everything necessary ensure the widest participation of the small and marginal rubber growers in the state.

11. **Creation of a price fluctuation fund:** It will be difficult to push up the prices by local measures alone when it is possible for the industry to import above a particular domestic price level. It may be possible only to bring about a price situation corresponding to the landed cost of imported rubber or marginally higher. It will be worthwhile to explore the possibility of a rubber prices fluctuation fund raising the corpus from the trade and industry as an additional measure or by earmarking a portion of the cess collected by the Board or from Government of India grants for the purpose. Similarly the state government can allocate some portion of purchase tax or surcharge for the fund to be used for support operations when justified. Kerala Government could be direct beneficiary as the revenues go up if the prices are pushed up.

12. **Do away with announcing Bench Mark prices:** The Government of India have been fixing Benchmark Prices of natural rubber from time to time. The latest benchmark price fixed was at Rs.3405 in September 1998. There is no mechanism available with the GOI or its arm the Rubber Board to ensure the Bench Mark Price when the NR prices goes below. That was the situation until April 2002. But it is possible that the dealers can be liable for legal action if a higher price is offered. Therefore the growers have not gained in any way. The Commission does not find any logic in continuing the exercise by the GOI and dispensing with this exercise be considered.

13. **Promote group action through Rubber Producers' Societies:** Though the small and marginal farmers dominate the sector, with the support of the Rubber Board, grass root level organisations the Rubber Producers' Societies (RPS) have already been formed covering about 30 per cent of the rubber growers. They are small groups of rubber growers registered under the Registration of Societies Act. They are largely self-help groups engaged in input supply, collection and marketing of latest, small scale processing etc. The coverage has to be expanded and federated enabling to undertake more locally value adding activities, storage warehousing and marketing. They are to be developed as an alternative to the current oligopolistic market structure, which dictate terms to the buyers despite very favourable demand-supply situation in favour of the producers, which may not be continuing. Given the high level of education of the growers and the reasonable progress achieved in the institutional development at the grass root level, a better quality management process can be ushered in thereby meeting international standards and gaining entry into the

international market. All possible support has to be extended by the State and the Rubber Board in addition to what is currently being done for human resource development, infrastructure development and investment needs in modernising the existing processing plants, value addition, storage, packing and also having access to information and getting established in the international market. Incidentally the support which the Government of Kerala is extending for facilitating procurement and subsidising handling charges by the cooperatives could be more productivity and sustainably used in assisting the RPS in building capability as an alternative to enter the market in areas identified above. The resources available for agricultural development the local self-government institutions (grama panchayaths and block panchayaths) especially those covering in the predominantly rubber growing areas are substantial which should also be canalised in support of institution building for rubber development. Considering that the production base involves a large number of small holdings sustainable development models need to be evolved with the involvement of all stake holders in a participatory mode, participation not only in decision making and policy formulation, but also in contributing to the investment for various activities to modernisation of the sector.

14. **Impact on the sector through import of rubber products:** The serious injury, which may be caused to the domestic industry perhaps, is through import of rubber products rather than raw rubber. This indirectly can bring down domestic consumption and affect the producing interests. Here again domestic industries need to improve quality and competitiveness to match international standards not only to avoid import of cheaper goods but also to maintain or increase its share in the international market.

15. **Strategic market information support:** Studies involving marketing strategies and providing market information will have to be augmented. Information generation, trend analysis and in general market 'watch' is required both raw rubber as well as rubber products and there is a compelling need for the Board not only to generate this information but for sharing this with all concerned and this would require strengthening the infrastructure for marketing and economic research available in the Board.

16. **Labour welfare to be seen in a positive way:** The labour welfare measures established in the state to be seen in a positive way as increasingly low labour wage advantage of the developing countries is being threatened with non-tariff measures with interpretation as abuse of labour. At the same time there is need to arrive at a consensus on bringing about commensurating cost-effectiveness for the NR production enterprise by competitive especially for the small producers to play in a level playing field. Similarly the management skills also need upgradation. The complacence, which has been prevailing needs to be shed, and all stakeholders in the enterprise have to become more professional.

Long-term measures

17. **Potentials and constraints for productivity enhancement:** In spite of the commendable increase in the overall productivity per unit of land there is still un-tapped reservoir of production potential. The technology gap has to be bridged as the potential is there is for increasing productivity by about 40 per cent at least, if not more. At least one fifth of the mature area yield less than a tonne per hectare. To make good the high cost of production further increase in productivity have to be achieved. Moreover for meeting the long term NR demand in the country, productivity increase is inevitable. There are limitations in productivity increase which depends on adoption of proper agricultural practices and in times of low price farmers are generally unwilling to invest further even for improving productivity. It also has to be recognised that a good percentage of the rubber growers are employed in other areas and rubber production is a part time activity for many of them.

18. **Cost-effective production:** Productivity increase would only partially helpful in facing the challenges of competition. Equally or increasingly significant is cost-effective production to compete in the market is capable of facing the challenges of competition. While NR production should receive support, the production should be cost effective for which research on cost reduction methods will have to be augmented. Rather than material inputs it is the agronomic and other management practices that are more rewarding in cost-effective production. Hence the Commission recognises that labour has an important role to perform in bringing about cost-effectiveness in NR production. The growers have to take labour in to confidence and recognise their role and contribution as a stakeholder, and the management has to be less confrontational and work towards enlisting workers cooperation through motivation and persuasion.

19. **Quality improvement for export competitiveness and augmenting income:** Improvement in quality along can bring about 10-20% higher realisation of price. About 40 per cent of the Ribbed Smoked Sheets (RSS) produced in the country belongs to 'upgraded quality'. The case is true for latest as well as Technically Specified Rubber (TSR). Growers have to move away from the conventional post harvest system leading to internationally acceptable standards. Far more infrastructure development and institutional building a required in the field for mobilising such activities considering the fact that the sector is predominated by small holders. Let more emphasis has to be given in modernising the existing processing plants, value addition, storage, packing and also having access to information and getting established in the international market.

20. **Increasing net farm income:** Competitiveness can be indirectly enhanced by increasing income from rubber plantations. By and large the opportunities available during the immature period through inter cropping a range crops from pineapple banana to tapioca and ginger are extensively utilised. Utilisation of rubber a by-product after completing one cycle of production is another opportunity for augmenting income. Commission's proposals are presented a little later in the discussion. During the mature phase attractively profitable inter cropping and under cropping are yet to be development and popularised. Apiculture is proved to be a profitable venture. A mature plantation is capable of generating 182 kg of honey per hectare that can yield a net profit of Rs.5000 per hectare. Despite such attractive profitability not even 2% of the area is utilised. Commission considers that it a priority to undertake a study to find the critical constraints in the widespread adoption

of this practice so as to take remedial measures. Similarly it has to be examined why opportunity provided through production f rubber seed oilcake are not taken advantage of.

21. **Investment in productivity increase and cost-effective production:** Productivity increase and cost-effective production demand substantial investment both in the generation of the technology strategic areas such as reduction in immaturity period, enhancing the economic life span of the rubber tree, breeding for disease, pest and stress resistance to save on cultural practices. Far more aggressive replanting programmes have to be undertaken. Marginal areas have to be left out. The sector generates a cess of Rs.80 crores annually which has to be ploughed back for supporting scientific development in replanting.

22. **Promoting rubberisation of roads: Kerala to set an example:** One of the strategies for ensuring stable prices is to find new uses and establish demand of some massive scale for NR. One such opportunity is provided in road rubberisation. Use of bitumen mixed with 2-3% or rubber has been accepted the world over as quite useful for extending the life of the roads. The savings in maintenance more than compensates the extra cost of laying roads using rubberised bitumen and repair costs and roads are better in quality. The Commission has been informed that despite the instructions of Central Government to all States and national road making authorities to rubberise at least 10% of the road, none has accepted it. As Kerala has vested interest in the promotion of NR use, the Commission strongly urge the Government of Kerala should to set an example and demonstrate the potential to others by getting this instruction accepted and implemented by its own Public Works Department. Accepting the instruction thereby any one though lot of discussions have taken place there has not been any attempt from Kerala PWD to take up this.

23. **Competitive rubber industry: Imperative for sustaining NR production:** More serious injury is caused to the domestic industry perhaps is through import of rubber products rather than raw NR. This indirectly can bring down domestic consumption and affect the producer interests. Domestic industries need to improve quality and competitiveness to match international standards not only to avoid import of cheaper goods but also to maintain or increase its share in the international market. Concurrent with the increase in NR prices over time, the SR prices and NR based product prices grew at a faster pace. Therefore the argument that the rubber based industrial products becoming non-competitive because of the increase in NR prices is not justified.

24. **Promotion of Rubber wood as construction timber:** Rubber wood is a by-product as trees are to be felled after the economic life span of about 30 years, which in a way is perpetual so long as Kerala continues with rubber cultivation. More than one million cubic meters of rubber wood is annually available from the rubber plantations at the current level of cutting for replanting. Promotion of rubber wood as an eco-friendly material by reducing the strain on our depleting forests should receive priority. Rubber wood is extremely suitable for furniture and interior works and has a good market in USA. Japan, Europe etc. Therefore much of the effort in promoting rubber wood is currently focussed on high end uses such as high value furniture and fancy wood panelling. It is true that value addition is tremendous in this segment of the market as much as 1500% if we go by the experience of Malaysia in this area.

Relatively this market is restricted in relation to the potential supply of rubber wood and the priority demand for wood in this country. The mass market lies in the area of construction timber (frames for doors and windows and other attendant uses for buildings both institutional and individual). It is to meet this demand that our limited forest resources (as well as that other developing countries in Asia and Africa who depend upon timber for earning foreign exchange thereby making our own contribution to the fast dwindling irreplaceable tropical forests) have been put under great stress. It is in this vacuum that rubber wood should and can get in and ecologically make a valuable contribution. Then only on the one hand rubber wood performs an essential ecological function and an economic function of augmenting the income of the farmer. At present much of the massive use of rubber wood lies in low value earning packaging. Processed rubber wood can compete with most of the hard wood varieties available in the market for construction timber. A lower level of processing might be adequate to meet this demand and hence cost effective unlike high end uses which needs visual appeal requiring high-tech and expensive processing. Processing rubber wood for timber demands only low level of technology and low capital investment and hence can be location ally widespread and hence accessible spatially to a larger population of rubber growers. As rubber growing is spread through out the state, Kerala can capitalise on the locational advantage unlike other rubber-based industries. This is an area farmer groups such as the Rubber Producers' Societies can engage and help augment income. Then only Kerala can be the timber valley of India, which has to make substantial import of timber to meet its requirements. There is also need for measures for mitigating the social problems emerging in rubber wood extraction which if allowed to continue can stall one possible potential income enhancement opportunity for the rubber grower

25. **Develop value addition capability in Kerala:** Though India has one of the highest rubber industries of the world, (the position varies from 4^{th} to 5^{th}) and Kerala accounts for 94% of the NR production, the state hosts only 14% rubber-based industries. Kerala should develop its value addition capability in processing as well as in manufacturing activities. Domestic market also does not pick up and industries started, about 60 in number, are mostly sick. They do not have the required investment and expertise to penetrate the local or the world market. Kerala Government should examine the causes and devise measures to stimulate investment in rubber related value addition activities. Additional support to processors to improve quality and to obtain BIS/ISO 9000 certification will have to be provided and the support is to be given for both private as well as those in the co-operative sector. Studies on evolving marketing strategies and providing market information will have to be augmented.

Co-operatives engaged in trading and processing activities can be encouraged to take up manufacturing activities and funds from NCDC are available for this purpose. The interest of NCDC loans gets subsidised by the share capital contribution of the State Government. Special training programme and marketing support will have to be provided. Research and testing support are available from the Rubber Board at nominal costs. An all our programme for rubber based industrialisation with thrust on products for export containing more natural rubber than synthetic rubber is desirable. Malaysia has been doing it.

1.5.6 Tea

1.5.6. 0 Tea in Kerala's economy

Kerala has a long tradition in tea production dating back to colonial times. Production of tea in Kerala is concentrated in the two high range districts of Idukki and Wayanad. The tea plantations are located in isolated and relatively remote areas as they are established in the high altitude areas of the Western Ghat. Substantial part of the estates are on government land (originally *sholla* forests and grass lands) and are on long term lease varying from 30 to 99 years. Kerala with an area of 37,000 hectares and 68,590 tonnes of production in 2000 accounts for 8% of the area as well as production in the country. The estate sector predominates tea plantations in Kerala. The estate sector above 200 hectares accounts for 75% of the area and contributes 86% of the production in the state but constitutes only 2% of the production units. Around 4000 small growers having less than 50 hectares control only around 10 percent of the area under tea. Tea plantations provide daily employment to 98,000 workers and livelihood security to 10,000 small growers. Tea plantations employ relatively high proportion (50%) of women workers especially those on daily employment. Labour for working in the tea plantations, especially in the Idukki district are from outside the state, the neighbouring districts of Tamil Nadu traditionally and mostly resident.

Impact of changes in the national and global scenario: Even though the state's share in area and production of tea with around 8% is not very significant, Kerala's tea plantation industry cannot escape some of the basic transformations that are occurring in the tea plantation industry within the country, and the implications of global changes. India was reputed as the largest producer, consumer and exporter of tea in the world till the eighties. Tea was the largest foreign exchange earner for the country. Though not in quantity, the relative share of exports to total tea production in the country declined during the last two decades, from 40% in 1980 to nearly 24% in 1999. At the same time, the proportion of consumption increased from 60% to 76% (346 to 650 million kg). Export of tea declined from 224 to 190 million kg relegating India (13%) from the 1st to 4th position, only after Sri Lanka (21%), Kenya (19%) and China (18%) in that order. Tea thus is becoming increasingly a domestic market dependent commodity rather than an export oriented product of the past. On the one hand with the collapse of the Socialist countries, Indian tea industry lost a fairly sheltered market (even in 2001, India's share in tea imports to Russia and CIS countries was sizeable at 46% though declined from 53% over a decade), and on the other the switch over in trade from barter to currency, placed increasing pressure on quality improvement and competitiveness. Even though South India contributes only less than one quarter of the production, its share to export is more than one third. Put it in another way, South India exports one third of its tea production. North India exports only one fifth. Kerala's share in tea exports from South India is reckoned at 40 percent. About 44% of the tea produced in Kerala is exported. Naturally the survival of State's tea industry depends upon the quality improvement and greater competitiveness.

1.5.6.1 Crisis in tea plantation industry

Price fall: All through the first half of the nineties, between 1990 and 96, the price of tea (Cochin auction price as the standard) hovered around Rs. 40 per kg fluctuating within a range of Rs.35 and Rs. 45 per kg. The price rose to Rs.62 in 1997, peaked at Rs. 73 in 1998 and then started to decline to Rs. 62 in 1999 and Rs. 52 during 2000 and 2001. It declined further to Rs. 42 in Jan-Jun 2002. Thus even after one decade, the price of tea remained the same with all ups and downs during the period.

The rise and decline in price of tea during the second half of the nineties is a national and international phenomenon. The price of North Indian tea declined from 119 to 94 points (Base year 1995=100). South Indian tea prices also fell from105 to 77. Even though the latter prices are always lower than the former, the South Indian tea fell by 12 points while that of North Indian tea only by 6 points.

The international price of tea (auction price) of all the nations increased from the base year (1995) and peaked in 1998 and then declined. But only the price of Indian and Indonesian tea declined below the 1995 level. The price of tea of two major producers Sri Lanka and Kenya stabilised at 10 and 14 points respectively above the 1995 level, while that of India and Indonesia by 12 and 8 points respectively below.

Magnitude and nature of the crisis: While the prices were declining from Rs. 73 per kg in 1998 to Rs. 53 in 2001, wages increased from Rs. 59 to Rs. 76 so also the cost of other production inputs. There has been closures, failures in payment of wages, default in the payment of statutory obligations such as the remittance of provident fund, default of payment to financial intuitions, owners abandoning estates, neglect of tea garden even refusal to harvest, demonstrations demanding relief, all signs of unprecedented distress in the plantation sector especially in the tea plantations which are better organised and better endowed. Plantation owners attribute drastic fall in income due to the drastic decline in the price (from a peak in 1998 to the level of 1990) and the increase in wages from the 1998 level by 30% more in 2001 to the failures in the plantations.

Crisis in the tea plantation industry was brewing: The crisis in the tea sector of the plantation industry in the state has been brewing for quite some time. It did descend suddenly. In productivity level Kerala is 20 years behind Tamil Nadu. The productivity of tea gardens is low which is around 1900 kg per hectare, while that of Tamil Nadu is around 3000 kg. Yield per hectare increased only by 26% during two decades, from 1481 kg in 1980-81 to 1865 kg in 2000-01. During the corresponding period productivity in Tamil Nadu increased by 50% from 2000 kg to 3000 kg. Apart from that the base production level itself is above 500 kg. In absolute terms the increase in Tamil Nadu is 1000 kg against Kerala's 500 kg. The poor state of agro management in the Kerala tea plantations is evident from the slow increase in productivity.

1.5.6.2 WTO implications

Tea along with coffee has been brought under the purview of AoA of the WTO. From April 2001, quantitative restrictions on the import of tea were

removed. The bound rate for tea is 150%. The applied rate is increased to 100% (as on 01.03.2002). Prior to that import duty including surcharge was 44.13% plus Rs. 2.30 per kg. Provisions of PFA (Prevention of Food Adulteration) Act are being imposed on imports. Import of tea is restricted to the two designated ports (Kolkata and Cochin) under FTA (Free Trade Agreement) with Sri Lanka.

1.5.6.3 Challenges and opportunities

Inherently low productive land resource: The agroclimatic factors in the state, especially high rainfall and its uneven distribution with long periods of drought and steep terrain are inherently unfavourable to high productivity in tea. The undue stress on tea bushes arising from uneven rainfall and long drought lead to higher incidence of pest attack and its control adds to the cost of production. The inherent poor agro-climatic factor does not fully explain the differences in productivity increase in the slow growth in productivity.

High vacancy ratio: The vacancy percent in Kerala tea plantations is found between 20-30%, which is the highest in the country. The net effect, apart from soil erosion, long drought and of low density of bush population, is lower yield per hectare.

Over-aged tea bushes: Tea bush is the greatest asset in tea plantations being a crop with a long productive life span that extends to more than five decades. Kerala's relative share of tea bushes which have surpassed the productive age (50 years and above) is 73%, against 42% of Tamil Nadu, 48% of West Bengal and 32 % of Assam. The problem of over-aged tea bush is further exacerbated in the Idukki district, which accounts for 68% of the tea area and is home to some of the largest plantations that exist in the state where the ratio is as high as 79%. Age of the plant is a crucial factor in obtaining due response to yield increasing inputs and scientific management. Bushes beyond 50 years of age respond poorly to quick yielding measures such improvements in pruning, plucking, balanced manuring and application of growth promoters, and even to medium term measures such as rejuvenation pruning. It is unfortunate that long-term measures such as replanting, modernisation of factories, augmentation of fuel-wood or other sources (solar energy) for processing, did not attract sufficient investment even during the days when the going was good. A NABARD study covering a sample of 24 estates found that replanting accounted for only 2% of the of total capital expenditure during the 10 year period between 1973-83. The cumulative effect of by passing/postponing the replanting/ replacement requirements are now manifesting and certainly exacerbating the present crisis.

Higher cost of production: It is true that the unit cost of production of tea in Kerala is higher than other states. Partly because wages are higher in Kerala in comparison

with other competing tea growing states in the country and partly due to the low productivity per unit of land put under tea.

Value addition and packaging: The primary processing and marketing of tea have a very crucial role in achieving higher realisation of the price to the producer. Traditionally and legally (according to the provisions of Tea Act) tea produced in the estates are sold at periodical auctions held at designated centres. Cochin, Coimbatore and the Coonoor are the auction centres through which the tea produced in South India is disposed of. Apparently it is a transparent system with the participation of both growers and traders. Tea is sold to consumers in two forms, 'loose tea' and 'packaged tea' only (40%): the latter consumed by the low-income mass consumers and the latter by middle and higher income groups. Even though the 'loose tea' market is larger (about 60%) than the 'packaged tea' market (about 40%) it is the latter set the price. Because in the former a large number of traders are involved while only a few established big players are operating in the latter. In a sense monopsonic situation exists in the 'packaged tea' market. More than half (55%) of the market for packed value added tea is controlled by just two giant companies. Quite often the marketing companies have substantial interest in production also as they own large plantations. The price differential between consumer price and what the producer gets is very substantial between the two markets. In case of loose tea the consumer pays about 70%, while in case of packaged value-added tea between 120-300 percent, more than of what the tea producer gets.

Direct marketing: A recent experience is revealing. Making use of the interim period from court injunction in 2001, some producers got engaged in direct marketing (a system practiced by many big estates until the sixties with their own brand images such as the Kannan Devan Hill Produce Co. Ltd.) who were able to secure a much higher share of the consumers' price. This indicates that direct marketing can help increase income (the loose tea market is a great potential opportunity and secondly the need for abrogating the Tea Control Order of 1984 that restricts the sale of tea only through auction centres only. This can help only a few of those participating in the tea auctions while a vast number of traders are not participants.

Quality improvement and factory modernisation: At the auctions, Kerala tea fetches the lowest price in the country on account of poor quality compared to tea from other states. While tea from some of the modern factories in Kerala commands the highest price in the auctions indicating the potential advantages associated with quality improvement and high returns to investment in factory modernisation. Factory modernisation is expected to serve three purposes: increasing net out-turns of 'made tea'; reduction in cost of manufacturing by adapting latest technology, and increasing installed capacity.

Primary processing and value addition: The strategy for the primary processing and value addition for Kerala tea has to be designed in the context of a growing domestic market with stiff competition and niche market for the value added forms such as the packet tea, tea bags and instant tea. Already a few leading companies in the state have started producing value added forms of tea both for the domestic and export markets. However, the entry cost for brand development is prohibitively high for individual estates to bear. Therefore a consortium approach is imperative to even out the cost of marketing.

Institutional constraints: Apart from the agronomic and economic problems of tea plantation industry in Kerala, there are also quite a number of institutional constraints which include those related to taxation both in incidence and collection, land policy that inhibits diversification in the context of restructuring and access to fuelwood which imposes limitations on processing, ecology of the fragile lands in which the plantations are established, labour management and productivity, supply of electricity, access to credit especially the terms, and the absence of an effective mechanism that can liaison with the various agencies of the State governments whose policy decisions are very critical to the long term sustainability of the tea plantation industry in the state.

Import for reexports and loss of market for Indian tea: Even though India produced over 846 million kg of tea and exported nearly 205 million kg, the country imported 13.4 million kg in 2000 at an average unit value of nearly Rs. 56 per kg against the domestic price of Rs 62 and export price of Rs. 92. In 2001 the import increased to 16.6 million kg at a unit price of Rs. 63 kg against a domestic price of Rs. 62 and export price of a little over Rs. 89 when the country produced nearly 854 million kg and exported nearly 180 million kg. Indonesia, Vietnam, Kenya and Sri Lanka are the principal countries from which tea was imported. Among the countries Indonesia's share of import increased from one third to one half while Sri Lanka's share declined from one third to one quarter. The imports constituted only 1.5% of the production 7% of the exports in 2000, and 2% of the production and 8% of the export of tea in 2001. Hence imports apparently may not have had an adverse impact on the domestic prices of tea in India. Import of tea was being allowed even before the removal of quantitative restrictions for the specific purpose of reexports and earning foreign exchange through value addition (euphemism for simple repackaging). In the absence of any minimum limits for value this provision is being misused by trading interests through importing cheap and low grade tea from other countries and after 'value addition' is reexported to India's traditional markets where Indian tea holds a premium. The adverse implications are two fold. First, the Indian tea Industry is finding it difficult to dispose of the surplus. Second, the dumping of low quality imported tea, as Indian tea would lose permanently India's market, which has been built painstakingly over the years. It is in this context it is significant to note that in the international market Indonesian tea is quoted one quarter to one third of the Indian tea and hence must be of lower quality. And India's import of tea (lower quality tea) is on the increase.

1.5.6.4 The Problem and the Strategies

The Problem: The emerging picture of tea industry in Kerala with the highest cost of production in south India is entangled in a vicious circle of low productivity, low income and low investment. The inability of the tea plantation industry to compete in the domestic as well as international market, as a consequence on the one hand due to the inherently low productivity and ecologically vulnerable resource base, and other the shrinkage on income as a result of the squeeze between high cost of production and low prices.

The ownership of the plantations is mostly vested outside the state, in the colonial times with sterling companies and subsequently with Indian companies registered outside the state. The basic organisation structure and ownership pattern impose

constraints on the manoeuvrability and limitations on the leverage of the state for interventions when called for as it is happening with the continuing crisis through which the tea plantations are undergoing. At the same time the state government is called upon to carry the burden and liabilities that fall out from the crisis.

Strategies: In order to redeem the tea plantation industry in Kerala from the abysmal crisis to which it has fallen, an integrated strategy consisting of both short term and long-term measures is called for. Immediately remedial measures are to be taken to provide relief to the workers, and support by the governments of the state and the centre. In the medium to long term, marketing reforms are needed to ensure a greater share of the consumer's price and replanting and rehabilitation to increase productivity. The Commission is convinced that tea plantation industry in the state should not be seen just as another economic activity or land use. It has to be seen as a social and ecological commitment considering the sole dependence on the livelihood security of a large number of workers and their dependents of the present generation and the extreme deprivation, their forefathers have undergone to establish and sustain them; and the ecological protection this endeavour to an extremely sensitive and fragile ecosystem.

1.5.6.5 Recommendations

1. Immediately workers and their dependants engaged in the tea plantations should be given direct food relief under the Sampooran Grameen Rozgar Yojana, which can partly be adjusted as wages. The same can be used for rehabilitation of the plantations in taking measures for improving the land by undertaking soil and water conservation measures and gap filling by planting in vacant spaces.

2. The owners of tea estates are given debt relief support by the institutional financing agencies including commercial banks by way converting short-term loans to medium term loans and postponement of long-term loans.

3. The debt relief measures should include support to pay up the commitments due to the workers including payment of wages, statutory obligations such as

remittance of provident fund and for which the Government should give guarantees to the financial institutions.

4. Explore the possibility of increasing income to the estates including tourism so that the decline in income from tea production could be made good. Such initiatives are recommended by the Commission not at the cost of tea production through diversion of land and retrenchment of workers, but only as a supplementary source of income and employment.

5. Government should extend tax remissions as well as leisure payments, to the estates (something like a debt swapping) that are willing to fulfil the obligations to the workers, and commit investment in rehabilitation and replanting of plantations.

6. The operation of the Section 17 of the 1984 Tea Control Order should be stalled until at least there is reasonable improvement in the tea prices; and modify and if possible abolish the order so that the producers have the freedom to sell their produce in whatever manner they find it profitable to dispose of so that a greater share of the consumers price could be secured. Given the kind of monopsonic situation with dominance of a few tea packaging and blending companies prevailing in the tea market, only the traders can benefit and not the producers. (The price leadership of the packers and blenders adversely affect the producers in the loose tea segment of the market).

7. The tea producers especially the small ones should be encouraged and supported institutionally and financially in undertaking ventures which enable them to market tea directly to the consumers through small tea traders and provision store owners.

8. The Commission takes note of the recent initiative of the GOI in creating a mechanism for the price fluctuation experienced in the tea industry.

9. Of late tea imports have increased and much of them for reexport. Considering the fact that such reexports cut into the tea market of India abroad and only helps the trading interest at the expense of the nation and not that of the producers. Urgent measures should be taken to prevent abuse of this provision. Having QRs removed under the AoA, no import restrictions are possible. But the duty regime can be used effectively to restrain imports by making it uneconomic. One such measure the Commission suggests for action by the GOI is to make such imports by insisting that value addition is not less than the applied rate of prevailing import duty. Another measure is to insist on quality of the tea used for exports, which are comparable to Indian tea. Further, quality assessment should be given to the officials of the Tea Board instead of the current practice of inspection being done by the officials of the Customs department. The former are better equipped and more experienced than the latter in assessment of quality sensitive commodities such as tea. Given the buoyancy in the foreign exchange reserve the nation can afford to forgo such miniscule accretions to foreign exchange earnings of the country.

10. Government of Kerala in collaboration with the Tea Board and the financial institutions especially NABARD should take the initiative in setting up a Rehabilitation Revolving Fund for making available long term credit for the relief and rehabilitation of the estates and renovation of the tea factories so that on the one hand it would help improve the productivity directly and indirectly as well, by enabling the tea bushes to give higher response to yield enhancing agronomic measures such as pruning; and on the other improvements in quality. (The latter is important, as the quality of tea processed in the state needs considerable improvement to fetch better prices). As in the case of Rubber Board a part of the Excise and other duties levied on tea should be set aside and also enlarging this fund by the GOI. Tax reliefs given by the State Government could be tied up to rehabilitation and replanting as an incentive. Assistance available under various land and water conservation and management, and forestry programmes of the government could also be pooled to enhance the resource pool of this fund.

11. The tea plantations should either be considered as either an industrial or agricultural enterprise. At present these enterprises are at the receiving end of both. If it is considered as an agricultural activity (which it is but for the organisation in terms of the extensive hired labour) it should be eligible for concession for inputs such as the electricity and credit at the rates levied to agriculture. If industry it is only legitimate that taxes are levied as applicable for industries. Being still a significant foreign exchange earner, tea plantations should be made eligible for all the support given to such enterprises, which earn foreign exchange.

12. Increasingly at a faster pace the compounding of agricultural income tax should be implemented. This will on the one hand would alleviate much of the hassles involved with tax compliance and on the other, will provide as an incentive to increase productivity and income as incidence this tax would be treated as yet another item of fixed cost (comparable to share rent and fixed rent under tenancy).

13. The Central and State government including the local self-government bodies together should take a second look at the taxation structure and the incidence of taxes on tea plantation enterprise. The tax system and its incidence should facilitate and induce investments in this sector, which is badly in need of.

14. The basic fact remains that the productivity of Kerala's tea plantation is low, the productivity growth is slow; and the response to productivity enhancement measures in the short and medium term is low, because of the very high proportion of bushes as much as nearly two thirds is past beyond the productive age. The low productivity syndrome have to be seen in the right perspective while analysing the causes of the present crisis which is deepening day by day, in order to help take sustainable mitigation measures. The issue of enhancing labour productivity and introducing productivity-linked wages do not imply any operational level significance unless commensurate increases are achieved in yield. The State Government should take the initiative to bring together the workers and owners in this sector to arrive at a consensus on mutually matching obligations and commitments on the measures required for increasing the productivity of land, management and labour and cost reduction for the long term sustainability of the tea plantation enterprise in the state.

1.5.7 Coffee

1.5.7.0 Coffee in the economy

Coffee in India: India accounts for about 4 percent of the world production and export of coffee. India's coffee production stood at 301 thousand tonnes in 2000-01 of which two thirds constituted Robusta variety and one-third Arabica. Coffee production increased by one third from 223 to 301 thousand tonnes during the last five years between 1995-96 and 2000-01. Production of Arabica is almost stagnant at 104 thousand tonnes during this period while that of Robusta increased by nearly 60% from 120 to 197 thousand tonnes. Arabica fetches a premium price of one quarter to one third over Robusta, both in the domestic and international markets. Arabica is used for direct consumption while Robusta is preferred as a blend and value addition processing such as instant coffee. Most of Robusta produced in India is exported while Arabica is preferred for internal consumption. India exported 247 thousand tonnes of coffee valued at Rs. 1377 crores in 2000-01. Though export declined during 2001-02 to 209 thousand tonnes valued at Rs. 1033, still coffee continues to be a significant foreign exchange earner.

Kerala's share: Kerala's share comes to nearly a quarter of country's production of coffee with 71 thousand tonnes in 2000-01. During 2000-01 coffee occupied about 84 thousand hectares in Kerala against 340 thousand hectares in the country. In Kerala coffee is grown mainly in the Wayanad district, which accounts for 80% of the area and production and the rest is mostly in Idukki district. Robusta variety of coffee accounts for 95 percent of the area under coffee, and 94 percent of the production in the state. Productivity of coffee in Kerala increased phenomenally from 278 kg in 1991-91 to 833 kg in 2000-01 per hectare narrowing the gap with Karnataka from one half to a quarter.

Coffee in Kerala a small growers crop: Coffee is predominantly a small growers crop in Kerala. In 1990-91 about 93 percent of the 76400 coffee holdings in the state accounting for 89 percent of the 68300 hectares under coffee, was two hectares and less. Only 134 holdings with the average size of 55 hectares were above 20 hectares then, which together accounted for only 11 percent of the area. The situation is unlikely to have changed since then.

Coffee exports: During the second half of the nineties, export accounted for 77 to 84 percent of the production. Coffee is a highly export dependant crop and hence is susceptible to the vicissitudes of the international market both in demand and supply, especially the latter.

1.5.7.1 Price fall and crisis in the coffee economy

Price fall: The domestic price of coffee in the country steadily increased from Rs. 27.85 in 1990-91, jumped to Rs. 79.79 and ruled high to reach the all time high of Rs. 95.37 in 1997-98. Since then the decline has been continuous, between Rs. 10-20 per year, and paused around Rs. 49.83 during 2001-02. The fall in price of coffee was far more devastating in Kerala and causing far greater distress as the Robusta prices are always lower by 20-25% than Arabica. The price of coffee received by growers in

Kerala declined to Rs. 59.91 in 1999 precipitously to Rs. 28.54 in 2001 and further to Rs. 26.36 during the first half of 2002.

The primary cause for the drastic decline in Indian coffee prices is attributed to the fall in world prices of coffee experienced during the period, as coffee being a predominantly export market dependent commodity. The world prices of coffee 'Other Milds' declined from the high of US$ 1.85 per pound in 1997 to US$ 0.62 in 2001. For Coffee Robusta the price of around US$ 0.82 per pound that prevailed during 1996-98 period, declined drastically to US$ 0.28 in 2001. One of the reasons for the decline in world prices is the increase in production from nearly 96 million bags (5.8 million tonnes @60 kg per bag) in 97-98 to 115 million bags (6.9 million tonnes) in 1999-2000, even though declined to 109 million bags (6.5 million tonnes) in 2001-02. What is remarkable has been the emergence of Vietnam as a major player within a short period of four years from a production of 6.7 million bags in 97-98 to 14.8 million bags in 2000-01, accounting for 11.5% of world production, overtaking Columbia (10.5 million bags). (Brazil still is the leader, accounting for 26% of the world production). The drastic rise in price in 1997 was also due to the decline in production of Brazil from 27.6 million bags in 19996-97 to 22.7 million bags in 1997-98. And the drastic decline since 1998 has been due to the Brazilian recovery from 22.8 million bags in 1997-98 to 36.6 million bags in 1998-99. Although India is not a major player in the world coffee market with relatively a small share of around 4 percent in production, country's heavy dependence on exports (three quarters to four fifths of the production) renders it highly vulnerable to the international market.

1.5.7.2 Implications of AoA

Along with tea and cardamom, the AoA covers coffee. Quantitative Restrictions on imports (QRs) have been removed since April 2001. The tariffs on coffee imports have increased to 100% since March 2002. The PFA standards are being imposed on imports.
Strategy

1.5.7.3 Challenges and opportunities

Combined impact: Almost all coffee produced in Kerala being Robusta and much of it is exported, Kerala's coffee is more vulnerable to the international price regime. It is one commodity in which the price fall has been dramatic to the extent two-thirds of the peak level (from 1998 to 2002). The predominance of small growers, sensitivity to seasonal climatic conditions (occurrence of timely pre-blossom showers is very critical to yield) and the fragility of the resource base of the coffee growing areas, aggravate the distress and erosion of livelihood security of coffee growers, arising from the price fall.

Devastation of the inter-crop pepper: Small growers of coffee sustained the livelihood and farm income through intensive use of land resources at their command. Coffee is grown on the slopes while the valley bottoms are converted to paddy lands. Inter cropping of coffee with pepper, a mutually compatible system, is quite extensively practiced in Wayanad following the devastation of oranges due to the spread of citrus die-back disease. Many coffee growers have put the valley-bottom

land to arecanut, and some to cardamom. (Off late extensively banana is grown, if already the land is brought under any perennial tree crop such as arecanut). The incomes generated from these crops supplemented substantially the farm income of small coffee growers. The devastation of the pepper consequent to the spread of Quick-Wilt (Phytophthora foot rot) disease of pepper, and the fall in pepper prices as precipitously as that of coffee from around Rs. 190 per kg in 2000 to Rs. 70 in 2002 per kg, have greatly dented the income levels of the coffee growers. Almost concurrently with the decline in coffee prices, Betel nut (processed arecanut) prices also fell drastically from around Rs. 104 per kg in 1999 to Rs. 35 in 2002 per kg, which further accentuated the distress of the coffee growers in the state. The rising cost of production including labour wage, which is substantial in coffee production, especially in picking; and declining product price have put tremendous squeeze on the farm incomes of coffee growers.

Demand for coffee: Unlike tea, the mass consumption of coffee is confined to the southern states especially, Karnataka and Tamil Nadu. Domestic demand for coffee might increase to the extent of population increase in the southern states and to income and urbanization in the northern states. Value adding enterprises such as instant coffee have already come to stay in the Indian market. The other possibility of expanding the demand is that of finding out more products based on coffee such as toffees. Active promotional efforts in this direction might yield some beneficial results in increasing the consumption of coffee.

1.5.7.4 The strategies

Bridging the supply-demand gap: The basic challenge facing the coffee plantation industry in the country and in the state as well, is that of managing the surplus in production. Two options need to be considered: first reducing production, and second expanding the demand for coffee. In the immediate context, it would not be possible to reduce production either by minimizing material inputs and agronomic management practices, as such interventions would have deleterious impact on future yield, and the cost for subsequent recovery would be higher. Reduction in acreage is not immediately possible being a perennial crop. By increasing domestic consumption, and enhancing export by acquiring a greater share in the international market, demand for coffee could be increased. Domestic consumption of coffee could be increased in traditional coffee consumption areas by reducing the price and in the non-traditional areas through promotional efforts. Considering that coffee price has touched the rock bottom, further reduction in price is not possible. On the export front also, lowering the price further does not appear to be feasible for sustaining coffee production in the country. Almost all coffee produced in Kerala is Robusta, which is used for blending and manufacturing products like instant coffee. Hence there could be some possibility of expanding export to the world market with appropriate promotional efforts.

Improving total income of coffee plantations: The alternative available for supporting the livelihood security of the coffee growers, is to increase farm income by enhancing productivity through cost effective measures, and augmenting income from land under coffee through intensification as well as diversification of land use. In either case, both are medium to long-term measures.

Diversification: For the long-term sustainability of coffee production in Kerala, coffee has to be made competitive. A major intervention proposed is to confine and promote coffee production only to highly productive areas. Coffee areas and lands within the areas, marginal to economic production should be taken out of coffee cultivation. Lands so released could be put to diversified uses for which the coffee areas which are mostly located in the mid-altitude zone of the Western Ghat region in the state. Already dairy production based on high yielding crossbred cattle has taken strong roots. Land that could be released from low yielding coffee production is highly suitable fodder for production. In combination with high yielding crossbred cattle, fodder production can sustain cost effective milk production in these areas. Organic coffee production could be added to the product basket. The cool subtropical climate offers excellent opportunity for the production of winter vegetables, the demand for which is largely met currently from supplies far distant from the consuming centers of the state. The cool and high altitude sunshine provide ideal environment for the production of subtropical flowers including roses. With international airports located within 100 km quick access for export of flowers is facilitated.

1.5.7.5 Recommendations

The crises coffee and tea production facing in the state have several similarities in production. They include supporting resource base (both occupy areas under similar physiographic characteristics, rainfall but for a change in the altitude the former occupying higher altitudes and latter lower elevations but endowed with relatively cool subtropical environment), agronomic management (perennial and mono crops), production organisation (significant employment of wage labour), marketing (public auctions), etc. Both are managed by Commodity Boards of the GOI. Research, development and extension are outside the mandate of the State government. Major difference is that tea is domestic market oriented while coffee depends significantly on export markets. The crisis in coffee is far deeper as the price fall has been far steeper. Growers engaged in coffee production are predominantly small and hence they are far more vulnerable, and their reserve and holding power against economic adversities are relatively weak. Therefore the recommendations and remedial measures proposed are comparable except that they be tailored appropriately to suit the specific context of coffee production. Briefly they are recapitulated.

1. Direct food relief under the Sampooran Grameen Rozgar Yojana, immediately to workers and their dependants engaged in the coffee plantations which could be used as part wages and undertaking land improvement, rejuvenation, rehabilitation and replanting;

2. The owners of coffee plantations be given debt relief support by the institutional financing agencies including commercial banks by way of converting short-term loans to medium term loans, and postponement of long-term loans and enable them to fulfill statutory obligations to workers;

3. Support for promoting of ecotourism as part of augmenting income and not replacing coffee production.

4. Grant of tax remissions and relaxed payments tied to fulfilling obligations to workers and commit investment in rehabilitation and replanting of plantations.

5. The Commission takes note of the recent initiative of the GOI in creating a mechanism for the price fluctuation experienced in the plantation industry, which is also applicable to coffee.

6. Creation of a revolving fund as proposed for tea production with the participation of the GOI through Coffee Board, NABARD and the GOK with commitment for annual replenishment. The fund could be used for long term investment for rehabilitation, replanting, diversification and facilities for processing of berries into beans;

7. A systematic rehabilitation of coffee plantations taking the entire land resource of the coffee grower as a unit to maximize sustainable income, which might include activities:

- Gap filling
- Replanting old, unproductive, moribund, diseased, low productive (which not amenable to yield increasing management practices) coffee bushes with disease tolerant and high productive planting materials;
- Intercropping with pepper or other appropriate crops;
- Diversification of land marginal to coffee production limited to agricultural production such as

    - fodder based dairy livestock production;
    - sub-tropical vegetable production;
    - Subtropical flower production; and
    - Agroforestry trees for timber, pulp and fuelwood.

8. Special projects for dairy production, sub-tropical vegetable production and sub-tropical flower production integrating coffee production might be formulated and implemented.

9. As proposed for tea production, coffee plantations should be considered either an industrial enterprise or agricultural enterprise for all purposes including extension of support services and taxation.

10. Compounding of agricultural income tax be extended to cover all coffee sizes of plantations.

11. Review of the taxation system as proposed in case of tea on the same logic;

12. For the long term sustainability of the coffee plantation enterprise in the state it is recommended that the Government of Kerala might take the initiative in bringing together the workers and coffee planters owners to develop a consensus on mutually matching obligations and commitments on the measures required for increasing the productivity of land, management and labour and cost reduction.

13. Withdrawal of the Coffee Board from the development activities has created a vacuum in the extension support system in the coffee growing areas. No alternative extension system has been put in place. This vacuum might be filled by including coffee in the mandate of the Department of Agriculture and assuming responsibility for extension and development activities for coffee in the state. Support services could be extended by the local self-government institutions also in coffee areas (Wayanad and Idukki districts).

1.5.8 Cardamom

1.5.8.0 Cardamom in Kerala's economy

Cardamom in Kerala, at least a substantial part, is grown on lands, which were once forests and known as Cardamom Hills Reserve, administered by the Department of Revenue, found in the present day Idukki district. The government granted forestlands on long-term lease to growers. They were given the right to cultivate cardamom but with the obligation to retain the tree vegetation. Trees provide the shade, which is considered vital for the healthy growth of cardamom. Cardamom cultivation in Kerala is concentrated in the high ranges spread over in the districts of Idukki (80% area), Wayanad (10%) and Palakkad.

Kerala with an area of 41,000 hectares and 7555 tonnes of production in 2000-1 accounts for 56% of the area and 72% of the production of cardamom in the country. Karnataka with half the area and one-fourth production of that Kerala is the other major state engaged in cardamom production. Kerala's productivity with 130 kg per hectare is almost twice as that of Karnataka, although considerably lower than the major cardamom producing country in the world, Guatemala.

Estate sector is very significant in cardamom cultivation. There is concentration in the ownership of cardamom plantations. There are 154 estates above 20 hectares, which account for one third of the area (15,356 ha) under cardamom; while 15,307 units, which are below 2 hectares with an average size of 0.82 hectares accounts for less than one third of the area (15,307 ha). Medium sized units numbering 3932 ranging in size between 2-20 hectares cultivate one third of the area (15,656 ha). There were 20,003 units in the state engaged in cardamom cultivation, which together covered 44,237 ha in 1994-95. The pattern of ownership may not have changed significantly since then.

It is estimated that besides the large number (about 20000) of small holders, about 17000 workers are also employed in cardamom cultivation.

1.5.8.1 Price movement

Cardamom is the only one among the plantation crops, which did not experience price fall since the mid nineties and consequent distress for growers engaged in cardamom production. Between 1996 and 2002 the price of cardamom doubled from Rs.309 to Rs.688 per kg.

During the past two decades, cardamom moved from an export dependent to a domestic oriented crop. During the late seventies and early eighties India produced between-4000-4500 tonnes of cardamom and the export ranged between 2300-2900 tonnes. The proportion of exports ranged between 50-60 percent of the production. By late nineties not only the proportion declined to 10 percent but also in quantity to 100 tonnes even though production increased by half to about7000 tonnes. India's only significant competitor in small cardamom is Guatemala. Not only that, Guatemala is currently producing 50 percent more of India's production. Currently Guatemala accounts for ninety percent of cardamom exports in the world.

1.5.8.2 WTO implications

Along with the other plantation commodities tea and coffee, cardamom also has been brought under the purview of AoA of the WTO. From April 2001 quantitative restrictions on the import of cardamom has been removed. The bound rate for cardamom is 108%. The applied rate is placed at 70% (as on 01.03.2002). On the basis of the performance of cardamom in production and marketing, the obligations under AoA do not call for any serious concern for cardamom in the short run, as the ruling prices are attractive, and both production and productivity have increased.

1.5.8.3 Challenges, opportunities and strategies

In spite of the high prices export is expected to increase. The boom may last a couple of years more until at least Guatemala production recovered. Even if Guatemala recovered, demand may not be a restraining factor as the domestic market is expanding. Production potential is far greater than the current levels. Productivity can even go up to 1000 kg/ha against 300 kg/ha of the present.

In the long run there could be difficulties not as much due to market factors as due to ecological factors. Firstly, cardamom plantations occupy one of the ecologically most sensitive area, the slopes and highs of the Western Ghat. Secondly, most of the cardamom plantations, especially the larger ones, are located on the original forest areas. Cardamom is grown under shade of trees after clearing the under-growth. Plantings are done after clearing the under-growth. Subsequently under-growth is kept in check as part of controlling weeds. While doing so not only the shrub and grass vegetation are destroyed but also the later generations of tree community which provide the shade and protection to cardamom plants, as well as the much needed fertility building and moisture retaining organic matter also. Such continuous cultivation lasting decades has nearly deprived the land of the younger generation tree growth, which is expected naturally to grow and replace the older ones as they get aged. In the absence of replacement, the original tree growth has become moribund and dead leaving wide gaps. The result is lack of protection from sun, and exposure to the fury of rainfall and consequent soil erosion and resource degradation.

The situation is compounded by the land tenure system of long-term lease under which the lessee has no obligation to maintain the productive potential of the land including regeneration of trees. Obligation is limited to preservation of the trees.

This area is also home to several tribal communities. Natural forests and wild life sanctuaries about on to these lands. There are several competing claims on these lands.

Cardamom provides several advantages to Kerala. The state is dominant in cardamom production in the country. The other players are Karnataka and Tamil Nadu. Productivity is relatively higher in Kerala. It is a crop of promise as the domestic market is substantial and expanding. Productivity levels are low leaving enormous scope for improvement.

1.5.8.4 Recommendations

1. Notwithstanding the boom both in demand and price, investment in improving productivity through replacing moribund and diseased plants, and replanting high newer high yielding and disease tolerant clones, is needed. An intensive and time bound programme has to be put in place for the rejuvenation and replanting of cardamom plants.

2. Top priority should be given for a programme for restoring tree vegetation in cardamom plantations. Restoration of vegetation and measures to sustain the productivity of land should be made obligatory while leasing land for cultivation.

3. Technologies that take a holistic view of the cardamom land ecosystem rather than just cardamom plant per se as is currently focussed, are to be evolved. Evolving agro-forestry techniques in support of cardamom cultivation on the cardamom lands is a priority area of research.

4. Environmentally safe technologies (less pesticides, fungicides and weedicides) are to be promoted and encouraged especially in the context of increasing export prospects. Promotion of vanilla as an opportunity may be encouraged. Solar driers be popularised to improve quality of cardamom.

5. The Telecherry Extra Green Bold (TEGB) cardamom is unique to Kerala. Immediate steps be taken to get it identified under geographic indicators.

6. The inadequate extension support may be made good by bringing cardamom also under the mandate of the Department of Agriculture.

7. A holist review of the institutional frame work including leasing, management, control and regulatory mechanism, legal status, technology, development for the sustainability of cardamom lands, whatever be the form of public domain, is urgently called for. Conservation, preservation and sustainable use of the cardamom lands is a developmental imperative for the state from economic (a crop of opportunity), social (dependent 20000 holdings and 17000 workers and their livelihood) and most important of all ecological security (sensitive and fragile resource base, land and natural vegetation, upper catchment of major river basins).

1.5.9 Livestock products

1.5.9.0 Livestock in Kerala

Kerala sustains a livestock population (Data refers to 1996 Livestock Census to which only data are accessible) of 55.76 lakhs, of which cattle counted 33.96 lakhs, buffalo 1.65 lakhs (bovines together 35.61 lakhs), sheep and goats 18.66 lakhs and 'others' 1.49 lakhs; and in addition a poultry population of 269 lakh birds. In 1998-99 the state produced 24.20 lakh tonnes of milk, nearly 40000 tonnes of meat and 2044 million eggs ensuring per capita per day availability of 208 gm of milk equalling the national average of 207 gm, 9.9 gm of meat and 64 eggs per capita per year surpassing All-India average of 31 eggs. Main feature of the livestock population in Kerala is the predominance of cattle among bovines as the. buffalo population is relatively small (0.5% against 2.9%of Indian average 1992 Livestock Census). In 1961 buffalo constituted 6.5% of bovines. Cow is the main source of milk in Kerala as against All India pattern of cow milk 42% and buffalo milk 54%.

Significant features of the cattle population of Kerala are the predominance females and high proportion of crossbreds. Females constituted 89% among the cattle in Kerala in contrast to 50% of All India, and 79% in buffalo. Even as early as 1961 the proportion of female cattle was 67% while the national average was 45%. Female domination in the cattle population of Kerala indicates that cattle are primarily reared for milk while male cattle dominance in the rest of India is indicative that cattle is to provide substantial draught power also. For one hectare of gross cropped area (perennial tree crops excluded) Kerala has 0.15 pair of work animal (both cattle and buffalo) against the Indian average of 0.22.

Kerala has low per capita cattle population. One bovine for 10 people against 3 of All India. However density of bovine per km of geographic area though lower but is not much different, 87 for Kerala as against 94 of All-India.

Significance of animal production as compared to crop production is that the former brings in greater equity. Landless and other resource poor people secure livelihood security through animal husbandry activities, especially milk production. A quarter of the households in the state keep bovines with 2.42 heads per such households.

1.5.9.1 Implications of WTO

The provisions of the AoA cover animals and animal products. Quantitative restrictions have been removed on the import of live animals and animal products including milk in accordance with the AoA stipulations since January 1995. Import tariff by and large for the range animal products is bound at 100% and applied at 30% as on 1st March 2002. India has no significant presence in international trade of animal and livestock products. The problem Indian farmers facing with respect to livestock products is not as much the low tariff rates but the heavy subsidies given to farmers in the developed countries especially the EEC countries who have huge surpluses to dispose of. Dumping by these nations is the greatest threat to the Indian producers of animals and livestock products including milk and milk products.

1.5.9.2 Challenges, opportunities and strategies

Shortage of biomass palatable to bovines: In spite of the high apparent biomass production capability on account of high rainfall and temperature of the tropics and manifested in the greenery seen all around, availability of biomass palatable to livestock (grass vegetation) in Kerala is limited largely to straw from paddy lands which accounts for only 16 per cent of the gross cultivated land. Paddy straw is supplemented with whatever grass naturally grown in the interspaces of coconut and cashew gardens for livestock fodder. Other major crops such as rubber, pepper, coffee, tea, and cardamom, do not support any undergrowth. All the perennial tree crops which together accounts for 65-70 percent of the cultivated land, leave no fallow period to allow grass to grow like seasonal and annual crops. All types of fallow land do not exceed 0.5%. Kerala has 7.6 bovines to feed per hectare of foodgrain area against the Indian average of 2.4. Availability of biomass palatable to livestock is under stress. Even decades ago the situation was not very much different. In 1961 one hectare of paddy land had to support 4 heads of bovine.

Coping up mechanisms: Farmers adopted many mechanisms to cope up with at least partly, the inherent shortage of feed for livestock. Firstly livestock population growth is kept under check. Between 1961 and 1996 bovine population increased only 12 % from 31.7 lakhs to 35.6 lakhs. (In fact population declined from 37.5 lakhs of 1987). The increase during the corresponding period at the national level was 28%. Second, with drastic reduction in paddy cultivation as much as 40% in four decades, the biomass production declined. Instead of reducing the population, farmers changed the sex composition favourable to female by systematically eliminating male cattle; thereby the same amount of feed could be used more profitably for milk production. Between 1961 and 1996, male cattle population declined from 55% to 11%. Correspondingly the shift at national level was only 55% to 50%. It is through such mechanisms that the state has built up the capacity for milk production that equals national per capita availability. Despite such economic and productive use, limited biomass availability will continue to be a major limiting factor in cost-effective production of milk and milk products, and thereby eroding the competitiveness of Kerala's livestock producers against their counterparts in other states, especially in the neighbourhood.

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Biomass supports goat rearing: Even though the availability of biomass palatable to bovine livestock is limited, there are many tree species such as jack (and related species) which are abundant and grow under every agroclimatic conditions obtaining in the state, and offer opportunities for goat rearing. Utilisation of this potential is seen in the growth of goat population in the state which increased by 18% between 1987 and 1996 from 15.8 to 18.6 lakhs and that of male goats by 38% from 3.5 to 4.8 lakhs, when the bovine population declined by 1%. Substantial number of households, about 8.3 lakhs, rear goats.

Limitations in live animals and meat export: Kerala does not have surpluses in milk and milk products or poultry and poultry products for export except to some niche products. Given the resource limitations for livestock production at present, Kerala's livestock products are not cost-competitive. But Kerala has a facilitation advantage in the export of live animals, and meat and meat products to West Asian and Gulf countries. There are technical barriers however, as the phytosanitary measures, which need to be overcome by maintaining hygienic conditions and preventing the incidence of animal diseases. Failure to enforce strict implementation

of sanitary and hygienic measures, and to adopt improvements in the slaughtering and processing of animal have stood in the way of capitalising on this opportunity. The less than humane way of transporting and slaughtering of animals would be no less a significant barrier in promoting Kerala's meat exports, especially to sensitive EC countries.

Opportunities in live animals and meat export: The state has a network of slaughtering facilities with capacity where 11 lakh animals are slaughtered annually. What is required is modernising the slaughterhouses and upgrading and updating the slaughtering and processing facilities, as the quality standards for meat and meat products are very rigorous. The Kerala Agricultural University in its Meat Technology facility has developed quality standards and testing procedures. There are no cultural inhibitions against the handling and processing of animals for the production of meat and meat products.

Biodiversity in livestock: Biodiversity found among livestock is yet another asset, which the state has to fully explore. Kerala is home to the world renowned 'Vechchoor cow'. Short stature, high fat content in milk, quick digestibility of the milk due the smaller size of the fat globules and easy management are some of the unique features of this breed. A similar small-size cattle breed has been located in Kasaragod. Among goats the 'Malabari' and 'Attappady Black Beatle' are two distinct breeds endemic to Kerala.

Wastage of crossbred male calves: According to 1996 Livestock Census there were nearly 44000 crossbred male calves between the age group of 1.0-2.5 years, against a little over 111,000 of below 1 year of age, indicating that three fifths of the male calves below 1 year lost while reaching 1.0-2.5 years of age. In contrast a little over 460,000 female calves survived in the age group of 1.0-2.5 years against over 378,000 of female calves below 1 year. The trend is the same with male calves of the indigenous cattle even though attrition rate low, a little over one third. More or less the same phenomena could be observed in the 1987 Livestock Census also. The premature death of crossbred males is a loss of great potential for meat production. If their survival is ensured and fattened it could be an assured source of raw material for high quality meat production. A chain of well planned and organised and strategically located meat processing facilities could act as an assured market for the fattened calves and ensure enhanced income to farmers.

1.5.9.3 Recommendations

1. Determined efforts are to be made to utilise the market opportunities, infrastructure facilities and technological capabilities in order to promote live animal and meat exports to gulf countries. In support slaughterhouses are to modernised, hygienic conditions imposed to meet the quality standards and humane way of transporting and slaughtering insisted. To ensure disease free status livestock disease free zone be created and maintained.

2. Sources of raw materials (animals) in support of the meat exports have to be developed locally; instead of sourcing them from neighbouring whose quality cannot be assured. The male calves of crossbred animals at present under-utilised if not

wasted is one potential source for meat production. Cost-effective ways of rearing the calves for slaughter are to be evolved and promoted.

3. Kerala's competitiveness in milk production has to be enhanced by promoting locally produced biomass. One possible way is to foster the symbiotic relationship between crops and livestock in the farming system by integrating fodder production in the existing farming systems. What is lacking is not resources or knowledge but the integrated delivery of support and services by the concerned development agencies of the government to the farmers.

4. Urgent steps are taken to protect the Intellectual Property Rights utilising the geographic appellations attributed to Vechchoor cow, Kasaragod cattle, Malabari goat and Attappady Black Beatle goat. The Kerala Agricultural University be given adequate support for its efforts in conserving these breeds, which are endemic to Kerala.

1.5.10 Marine Products and Fisheries

1.5.10.0 Fisheries in Kerala

Fisheries, marine and inland, provide livelihood security to 10.54 people constituting 3.3% of the state's population (2000-01), spread over the coastal areas of the state in 222 marine fishing villages and 113 inland fishing villages. Fishing and related activities provide employment to 2.26 lakh workers (1999-00) of which 1.85 lakhs in the Marine sector and 0.41 lakhs in the Inland sector. They are engaged in a variety of activities. Among them 13% is classified as 'beach workers' who are engaged in direct fishing operations, 41% 'small scale fish distributors', 13 % 'fish curers', and 27 %, 'peeling shed workers'. Women workers are in majority (52%). In certain related activities as peeling (66%), fish curing (66%) and processing (59%) women are in overwhelming majority

Kerala's coastal line stretches to 590 km. Continental shelf (0-100 fathoms) extends to nearly 40,000 (39723) square km. Potential fisheries resources estimated at 11.50 lakh tonnes in the marine sector of which 5.70-lakh tonnes in 'inshore' areas and 1.80 lakh tonnes in 'off-shore' deep-sea fishing. Potential demersal fishery resources are estimated at 1.45 lakh tonnes and sustainable yield at a little over 87,000 tonnes. Against a minimum sustainable yield of 5.7 lakh tonnes the fish landings from the inshore area has already crossed 6.0 lakh tonnes posing the serious threat of the setting in of resource depletion. The state's territory contains 3.6 lakh hectares of inland water spread of which two thirds (2.43 lakh ha) constitutes 'brackish water lakes, backwaters and estuaries', and the rivers 0.85 lakh ha. Inland fish production potential is estimated at 1.5 to 2.0 lakh tonnes. Potential for cost-effective culture fishery is placed at 65,000 ha inland water spreads.

Since the beginning of the nineties fish production in the state is growing but at a very slow pace, if not stagnating. Production of marine fish increased from 5.99 lakh tonnes1990-91 to 6.18 lakh tonnes in 1999-00, while inland fish though small (6% to 11% of the total) at a faster pace doubled from 0.36 to 0.74 lakh tonnes. By quantity, among the marine fish landings, sardines (among them over four fifths oil sardine)

constitute the largest species accounting for one third (33%), mackerel 16%, prawns 9%, and perches 8%. Among the inland fish the largest single item is prawns 26%, and tilapia follows next with 16%.

In 2000-01 nearly 89,000 tonnes of marine products valued at Rs. 1046 crores were exported from Kerala. Even though exports of marine products have been increasing steadily from nearly 51,000 tonnes in 1990-91 to nearly 89,000 tonnes, Kerala's share in the country declined 37% to 20% in 2000-01. Similarly value of exports though increased from Rs. 414 crores to Rs.1046 crores but state's share declined from 34% to 16%. Frozen shrimp constituted the largest item of export (36%), followed by canned and dried shrimp (34%), frozen cuttle (24%) fish and fillets (17%) and frozen squids (16%). The proportion of frozen shrimp declined steadily from 59% 1990-91 to 36% in 1998-99 though not much in quantity, which ranged between 30-36 thousand tonnes. During this period, export of fish and fillets increased from 7% to 17% and frozen cuttle from 9% to 24%.

Enormous increase in fishing crafts and gears was registered during the nineties. Crafts increased from a little over 34,000 in 1988-89 to nearly 55,000 in 1999-00, which consisted of 4200 mechanised crafts, 28800 motorised crafts, 21800 non-motorised crafts. The largest increase was in 'motorised' crafts, which increased by 190%. Similar increase in gears also registered. In 1996 nearly 22,000 fishing gears were in use, of which trawl nets (5200) and gill nets (4900) accounted a quarter each, and the rest dragnets 3300, cast nets 3100 and others 5100.

1.5.10.1 WTO implications

Fish do not come directly under the purview WTO's AoA. It is considered as a primary industrial product under the WTO parleys. More than the WTO many other institutions are involved in managing internationally the fishery production and trade. Such a treatment has both advantages and disadvantages. It can be expected that tariff for imported fish products would come down, as it is seen largely as a raw material for the processing industries in the developed countries. For those who really add value, relatively lower tariffs may make exports very competitive. This is considered good for the processing industries.

However, it is significant that indirectly WTO regulatory mechanism is imposed through the Sanitary and Phytosanitary (SPS) measures) in AoA. These measures stipulate considerable amount of precautionary measures, which include that the fish should arise from disease free area, contain minimum permissible chemical residue etc. When it comes to disease free area it is not an objective condition as it is very difficult to establish norms for this. The clause for setting SPS standards, which are above internationally accepted norms like CODEX can be misused and such clauses, should be removed. The country could agree to adhere only to the code of conduct stipulated by international organisations such the FAO. Domestically the state has to move towards international standards of product hygiene.

The WTO Agreement on subsidies and countervailing measures have only little impact, as in our case subsidies are low. One unique factor is significant that India's fish processing industry is competing with other developing countries, which have

very little subsidy provisions in their fisheries. There is the possibility therefore that the subsidy issue could be raised as a non-tariff barrier.

WTO concerns are not confined to just exports alone, but the regime encompasses the total fisheries production system, which includes harvesting, processing and export. Today a narrow approach with focus on exports is taken which was appropriate during the 1970s but not any more given the way the WTO is evolving.

1.5.10.2 Challenges, opportunities and strategies

Threat to the sustainability of the resource base: The most disturbing and cause for great concern is the stagnation of production in the marine sector that has set in since early nineties, despite substantial increase in crafts and gears both in numbers and capacity. It is a signal that the state has reached its inshore potential. Marine fisheries are the sector of the economy in the state where the application of latest technologies has been realised and attracted capital investment in support, which began since early sixties. This has resulted in phenomenal growth in the sector. The over capitalisation and under-utilised capacity in crafts and gears for harvesting and in processing facilities, generate irresistible urge to expand fishing operations further, despite serious warnings on resource depletion and the impending socio-economic disaster that follows. The urge for utilisation of the under utilised facilities for fishing especially by the neo entrants who were till recently denied of opportunities to share the bounty of a common resource (the phenomenal increase in motorisation of traditional crafts for instance as result of the affirmative actions initiated and sustained by the state by itself a positive development in ensuring equity), the scramble for this depleting common resource, the use of which unfortunately is poorly regulated, will only be accentuated. Conservation of the marine resources and its sustainability are very critical for the very survival of a sizeable section of the state's population who are historically backward economically and socially, and endowed practically with no alternative opportunities for ensuring their livelihood security. For this state development of the marine fisheries sector is not only to increase the availability of fish protein for the diet and earn foreign exchange for the nation, but more importantly at least in the long run, is for the improvement in the livelihood security of the people who depend on fisheries. It is time for the state to consider the introduction of aquarian reforms that would restrict the use of marine resources for those who primarily dependent them such as the traditional fishers (men/women), a measure comparable to land reforms. This can lead to arresting the over exploitation of fisheries resources and conserving them by ensuring sustainable use.

Monsoon trawling ban: Kerala Marine Fishing Regulation Act has demarcated inshore area falling within 50 meters depth range for fishing by traditional fishers using country crafts, and the area beyond this limit in the economic zone to be utilised by mechanised boats and large vessels. As this delimitation is not being followed strictly, monsoon trawling has been banned as a conservation measure. The ban is in force for the last 14 years since 1988-89.

Implications of environmental concerns: In future years environmental concerns demanding drastic steps would figure in the international negotiations including the WTO deliberations as well as in the policies of the Government of India. Many of

them will have serious implications. The recent Ministry of Environment's ban of over 150 species of sharks and related species of marine origin is an example. This blanket ban has affected adversely the livelihood of a vast majority of fishers in the state. It is also not unlikely that such decisions whether national or international, lack knowledge about the local situation, and the conditionalities put forward are not backed by adequate information or proof, but just based on hunch. The threat of pollution from outboard engines is another case in point. Such directives without sufficient consultation with affected people and adequate compensation by way of mitigation and remedial measures would result in the erosion of the already fragile livelihood security of communities like the fishers.

Concerns to be converted into opportunities: At the same time, such crisis could also be converted into great opportunities to create awareness, and community education on the issues of the need for resource management. Similarly some of the non-tariff barriers such as poor hygiene standards, labour exploitation, etc., can be used as an advantage for Kerala. For instance, the alleged disadvantage/disability for the Kerala marine product exports to compete due to increased arising from the provision of basic facilities for workers in the processing establishments, contribution to welfare measures (the cess on exports to augment the Fisher men/women welfare fund etc.) and so on, can be transformed into opportunities in the context of non-tariff barriers being put up against Indian marine exports. The social security measures introduced by the Government on the industry in the state should be used as an advantage and not to be lamented upon as an imposition, in the context of setting standards of this nature by the international community increasingly in the long run. But it is also necessary to insist upon the application of such rules and levies, not only to investors from within the country but by investors from abroad as well so that the former can operate on level playing field.

1.5.10.3 Recommendations

1. One of the most important aspects, which render marine fisheries vulnerable and unsustainable, is that fish harvesting is unregulated. One of the implications is the conflict as to who should have the access rights. It leads to the conclusion that the nation and more so this state can't move to a context of unbridled private property rights in the sea. Mercantile orientation predominates in all aspects and all levels in activities connected with marine fisheries. Institutional regulatory arrangements are highly inadequate. Social conflicts are not adequately addressed. All the stakeholders the fishers, traders, the processors, the exporters and the state have to jointly evolve and demonstrate a long-term vision. A multi-stakeholder study may be undertaken on all aspects of fisheries including conservation and management of resources, sustainable utilisation, and support services by the state. The emphasis should be on the livelihood security of poor fisher families. The gender dimension of management should receive particular attention, since women face several health hazards, as for example in peeling prawns. A code of conduct for responsible fishers should also be popularised.

2. Ecologically sophisticated traditional knowledge should be used for selective fishing techniques. Urgent steps be taken to identify, document, validate and promote traditional knowledge in the utilisation and management of fisheries resources.

3. Local self-governments at the Panchayat level be increasing involved in the conservation and management of fisheries resources including mangroves.

4. It is time for a second look the whole mechanism of support services including subsidies extended by the state and state sponsored institutions. Subsidies should not be granted for investment on augmenting production. Instead, they should be redirected towards the management of resource as the state suffers from over capacity in the marine sector.

5. The role of the institutions, state as well as national such as the MPEDA (Marine Products Export Development Authority), need to be redefined in the changed context of resource limitation and increasing international regulations. A shift from promotion of production and exports, and reorientation towards the regulation and conservation of marine resources and ensuring livelihood security of the dependent population, are imperative. Similarly fishing bureaucracy of the state government has to move from the production mode to the management mode.

6. In order to capitalise on the human skill that the state possesses in fisheries, the export of fishery labour to other countries after providing them with the adequate training, and ensuring security, be promoted.

7. At present there are a large number of players operating in the export trade. The present competition between the Indian players to gain market abroad is likely to benefit the foreign buyers rather than Indian entrepreneurs. A coordinated effort through pooling of resources would improve the bargaining power of the exporters. Common effort such as the promotion an Indian logo for marine products could be one such area of joint effort.

8. One of the major impending threats to the marine exports from the state is increasing stipulation by the importing countries, which happens to be developed nations with sophisticated consumers, on sanitary and phytosanitary measures including the setting of standards for containing the presence of salmonella as in the EEC countries. Quality improvements are to be insisted not only for exports but also for domestic consumption. Significance of enhancing the quality and the environment for fish production by improving the sanitary conditions in the processing plants and peeling sheds should be emphasised and institutionalised. There is the urgent need to launch a quality literacy movement. Fisher families and all others involved in trade in this sector, should become aware of sanitary and phytosanitary measures and *codex alimentarius* standards. Elected members of panchayaths and the others opinion makers could be given short-term training and educational resource materials, including training modules, which should be prepared in Malayalam. Technical assistance from FAO and WTO in adopting SPS measures be sought.

9. The basic problem of quality arises from the perishability of the commodity and the consequent high potential product loss. A good catch that irradiated is known to kill all the pathogens, which then will be acceptable to importing nations including the EEC countries. The possibilities of irradiation technology in ensuring the biological quality of fish and fish products and preservation is widely recognised and approved by international agencies including the FAO and WHO. The Ministry of Health of GOI has also approved the technology and procedures, and has laid out the

safeguards. Permission allowing irradiation process for fish and fish products and chicken meat a host of other products is granted for both domestic consumption and exports. Department Atomic Energy (DAE) of the Government of India has evolved cost-effective technologies and designed low investment facilities for irradiation of food. The DAE has commissioned two irradiation units, one at Nasik and the other at Vashi, New Mumbai, both in Maharashtra, and are in operation. The possibility of installing such a cost-effective facility in the major fish processing centres in the state be explored.

10. One major lacunae in maintaining hygienic conditions and quality improvement, is the lack of resources for maintaining infrastructure facilities such as fish landing centres. Even though these facilities do generate income by way of service charges but that goes to the general pool from which retrieval through budget allocations to meet the needs is often far from adequate to keep the facilities in good repair. At least part of the resources generated could be specifically earmarked for maintaining and improving the facilities. Further, the management of these facilities be entrusted to a consortium of the stakeholders in a given locality so that they will have a commitment to maintain them.

11. When it comes to measures for quality improvement, protection of the environment and resource conservation, etc., the burden always falls on the state exchequer. Gradually mechanisms be evolved for sharing the burden by all the stakeholders involved, by taking them into confidence. The system should pay for itself. Both the producers and consumers should be made to pay the cost, as ultimately they are the beneficiaries. Such a mechanism is also necessary to build a stake for all involved in sustaining such efforts.

12. There are a number of concerns that require proactive action related to conservation and preservation of biodiversity in fisheries including protection from potential threats from alien species through import of species (as happened in the case of carnivorous catfish) and introduction of diseases through imported fed and seed materials; and the preservation and expansion of mangroves for the conservation of prawn resources, and the immediate environment.

13. Studies be initiated to identify and determine the magnitude of the incidence of the occupational diseases among women workers who constitute the majority of workers engaged in fisheries related activities, in order to help design appropriate measure to mitigate and eliminate them.

14. There is tremendous gap for information in a usable format. Special support be earmarked for generation of the needed information to concerned institutions.

Annexure1

GOVERNMENT OF KERALA

Abstract

Agriculture Department - Impact of WTO on Kerala Agriculture - Commission on WTO concerns in Agriculture - Constituted - Orders issued.

AGRICULTURE (AGRI) DEPARTMENT

G.O.(MS)No.163/2001/AD Dated, Thiruvananthapuram, 31.07-2001

Read: G.O.(Rt)No.446/2001/AD dated 12.03.2001.

O R D E R

Consequent to the liberalisation of imports most of the agricultural commodities of Kerala have been experiencing severe competition from products imported from outside. As a result the prices of commodities like coconut and copra, rubber, coffee, tea, arecanut, pepper and other spices have gone down even below the cost of production. The farmers of Kerala require income in making their products competitive in the international markets. In order to make Kerala's agriculture competitive and vibrant the Government of Kerala proposes to set up a high powered Commission on WTO concerns in agriculture to recommend various measures to be taken by the Government, its agencies and farmers. Accordingly Government are pleased to constitute a high powered Commission on WTO concerns in agriculture with Dr. M.S. Swaminathan as its Chairman in super session of the G.O. read above. Orders on the composition of the Commission including the Vice-Chairman and Member Secretary will be issued later in consultation with Dr.M.S. Swaminathan.

"The Commission will devise its own methods of working through Core Committees and Sub Committees etc. The Chairman and Members of the Commission will be treated as Class I Officers for the purpose of TA & DA. The Member Secretary in consultation with the Chairman will have the powers to assign work related to the Commission to the experts including those in the Commission on WTO and related maters on Agriculture and decide on the remuneration to be paid for such work. The norms for such remuneration will be separately approved."

The terms of reference

(i) To analyse the implications of the provisions in the WTO Agreement on Agriculture on Kerala's Agriculture.

(ii) To explore the possibilities and constraints for the export of our agricultural and allied Products and to recommend necessary steps to Government for improving substantially the export of Kerala's Agricultural and allied products.

(iii) To identify and prioritise agricultural crops and allied products and their bye-products for export so that farmers' income and State revenue can be improved substantially.

(iv) To suggest infrastructural and other measures to reduce cost of production and improve the quality of our agricultural produce to make them internationally competitive.

(v) To suggest the R & D support, training and extension required at various levels to boost up competitiveness of Kerala's products.

(vi) To suggest improvements in the Sanitary and Phyto-sanitary Measures required to help in our export and to prevent import of low quality cheap products from outside.

(vii) To suggest intellectual Property measures of particular interest to the farmers of Kerala and the State.

(viii) Any other matter the Committee deems necessary and proper.

The Project Planning Cells of the Agricultural Department and State Agricultural Prices Board, Thiruvananthapuram shall give manpower support to the Commission. The office space presently occupied by the Kerala State Administrative Reforms Committee in the Housing Board Building will be used as the office of the Commission. Necessary computer support and internet facility will also be provided to the Commission. The Commission is free to engage a few research associates on contract basis. However the possibility of deployment of staff from selected departments will be explored.

Funds for the Commission would be met from the provision available under the Head 2435-01-101-03-OC Market Intervention support for price stabilisation for the Department of Agriculture.

The WTO Commission would submit an interim report within 3 months and subsequent report from time to time.

BY ORDER OF THE GOVERNOR
K.B. Valsalakumari
Secretary

To

The Chairman, Task Force on Agriculture (with C/L)
Government of India, Krishi Bhavan, New Delhi-110 001.
Dr. M.S. Swaminathan, Chairman, M.S.Swaminathan Research Foundation
3rd Cross Street, Taramani Institutional Area, Chennai-600 113.
The Director of Agriculture, Vikas Bhavan, Thiruvananthapuram.
The Chairman, State Agricultural Prices Board, Thiruvananthapuram.

Copy to: 1. The Principal Secretary to Chief Minister
Joint Secretary to Chief Secretary
C.A. to APC
C.A. to Secretary (Agriculture)

Forwarded/By Order,
Sd/-Section Officer

(True copy)

Annexure 2

GOVERNMENT Of KERALA

Abstract

Agriculture (Agri) Department - Constitution of Commission on WTO concerns in Agriculture - sanctioned - further orders issued.

- -

AGRICULTURE(AGRI)DEPARTMENT

G.O.(MS)No.197/2001/AD Dated 31-07.2001

- -

Read: G.O.(MS)No.163/2001/AD dated 31.07.2001.

ORDER

Vide Government Order read above Government constituted a Commission on WTO concerns in Agriculture under the Chairmanship of Prof. M.S.Swaminathan. The terms of reference and mode of working of the Commission were mentioned in the Government Order. Now Government have decided to constitute the full commission inducting the Vice Chairman and Members and providing necessary support facilities as follows:

1.	Dr. K.N. Shyamasundaran Nair Former V.C., Kerala Agricultural University S-10, Vrindawan Colony, Pattom, Thiruvananthapuram-695 004.	Vice Chairman
2.	Dr.P.K. Warrier Managing Trustee, Kottakkal Arya Vaidya Sala, Kottakkal	Member
3.	Dr. Parvathy Menon Senior Correspondent Frontline, Bangalore.	Member
4.	Dr. K.P. Prabhakaran Nair 'Akshaya', East Hill Calicut-673 005	Member
5.	Shri R.K. Krishnakumar Managing Director, Taj Group of Hotels Mumbai	Member
6.	Shri K.J. Joseph Secretary, Association of Planters Ernakulam	Member

7.	Dr. John Kurien Associate Fellow Centre for Development Studies Thiruvananthapuram	Member
8.	Dr. K.V. Peter Vice Chancellor Kerala Agricultural University Mannuthy, Thrissur.	Member
9.	Shri P.K. Sivanandan Agricultural Production Commissioner Government Secretariat Thiruvananthapuram.	Member Secretary

2. The Vice Chairman and other members of the Commission will be treated as Class-I officers for the purpose of T.A. and D.A. and other allowances in respect of any assignment connected with the Commission. With in the broad framework of the terms of reference fixed, the Commission would concentrate on the following commodities and areas of concern.

1.	Rubber	7.	Spices other than pepper
2	Coconut	8.	Fish and Fish Products
3.	Coffee	9.	Milk and Milk Products
4.	Pepper	10.	Meat and Meat Products
5.	Tea	11.	Medicinal Plants
6.	Cashewnut	12.	Organic farming and Agro Processing

3. The strategies the Commission would work on will aim to

(a) Defend the position enjoyed by Kerala in these areas.
(b) Aim for new gains through value addition
(c) Set-up infrastructure and institutions and develop competence to deal with issues such as sanitary and phyto sanitary requirements, emerging under the agreement on Agriculture.

4. The Commission is empowered to set-up task forces on each of the areas in which further work is required.

5. The Commission is also authorised to constitute a 'Cell' with experts on various fields to assist it in different fields by re-deployment from State Government Departments/Organisations to the extent possible. Only those experts who could not be found out by re-deployment will be directly engaged by the Commission, on contract.

6. The Commission will submit interim reports on any issue coming within its scope of study as and when desired by Government.

7. Expenditure for the Commission will be met from the provisions available under the Head of Account '2435-01-101-94'. Additional allocation will be made to Head of account by re-appropriation from the head of account '2435-01-101-85'.

8. The Agriculture (PPM Cell) and Agriculture Prices Board will function as the Secretariat of the Commission. Agricultural Production Commissioner will arrange to have suitable persons posted against the posts sanctioned to these bodies. The Member Secretary of the Commission is allowed to engage two Research Associates on contract basis or on redeployment from State or Central Government or from autonomous/public sector organisations.

9. The Secretary, Agricultural Prices Board is designated as the drawing and disbursing officer of the Commission.

10. The Commission is allowed to have four telephones, one for the Vice Chairman and Member Secretary with STD/ISD facility, two telephones for the PABX and one for the Internet connection.

11. The furniture and office equipments and two cars earlier used by Administrative Reforms Committee and transferred to General Administration Department and the Institute of Management in Government will be spared for use of the Commission. Principal Secretary, General Administration Department will take action on this.

By Order of the Governor
RAJEEV SADANANDAN
Secretary to Government

To

Prof. M.S. Swaminathan, Chairman,
M.S.Swaminathan Research Foundation,
3rd Cross Street, Taramani Institutional Area, Chennai-600 113.
The Members concerned
The Director of Agriculture, Thiruvananthapuram
The Chairman, Task Force on Agriculture
Government of India, New Delhi (with C.L.)
The Principal Accountant General
The Accountant General (Audit)
The Finance Department

Copy to:

The Principal Secretary to CM
The PS to Minister (Agri)
The Joint Secretary to Chief Secretary
C A to APC
C A to Secretary (Agri)
General Administration (HKC) Dept.
General Administration (Political) Dept

Annexure 3

CONTRIBUTION BY INDIA ON MODALITIES FOR NEGOTIATIONS
Agriculture from a Development Perspective: Special and Differential Treatment for Developing Countries

Paragraph 13 of the Doha Ministerial Declaration (WT/MIN(01)/DEC/1) agrees, *inter alia,* that ".... special and differential treatment for developing countries shall be an integral part of all elements of the negotiations on agriculture and shall be embodied in the Schedules of concessions and commitments and as appropriate in the rules and disciplines to be negotiated, so as to be operationally effective and to enable developing countries to effectively take account of their development needs, including food security and rural development.

2. The negotiating mandate is premised on the fact that developing countries are Seriously disadvantaged in agriculture. To some extent, elimination of asymmetries, inequities and imbalances in the existing provisions of the Agreement on Agriculture (AoA) would serve to reduce the disadvantages faced by developing countries in agriculture. In order to achieve this objective, a non-exhaustive set of proposals is enclosed below, categorized under each of the three pillars envisaged in the negotiations, namely, market access, domestic support and export competition.

3. Even after this is done, and a level playing field is achieved, this mandate compels us to begin to provide tangible and effective positive action through special and differential treatment for developing countries.

4. Unfortunately, world agricultural trade is distorted and conditioned by domestic agricultural policies of a number of developed countries with vast budgetary and financial resources at their command. Heavy subsidization of their domestic production and exports of agricultural products has resulted in polarization of trade in their favour and depressed international prices to the detriment of agricultural production in developing countries. Developing Countries, due to lack of financial resources, even where rules permit, have not been able to provide support of the type and at the levels provided by developing countries. Thus developing countries could have no concessions to make in operational terms with regard to domestic support and export subsidies. The real issue in the modalities for negotiations, therefore, is to secure phasing out of the distortions in trade through direct and indirect subsidization of domestic production and exports by these developed countries.

5. Moreover, there must also be explicit realization of the fact that even as a vast majority of people in developing countries are dependent on agriculture, the farming community constitutes an economically weak and exceptionally vulnerable section of the population with a large number of them either below or close to the poverty line. Agriculture in developing countries is largely characterized by subsistence and small-scale farming. Providing opportunities for livelihood in agriculture, and availability of food at affordable prices are, therefore, of crucial importance to developing countries. *Flexibility in domestic policies for agriculture aimed at enhancing their food and livelihood security and for rural*

development should be incorporated in the rules and disciplines on trade in agricultural products through special and differential treatment for developing countries.

Inter-linkage between market access, domestic support and export competition

6. In order to address their legitimate and varied needs, including food and livelihood security, and agricultural and rural development, the tariffs are the principal instruments available to the developing countries. Developed countries, in contrast, use a vast array of instrumentalities under all three pillars envisaged in the mandate for negotiations, namely, market access, domestic support and export competition. Even under the pillar of market access, the instrument of special safeguards against surge in imports or decline in prices of agricultural products was denied to those developing countries that had no resorted to tariffication during the Uruguay Round. *Therefore, developing countries can be expected to reciprocate in market access, subject to their economic and social conditions, development needs, food and livelihood security and rural development requirements, only if they get adequate concessions and commitments by developed countries in all three pillars.*

7. *Any reductions in tariffs by developing countries should be based on an approach that secures an overall average reduction in bound rates for them which is significantly lower than that by developed countries and with no minimum reduction on each tariff line, irrespective of the approach for reduction in tariffs followed by developed countries. For specific agricultural products bound at relatively low levels in earlier negotiations, developing countries should be permitted to raise current bindings to the ceiling bindings for similar products committed during the Uruguay Round. Longer implementation periods in all market access commitments by developing countries should be provided, since the impact of reduction in protection is immediate, while any change in domestic policies for domestic support and exports by developed countries will show results only after a lag. Given the experience of implementation of the Uruguay Round commitments, that the time period of implementation by developed countries in practical terms has been at best equal to that of the developing countries (and not 2/3rd as stipulated by the AoA), any new commitments through any instrument in market access, domestic support, and export subsidies for developing countries should be no more than half of the commitments of developed countries.*

8. In addition to the above, specific proposals under each of the three pillars are as follows:

Market Access:

- To achieve substantial reductions in tariff peaks and tariff escalation in products of export interest to developing countries.
- To replace denomination of tariffs in specific, mixed and compound terms by 'equivalent' *ad valorem* rates.
- To improve disciplines on Tariff Rate Quota (TRQ) administration, and increase market access for all developing countries, including through TRQ volumes, for products of export interest to them.
- To extend the special safeguard mechanism under Article 5 of AoA to all developing countries.

Domestic Support

- To provide that Members shall not challenge the measures provided under Article 6.2 of the AoA by developing countries
- To retain the existing structure of Article 6.2 of the AoA for developing countries.

- To exempt developing countries from the applicability of threshold levels of production or income loss set out for payments made for relief from natural disasters, under paragraph 8 of Annex 2.
- To achieve significant and meaningful reduction in domestic support by undertaking reduction commitments on a product-specific basis, resulting in reduction of all trade distorting support, in the Amber Box and Anex-2 (paragraph 5,6, and 7), to *de minimis* level at the end of the implementation period.
- To remove the present inequity inherent in reduction commitment whereby developed counties with positive aggregate measurement of support can aggregate product-specific subsidies while developing countries, with negative AMS, are subject to de-minimis limitations, to agreement on a methodology for calculating aggregate support, which is subject to reduction commitments, such that:
- Domestic support above de minimis level is aggregated on a product-specific (or disaggregate) basis;
- Domestic support below *de minimis* level permits aggregation of non-product-specific support with product-specific support; and
- AMS is calculated on the basis of a stable currency /basket currencies, and that due consideration is given to the influence of excessive rates of inflation on the ability of any Member to abide by its domestic support commitments.

Export competition

- To eliminate export subsidies in an agreed time schedule, except subsidies provided by all developing countries under Article 9. 1 (d) and (e) of AoA which shall remain without reduction commitments.
- To provide that, for equity, no member is constrained to grant export subsidies during the implementation period for reduction commitments on all forms of export subsidies.
- To discipline export credits, loans, guarantees, insurance, food aid and support extended through state-trading enterprises or enterprises with special or exclusive privileges.
- To provide that Member shall not challenge the measures provided by developing countries under Article 9.1(d) and (e) of AoA.

Finally,

9. No developing country or group of developing countries should feel dissatisfied with the outcome on agriculture in negotiations, even while these negotiations are taking place against the backdrop of 'single undertaking' on all negotiations. To elicit an outcome on agriculture to the advantage of all developing countries, the notion of 'reciprocity' in the negotiations will need to be moderated to incorporate the development needs and concerns of developing countries.

10. The modalities for negotiations that are agreed by Members should be an integral part of the outcome of the negotiations.

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Annexure 4

FIRST INTERIM RECOMMENDATIONS

Dr. M.S.Swaminathan

Chairman, Commission on WTO Concerns in Agriculture
Camp : Kalpetta.

10 October 2001

Shri, Gopal Krishna Pillai, IAS

Principal Secretary to Chief Minister
Thiruvananthapuram
Fax: 0471 333 489
333 682

Dear Shri Gopal Krishna Pillai

The Commission on WTO concerns in agriculture considered at its meeting held in Kozhikode on 9th October 2001, some of the views which the Hon. Chief Minister could take up at the forthcoming meeting in New Delhi, where India's position at the Fourth Ministerial conference on WTO to be held in Doha from 9th to 13th November will be discussed.

I enclose a note summarizing our recommendations to the Hon. Chief Minister.

With warm regards,

Yours sincerely

Prof. M. S. Swaminathan

Cc. Dr. P.K Sivanandan, IAS / Dr. K.N Shyamasundaran Nair
Principal Secretary, SC & ST
Fax No. 0471 324 766

Brief for the Hon. Chief Minister on WTO Concerns in Agriculture

1. Trade and Poverty Eradication

The draft Ministerial Declaration for adoption at Doha emphasizes in its preamble:

"International trade plays a key role in the alleviation of poverty. We recognize the obligation to insure that all our people may benefit from the increased opportunities and welfare gains generated by the multilateral trading system "

In the revised WTO agreement on Agriculture, the above sentiment should get reflected in concrete rules and regulations, since Agriculture, comprising crop and animal husbandry, fisheries, forestry and agro-processing, constitutes the backbone of the livelihood security system in India and many other developing countries. For this purpose, provision should be made to safe- guard the interests of small-scale micro-enterprises, supported by micro-credit. For example, India produces over 80 million tonnes of milk in a year from an estimated 75 million animals owned by 50 million producers, mostly women. The poorest 60 % of rural households own 65 % of all milch animals. Such vital enterprises related to the livelihood and nutrition security of the poor, operated by the methodology of production by masses, cannot easily compete with the products produced by the mass production technologies, commonly referred to as "Factory farming", which are supported by heavy inputs of subsidy, technology, and capital

Hence, if trade and not aid should become an instrument of poverty eradication, there should be well-defined provision in the revised agreement to safeguard the livelihoods of the poor, by not permitting imports which will kill jobs and livelihoods. The proposed "Food and Livelihood Security box" is one such instrument

2. Indigenous Knowledge and Trade Related Intellectual Property Rights (TRIPS)

Clause 16 of draft Doha Ministerial Declaration mentions:

"We instruct the TRIPS council to give due attention to the relationship between the TRIPS agreement and the Convention on Biological Diversity (CBD) and protection of traditional knowledge" .

We welcome this emphasis in the revision of the TRIPS agreement, taking into consideration the ethics and equity provisions of CBD and the need to confer intellectual property rights on traditional knowledge. Kerala has thousands years of knowledge in Ayurveda and has rich Medicinal plant resources and traditions in herbal medicines.

India has already enacted "The Protection of Plants Varieties and Farmers' Rights Act 2001" and the India Parliament is considering a Biodiversity Bill. The Indian Legislation is a pioneering one, since this is the first piece of Legislation, which recognizes concurrently the rights of breeders and farmer conservers. We may request WTO to incorporate in the revised TRIPS, the provisions for equity and benefit sharing incorporate in the Indian Legislation. Such a provision could include the establishment of a Global Gene Fund, to recognize and reward the invaluable contributions of tribal and rural families to genetic resources conservation and enhancement. The World Intellectual Property Rights Organization (WIPO) has already recognized the need to accord IPR to the holders of traditional wisdom. UPOV (Union for the Protection of New Varieties of Crops), should similarly recognize Farmers Rights and should become "Union for the Protection of Breeders and Farmers Rights".

3. *Distinction between Agricultural and Industrial Crops*

At present, cotton is considered as an agricultural crop, while rubber and jute are considered industrial crops. We should press for the inclusion of rubber, jute and coir among Agricultural Commodities, since these are predominantly in the small farmer sector and provide livelihoods to small farm families owning one hectare of land or below.

4. *Steps to be taken at the National Level*

While the above 3 points relate to action at the global level, the Government of India should consider the following for immediate action.

a) Sanitary and Phytosanitary Measures and Codex Alimentarius Standards

The infrastructure for the above needs urgent strengthening. Greater awareness is also needed. For this purpose Community Radio Station can be established. Also, drying the harvested crop presents great problems in plantation crops like coffee, pepper, etc, with the result mycotoxins develop due to high moisture content. The Ministry of Non- Conventional Energy Sources (MNES) should launch a dynamic programme for setting up community drying centers using solar energy. This will help small producers to get the harvested crop dried properly.

b) Import for Re- Exports:

While in principle, such imports for re-exports after value addition are desirable, this provision is being abused in the case of coffee and tea, much to the detriment to the interests of the Indian producers. The Commerce Ministry should study this issue carefully in consultation with the Commodity Boards. There is also need to specify the authorities who are empowered to issue certificates of origin of materials.

c) Data on Imports

This information should be posted regularly in the websites of the Ministries of Foreign Trade and Commerce, so that proactive action can be taken to ensure a balance between demand and supply.

d) Invasive Alien Species

Numerous new pathogens, pests and weeds are coming into the country as a result of mass imports of pulses, oil seeds, Poultry products and other Agricultural commodities. The National Bureau of Plant Genetics Resources (NBPGR) of ICAR at New Delhi, has sounded an alarm about the threat which such invasive alien species pose to our Agriculture. The Poultry industry is also threatened with new diseases through imported poultry products, as happened in the case of the prawn industry in Andhra Pradesh. There is need for urgent attention to preventing the unconscious introduction of such serious threats to our Agriculture.

e) Quality Revolution

There is need for greater quality consciousness in the country. A widespread educational and awareness generation programme on quality standards should be launched immediately. Unless we achieve both productivity and quality revolutions, our farm products will not be globally competitive.

2. Crisis in Kerala's Agriculture and the need for immediate response

Kerala's Agriculture is predominately based on perennial crops like rubber, tea, coffee, pepper, coconut etc. Most of the farms are one hectare or less in size. Prices of all these commodities have collapsed. Only the prices of cardamom and some varieties of banana are remunerative.

Planters are not able to pay the prescribed minimum wages they are not also able to make the statutory remittances in relation to provident fund contribution in respect of labours. The present Crisis in Kerala's Agriculture and Economy is unprecedented since there is an across the board steep fall in prices. Many coffee and tea estates are getting closed. Such an unprecedented situation warrants an unprecedented response. An immediate assistance which the Government of India can provide is the inclusion of plantation crop labour with in the scope of the imaginative Sampooran Gramin Rozgar Yojana. For this purpose Government of India may kindly release 2 Lakh tonnes of rice and 1 Lakh tonnes of wheat for being given to plantation labours as part of their minimum wage. The cash component will be met by the farmers. The grain component may be given as grant so that the farmers and estate owners can pay the prescribed wage partly as grains and partly as cash.

This " Food for Saving Perennial Crops" programme could be included in the allotment from the five million tones of food grains which the Government of India has set apart for the Sampoorn Gramin Yojana.

(M.S.Swaminathan)

Annexure 5

SECOND INTERIM RECOMMENDATIONS

February 20, 2002

INTERIM RECOMMENDATIONS GIVEN to THE HON'BLE MINISTER for AGRICULTURE for INCLUSION in the 2002-03 BUDGET

Urgent Tasks Facing Keralam's Agriculture

Crisis in Kerala's Agriculture and the need for immediate response. Kerala's Agriculture is predominately based on perennial crops like rubber, tea, coffee, pepper, coconut etc. Most of the farms are one hectare or less in size. Prices of all these commodities have collapsed. Only the prices of cardamom and some varieties of banana are remunerative. The present Crisis in Kerala's Agriculture and Economy is unprecedented since there is an across the board steep fall in prices.

1. Giving immediate support to Plantations

Many coffee and tea estates are getting closed. Planters are not able to pay the prescribed minimum wages they are not also able to make the statutory remittances in relation to provident fund contribution in respect of labours**.** Such an unprecedented situation warrants an unprecedented response**.** In order to overcome the immediate crisis in the plantation sector the Five million ton Food for Work programme should be extended to plantation sector. Part of the wages can be paid as food. Food aid could be used for rehabilitation of plantations, which is as important as providing infrastructure support to agriculture in general, both being investments of long-term nature

An immediate assistance which the Government of India can provide is the inclusion of plantation crop labour with in the scope of the imaginative Sampooran Gramin Rozgar Yojana. For this purpose Government of India be requested to release 2 lakh tonnes of rice and 1-lakh tonnes of wheat for being given to plantation labour as part of their minimum wage. The cash component could be met by the farmers. The grain component may be given as grant so that the farmers and estate owners can pay the prescribed wage partly as grains and partly as cash. This "Food for Saving Perennial Crops" programme could be included in the allotment from the five million tones of food grains, which the Government of India has set apart for the Sampoorn Gramin Yojana.

3. Steps for export of products: Some budget support

One of the major reasons for the unprecedented decline in price of Keralam's farm commodities such as rubber, coconut etc. is increased supply arising from production and to some extent due to imports consequent to liberalisation in imports apart from the compulsions of the positioning of the WTO regime with regards to agricultural imports. In the short run it is not possible either to cut back on production or raise

internal demand substantially. One temporary and quick yielding possible measure is to export these commodities by supporting the export efforts by compensating the differential between the internal prices and export prices. State support should be extended to export efforts.

4. Integrated Project for Coconut Development

Coconut provides livelihood security for the largest proportion of the farming community in the state who are predominantly small and marginal holders. The decline in price in this commodity is the sharpest and enduring among the major farm commodities. Partly the crisis is due to over production within the country. Being a perennial crop, adjustments to meet the vicissitudes of the market in the short run is not possible. The possible strategies for income security to coconut growers are:

(a) Diversification of uses and income in coconut farming system thereby augmenting income from lands put under coconut (Replanting old and diseased trees, conservation of soil and moisture including rain water harvesting and augmenting irrigation, inter cropping including animal production; and

(b) Integrated management of coconut. Total utilisation of coconut, (not just as oil and cake, but utilisation of other products including coconut water and conversion into new products such as soft drinks, neera, "kerasudha" coconut sugar, etc.

The project proposed is the integration of coconut farming and production system with the post harvesting and processing with total product use and diversification within an area so that the full value realised goes to the farmers through a mission approach. This is possible as coconut is included in the Technology Mission. The organisation should in the form of Small Farmer Agribusiness Consortium which owned and managed by the farmers, utilising the existing facilities both public, private and cooperative, the small processors including the copra makers; a consortia approach primarily providing centralised facilities and services but solely owned by the farmers like the Amul pattern for milk production and pro\cessing. Consortium of financial institutions such ass the NABARD and technology consortium as the Agricultural University are envisaged. Already there is the rudiment of SFAC system exists in the state. The funding for centralised services from the Central SFAC.

Three pilot projects each covering 50-100 thousand hectares in the three regions of the state in southern (Travancore) predominantly disease affected area as on Onnattukara, central (Kochi) small irrigated farms in the Thrissur District and northern (Malabar) large rainfed gardens in the district of Kozhikode or Kannur.

5. Medicinal Plants and Tribal Welfare

Green health tourism is gaining popularity. The state has got already a high degree of green tourism. The tourism in this state is increasing because of the thousands of years of ayurvedic heritage, and medicinal plants. The State has to take advantage of this great opportunity. We have to grow more medicinal plants, which will benefit

the growers and processors. It creates downstream employment. Infrastructure for medicinal plant need to be created. Both conservation and cultivation, and validation of claims and some kind of labelling and certification have to be ensured. Tribal development should be made an integral part of the infrastructure for the promotion medicinal plants, as traditionally tribal communities are the conservers and preservers of medicinal plants and biodiversity in general. particularly. Gene banks for conservation, seed banks for promotion and propagation, and organising self-help groups (SHGs) for production should become integral part of the infrastructure for the promotion of medicinal plants. Staring from Silent Valley going up to Wayanad where some of the rare medicinal plants and medicinal rice are grown, may be developed into a Biovalley.

6. Line item for the WTO Commission in the 2002-2003 budget

As an immediate response to Keralam's crisis in agriculture, partly inherent and partly accentuated by the positioning of the WTO regime and its Agreement on Agriculture, the Government of Kerala appointed the Commission on WTO Concerns in Agriculture. The WTO and India's membership is a foregone conclusion. It is premature for the Commission to advice as to what should be the instrumentality and the mechanism to be shaped to support the Government, in order to safeguard the interests of the state vis-à-vis the WTO regime. The exposure the Commission so far had during its interactions with agencies of the State and Central governments, and representatives of the various interest groups and stake holders, reiterates the fact the state has to strengthen its capacity considerably to understand the complexities and equip itself with the skills and information, to negotiate Keralam's case at the national and international fora. The constitution of the Commission in its present form is a response to a crisis situation and hence temporary. However the experience so far shows that it is very necessary that the Commission be provided with sufficient financial resources and a separate budget line in the ensuing budget to fulfil its mandate though limited, commensurate with the expectations. It should not be difficult and quite justified too, to provide adequate allocation and a budget line under Plan in contrast to Non-Plan.

Annexure 6

THIRD INTERIM RECOMMENDATIONS

Commission on WTO Concerns in Agriculture

Recommendations for immediate examination / action on the basis of the third meeting of the Commission held at Thiruvananthapuram on 18-19 July, 2002

1. Offering to host the proposed National Institute for Organic Agriculture

The Union Minister for Agriculture, Shri Ajit Singh, recently announced the decision of the Government of India to set up a National Institute for Organic Agriculture which will have the authority to undertake certification of organic products. Kerala is a national leader in the production and marketing of organic spices, tea, pineapples, banana, medicinal plants and other farm commodities. It also proposes to undertake the production of organic rubber specially for the manufacture of condoms for use in the fight against the dreadful HIV / AIDS menace. Therefore, Kerala is an ideal location for the proposed National Institute for Organic Agriculture and the associated certification agency.

About 200 hectares of land ideal for the location of this Institute is available with the Kerala Agriculture University at Thiruvazankunnu, Palakkad district. **It is requested that the Hon Chief Minister and the Hon Agriculture Minister may write immediately to Shri Ajit Singh, Union Agriculture Minister, offering land and other facilities in Kerala for the proposed Institute.** This will help to strengthen the organic farming movement in Kerala and help farmers to produce health foods and value-added farm products for internal and international consumption.

2. Geographical Indications (GI)

The Central Legislation on GI (The Geographical Indications of Goods - Registration and Protection Act, 1999) offers wide scope for establishing the unique qualities for some of our traditional products. The Commission recommends that the question of preparing proposals for according GI to the following products may be examined by appropriate technical experts.

- **Malabar Pepper:** The pepper from Kerala was known several centuries ago as Malabar pepper and was greatly valued for its medicinal and culinary properties. The pepper from Kerala can therefore have the GI *Malabar.*

- **Ayurveda:** The traditional herbal drugs from Kerala can be given the GI. Ayurveda, since it is only in Kerala the Ayurveda heritage has been preserved in its pristine purity.

Suitable Technical Task Forces may be constituted to prepare the proposals for being sent to WTO through the Union Ministry of Commerce.

3. Agri-Export Zones

Kerala has already developed with support form the European Commission six Agricultural Wholesale Markets with excellent infrastructure. The success of these zones will depend upon the effectiveness of the backward (Producers) and forward (consumers) linkages put in place. In order to develop these zones quickly, an over-all management agency , characterised by vision, efficiency and low transaction cost, needs to be established immediately. Also, **strategic alliances** will have to be developed with appropriate public and private sector agencies for ensuring the economic success of these zones. The National Dairy Development Board can help to develop one Agri-Export Zone, as partner. Hindustan Lever and the National Horticulture Development Board could be considered for association with two other Zones. The overall management could be entrusted, if considered appropriate, to a revitalised, reorganised and re-tooled State Small Farmers' Agri-business Consortium Society (SFAC). The Agri-Clinics and Agribusiness Centre programme of NABARD, Central SFAC and MANAGE could be taken advantage of for the purpose of attracting young entrepreneurs in the Agri-Export Zones.

To discuss such issues and finalise the launching of the Zones, it is recommended that a one-day brainstorming session may be held soon, involving all the stakeholders. Bilateral agencies, like the Netherlands Government, could also be invited to the brainstorming session, in order to develop market linkages abroad.

4. Establishment of a Virtual University for Trade

Modern **Information and Communication Technology offers a unique opportunity for establishing a 21st century institution catering to a vital sector of Kerala's and India's economy, namely *Trade*.** There is need for a large cadre of trained youth as well as media personnel well-versed in the following areas.

- WTO Regulations and post-Doha negotiations
- National Trade scenario: Opportunities and challenges
- Patents, Intellectual Property Rights, Geographical Indication, UPOV WIPO, TRIPS
- Kerala's Trade opportunities and constraints
- Media Resource Centre

The Trade University, based on the Virtual College principle, can be operated by a consortium public and private sector agencies with modest financial investment. It will require one senior faculty member specialising in each of the above areas.

5. Biodiversity and Intellectual Property Rights

The State Government set up a few years ago a *Kerala Biodiversity Board* under the State Committee on Science and Technology and Environment to initiate proactive action on the implementation of the proposed Central Biodiversity Act, being enacted under the provisions of the Global Convention on Biological Diversity. The Farming community and the rural and tribal families should become familiar with the

provisions of the Protection of Plant Varieties and Farmers' Rights Act and the proposed Biodiversity Act.

It is hence strongly recommend that the State Biodiversity Board may be activated immediately. The Board may set up standing committees under the chairmanship of eminent persons from NGOs or academic community to deal with the following.

- Conservation of Biodiversity
- Sustainable use of biodiversity including agro-biodiversity
- Equitable sharing of benefits

In addition, a group may look into the IPR aspects of traditional knowledge, including traditional herbal medicine and health practices. These bodies could later be converted into statutory bodies after the Central Legislation comes into force. There is also need for generating more awareness of the provisions of these Acts, particularly among the women and men members of Panchayats. Suitable training modules may be prepared for this purpose. The various Commodity Boards can also be requested to undertake capacity building work on the conservation and sustainable and equitable use of biodiversity.

6. Fisheries

Kerala's share in the total fish trade is tending to go down in value terms. There is need for two immediate steps.

First, there is need to launch a *quality literacy movement.* Fisher families and all the others involved in trade in this sector should become aware of sanitary and phytosanitary measures and *codex alimentarius* standards. Elected members of Panchayats and the others concerned could be given short-term training and educational resource material, including training modules in Malayalam should be prepared.

Second, a **Multi-stakeholder study** may be undertaken on all aspects of fisheries management and subsidies. The emphasis should be on the livelihood security of poor fisher families. The gender dimension of management should receive particular attention, since women face several health hazards, as for example in peeling prawns. A code of conduct for responsible fishers should also be popularised.

7. WTO Agreement in Agriculture: Next Round

At the Ministerial Conference in Doha, WTO Member countries acknowledged the need to correct the prevailing restrictions and distortions in agricultural world markets. The Ministerial Declaration at Doha reaffirms the commitment of creating a fair agricultural trading system that will recognise the special needs for developing countries. The new negotiations on Agreement on Agriculture are to be completed by January 2005. Progress will be reviewed at the Fifth Ministerial conference to be held in Cancun in Mexico in 2003. Therefore, time is opportune to draw up a balance sheet of the positive and negative effects of the Marrakesh Agreement in operation since 1995 and propose a new agreement which will help to fulfil the purported aim of AoA, namely an agricultural trading system which is fair to developing countries, where agriculture is not just a food producing machine but is the very backbone of the livelihood and ecological security systems.

Agriculture is a State subject. Therefore, **the Hon Chief Minister of Kerala may write to the Hon Prime Minister and the Hon Minister for Commerce requesting them to convene a meeting where the viewpoints of States of the changes needed in AoA can be considered.** Kerala's agricultural health is based on trade, since most of the farm commodities produced in the State are for trade within or outside the country. Kerala's experience with AoA is hence particularly relevant to the formulation of the national policy.

If the suggestion meets with approval in principle, a group can be set up to prepare a business plan. The Virtual Trade University can function on a hub and spokes model with the main university functioning as the core centre of a State-wide network.

Sd/- M S Swaminathan
20 July, 2002

Annexure 7

FOURTH INTERIM RECOMMENDATIONS

WTO AGREEMENT IN AGRICULTURE

POST-DOHA NEGOTIATIONS

Issues Relating to Market Access

Recommendations of the Commission on WTO Concerns in Agriculture

I. Subsidies:

Farm subsidies are rising in OECD countries. Subsidies exceed 1 billion US Dollars per day and work out to over US $12,000 per farmer per year. USA has further enhanced farm subsidies in their 2002 Farm Bill. The global agriculture is getting divided into the following two cultures.

1. Large agri-business characterized by mass production technologies and supported by massive inputs of subsidy, capital and technology. This is best referred to as Factory Farming.

2. Small scale farming characterized by low inputs of capital, poor forward and backward linkages with markets and high risk. Such Farmers' Farming is the backbone of the rural livelihood security system of most developing countries.

There is at present no level playing field between these two farming cultures. It is essential that the Government of India undertakes a critical analysis of the methodologies adopted by OECD countries in covering their huge farm subsidies under different boxes.

II. Tariff and Non-tariff Barriers:

Both tariff and non-tariff barriers further limit access to the markets of industrialized countries. While tariff barriers will be subject to some discipline, non-tariff barriers, particularly those relating to FAO *Codex Alimentarius* standards of food safety, can be overcome only by strengthening post-harvest technology and sanitary and phytosanitary measures. In addition, there is need to launch a **Quality Literacy Movement** among farm families to make them quality conscious.

III. Eco-labeling and Organic Products Certification:

Internationally recognized certification and labeling agencies will have to be created, to step up exports of environment friendly and organic products. The certification criteria will have to be reviewed by a special Task Force set up by WTO.

IV. Trade-related Intellectual Property Rights (TRIPS):

The revised TRIPS should take into account the IPS rights relating to traditional knowledge like *Ayurveda* and the benefit sharing provisions of the Convention on Biological Diversity and the Farmers' Rights provisions of the FAO Treaty on Plant Genetic Resources.

We should also recommend the incorporation of a provision for compulsory licensing of rights in the case of discoveries having an important bearing on food and health security. Such a provision has already been agreed at Doha with reference to medicines for the treatment of HIV/ AIDS.

V. The review of Agreement on Agriculture:

A detailed paper is enclosed on this topic including the potential impact of this Agreement on Kerala's farm economy. (Annexure I)

A note on Market Access based on the discussions held at Thiruvanthapuram on 18-19th July 2002 is also enclosed. (Annexure II)

The issues which are to be considered in detail by the Union Commerce Ministry relates the following:

- Tariffication
- Removal of Quantitative Restrictions (QTL on the import of farm commodities)
- Recategorisation of the status of rubber from an industrial to an agricultural crop
- Application of bound rates
- Issues relating to sanitary and phytosanitary measures
- Common stand with our neighbouring countries particularly Sri Lanka and the formation of an India-Sri Lanka Rubber Producers' Association.

We should develop a strategy for making our subsidies WTO compatible. In relation to market access, we should also analyse WTO related issues and non-WTO related matters separately and take appropriate action in both these cases separately.

The most urgent task is to improve the productivity, profitability and stability of Kerala's farming systems. There is need for the following revolutions to achieve this goal.

- Productivity Revolution
- Quality Revolution
- Value Addition Revolution

There are several problems relating to quality like organic residues in pepper and **salmonella** infection in fish and shrimps and pesticide residues, which need urgent attention. We recommend that the Government may launch a **Quality Literacy Movement** among farmers and planters. Such a movement should bring to light the implications of Codex Alimentarius Standards and sanitary and phytosanitary measures. Quality standards should be the same both for home and external markets. Otherwise, the standards will never improve.

In the case of Animal Husbandry, it is necessary to create disease free zones and certification machinery for live animals. Similarly, there is need for much greater attention with post-harvest handling in the fisheries sector.

Kerala's economic future and prosperity depend heavily on agriculture, including plantation crops, animal husbandry and fisheries. Therefore while we should try our best to get changes made in the WTO Agreement on Agriculture, particularly with reference to Market Access, we should not lose a single day in attending to non-WTO issues like improvements in productivity, quality. value-addition, cost reduction and post harvest technology.

M S Swaminathan
Chairman,

Commission on WTO Concerns in Agriculture

Annexure 8

New Bound Tariff Rates Sequel to GATT Article XXVIII Negotiations
(Concluded in January, 2000)

Sl. No.	H.S.Code	Description	New Bound Tariff Rate (Per cent)	Applied Rates
1.	0402.10	Skimmed Milk Powder	60@	60
2.	0402.21	-Do-	60@	60
3.	0806.10	Grapes, Fresh	40	40
4.	Ex.1001.90	Spelt wheat	80	50
5.	1005.10	Maize (corn) seed	70	50
6.	1005.90	Maize (corn) other	60#	50
7.	1006.10	Rice in the husk (paddy or rough)	80	80
8.	1006.20	Husked (brown) rice	80	80
9.	1006.30	Semi-milled or wholly milled rice whether or not polished or glazed	70	70
10.	1006.40	Broker rice	80	80
11.	1007.00	Grain sorghum	80	50
12.	1008.20	Millet	70	50
13.	1514.10	Rape, colza or mustard oil, crude	75	45
14.	1514.90	Rape, colza or mustard oil, other	75$	45
15.	1901.10	Preparations for infant use put up for retail sale	50	50
16.	0809.40	Plums and sloes	30	25
17.	1507.10	Soybean oil, crude	45	45
18.	1507.90	Soybean oil, other	45	45
19.	0713.10	Dried Peas	50	
20.	1107.10	Malt, not roasted	40	
21.	1509.90	Olive oil, other than virgin	40	
22.	1704.10	Chewing gum	45	
23.	1950.30	Sweet biscuits; waffles and wafers	45	
24.	3823.70	Industrial fatty alcohol	50	
25.	1512.11	Sunflower - seed or safflower oil and fractions thereof Tariff quota: In quota rate Out of quota rate	150000 MT at 50% 300%	45
26.	0802.11	Almonds, in shell	Rs.35/kg	Rs.35/kg
27.	0805.10	Oranges	40	35
28.	0805.30	Lemons and limes	40	35
29.	0805.40	Grape fruit	25	25
Sl. No.	H.S.Code	Description	New Bound Tariff Rate (Percent)	Applied Rates

30.	0808.10	Apples	50	50
31.	0808.20	Pears & quinces	35	35
32.	0809.40	Plums and sloes	25	25
33.	0813.20	Prunes	25	25
34.	2004.10.09	Other potato preparations - frozen	35	35
35.	2009.11	Frozen orange juice	35	
36.	2009.19	Other orange juice	35	
37.	0405.10	Butter	40	
38.	0406.90	Other cheese	40	

@ A tariff quota of 10000 MT at an in-quota tariff rate of 15% applicable cumulatively to both the tariff lines 0402.10 & 0402.21.

India establishes a global TRQ at an in-quota rate of 15% for the following quantities.

Year 1	350,000 Tonnes	Year 3	450,000 Tonnes
Year 2	400,000 Tonnes	Year 4 and beyond	5000,000 Tonnes
Out of quota rate	:	60%	

$ Tariff quota of 150000 MT at in-quota tariff rate of 45%

Source: Conference of State Ministers of Agriculture and Food
New Delhi. September 14, 2000, Agenda Item: 1

Annexure 9

Statement of Applied Import Tariffs on Agricultural Items

The agricultural products generally attract a maximum import tariff slab of 35%. On a number of agricultural items the basic tariffs have been increased recently in some cases beyond 35%. These are:

Item	Previous Tariff	Revised Tariff
Wheat	0%	50%
Rice	0%	70-80%
Grain Sorghum	9%	50%
Millet (Jowar)	9%	50%
Arecanut	35%	100%
Apples	35%	50%
Tea	15%	35%
Sugar	40%*	60%*
Edible Oils		
a. Edible grade crude vegetable oils (excluding coconut oil, palm oil and its fractions whether refined or not) imported in loose or bulk form for the manufacture of Vanaspati or for refining	15%	25%
b. Edible grade crude palm oil and its Fractions imported in lose or bulk form for the manufacture of vanaspati	15%	15%
c. All other vegetable oils whether refined or not	35%	45%

* in addition a countervailing duty of Rs.850 per tonne is also levied.

Source: Conference of State Ministers of Agriculture and Food
New Delhi, September 14, 2000, Agenda Item: 1
Review of WTO/Agreement on Agriculture

PS: - For the purpose of communicating correction, if any, please note that the text part of the report is page numbered 1-53, (page 1 of the text is shown as page 7 in this emailed text), Page 54 is figure, Pages 55-56 are tables and Pages 57-87 are annexures.

Annexure10

Applied and Bound Tariffs of Agricultural Products

Tariff item	Description of products	Applied rate of duty - as on 1.3.2002	Binding as on 1-3-2002	Final Binding	Base rate duty
0104 10	Sheep	30	100		
0104 20	Goats	30	100	100	100
0511 10	-Bovine semen	30	100	100	100
0511 91	--Products of fish or crustaceans, molluscs or other aquatic inverte-brates; dead animals of Chapter 3	30	100	100	100
0702 00	Tomatoes, fresh or chilled	30	108	100	140
0703 10	-Shallots	30	108	100	140
0703 10	-Ex.Onions	5	108	100	140
0703 20	Garlic	30	108	100	140
0709 51	--Mushrooms	30	108	100	100
0710 10	-Potatoes	30	150	150	140
0710 40	-Sweet corn	30	150	150	140
0710 80	-Other vegetables	30	150	150	140
0710 90	-Mixtures of vegetables	30	150	150	140
0712 20	-Onions	30	35	35	140
0714 10	-Manioc (cassava)	30	150	150	140
0714 20	-Sweet potatoes	30	150	150	140
0802 90	Ex.Other (arecanuts)	100	108		
0803 00	Bananas, including plantains, fresh or dried	30	108	100	140
0804 30	-Pineapples	30	108	100	140
0805 10	-Oranges	30	40	40	140
0807 11	-Watermelons	30	108		
0807 20	-Papaws (papayas)	30	108	100	140
0808 10	-Apples	50	50	50	140
0901 11	--Not decaffeinated	100	108	100	140
0901 12	-- Decaffeinated	100	150	150	140
0901 21	--Not decaffeinated	100	150	150	140
0902 10	-Green tea (not fermented) in immediate packings of a content not exceeding 3 kg	100	150	150	140
0908 10	Nutmeg	30	108	100	140
0908 20	Mace	50	108	100	140
0908 30	Cardamoms	70	108	100	140
0910 10	Ginger	30	150	150	140
0910 30	-Turmeric (curcuma)	30	150	150	140

0910 50	-Curry	30	150	150	140
1001 10	-Durum wheat	50	100	100	0
1006 10	Rice in the husk (paddy or rough)	80	80	80	0
1006 20	-Husked brown rice	80	80	80	0
Tariff item	**Description of products**	**Applied rate of duty - as on 1.3.2002**	**Binding as on 1-3-2002**	**Final Binding**	**Base rate duty**
1006 30	-Semi milled or wholly milled rice, whether or not polished or glazed	70	70	70	0
1006 40	Broken rice	80	80	80	0
1102 30	-Rice flour	30	150	150	100
1103 11	--Of wheat	30	150	150	40
1108 12	--Maize (corn) starch	30	100	100	100
1108 13	--Potato starch	30	35	35	100
1108 14	--Manioc (cassava) starch	30	100	100	100
1201 00	Soya beans, whether or not broken	30	100	100	0
1203 00	Copra	70	100	100	100
1206 00	Sunflower seeds, whether or not broken	30	100	100	0
1207 10	-Palm nuts and kernels	30	100	100	0
1209 91	-Vegetable seeds	5	10	10	100
1401 10	-Bamboos	30	100	100	100
1401 20	-Rattans	30	100	100	100
1501 00	Pig fat (including lard) and poultry fat, other than that of heading 02.09 or 15.03	30	300	300	100
1502 00	Fats of bovine animals, sheep or goats, other than those of heading 15.03	15	15	15	15
1503 00	Lard stearin, lard oil, oleostearin, oleo-oil, not emulsified or mixed or otherwise prepared	30	300	300	100
1504 10	-Fish liver oils and their fractions	30	100		
1507 10	-Crude oil, whether or not degummed	45	45	45	45
1507 10	Ex-crude oil, whetheror not degummed with a FFA content of 20% or more	30			
1507 10	Ex. Edible grade	45	45		
1507 90	Ex.Other with a FFA content of 20per cent or more	30			
1507 90	(Ex.Edible grade (refined)	45	45		
1510 00	Ex. With a FFA content of 20 per cent or more	30	45		
1510 00	Ex. Edible grade	45	45		
1511 10	-Crude oil	100	300	300	165
1512 11	Ex. Edible grade	50(TRQ)/75 (REST)	300		
1515 50	-Sesame oil and its fractions	100	300	300	165
1516 10	Animal fats and oils and their fractions	30	300	300	100
1516 20	Vegetable fats and oils and their fractions	30	300	300	165

1517 10	Margarine, excluding liquid margarine	30	300	300	100
1604 11	-Salmon	30	150		
1604 13	Sardines, sardinella and brisling or sprats	30	150		
1604 14	--Tunas, skipjack, and bonito (Sarda spp)	30	150		
Tariff item	**Description of products**	**Applied rate of duty - as on 1.3.2002**	**Binding as on 1-3-2002**	**Final Binding**	**Base rate duty**
1604 15	--Mackerel	30	150		
1605 10	-Crab	30	150	150	140
1605 20	-Shrimps and prawns	30	150	150	140
1605 30	-Lobster	30	150	150	140
1605 40	-Other crustaceans	30	150	150	140
1701 11	-Cane sugar	60	150	150	75
1701 12	-Beet sugar	60	150	150	75
1703 10	-Cane molasses	15	108	100	140
1704 10	-Chewing gum, whether or not sugar-coated	30	45	45	140
1801 00	-Cocoa beans, whole or broken, raw or roasted	30	108	100	140
1802 00	Cocoa shells, husks, skins and other cocoa waste	30	103	100	140
1805 00	Cocoa powder, not containing added sugar or other sweetening matter	30	150	150	140
1903 00	-Tapioca and substitutes therefore prepared from starch in the form of flakes, grains, pearls, siftings or similar forms	30	150	150	140
2002 10	--Tomatoes, whole or in pieces	30	150	150	140
2003 10	-Mushrooms	30	35	35	140
2004 10	-Potatoes	30	35	35	140
2005 20	-Potatoes	30	55	55	140
2008 11	--Ground nuts	30	150	150	140
2008 20	-Pineapples	30	150	150	140
2009 11	--Apple juice	30	65	85	140
2009 50	Tomato juice	30	85		
2009 80	--Juice of any other single fruit or vegetable	30	85		
2103 20	Tomato ketchup and other tomato sauces	30	150	150	140
2201 10	-Mineral waters and aerated waters	30	150	150	140
2203 00	Beer made from malt	100	150	150	140
2208 30	-Whiskies	182	182	150	Rs80/lt or 310 which ever higher
2208 40	-Rum and taffia	182	182	150	-do-
2209 00	Vinegar and substitutes for vinegar	30	150	150	100

	obtained from acetic acid				
2304 00	Oil cake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of soya-bean oil	15	100	100	100
2306 50	-Of coconut or copra	15	100	100	100
2309 90	-Ex.Prawn feed	5	150		
3301 00	Ex.Extracted oleoresins	25	100		