# REPORT

# OF THE TASK FORCE

# ON PLANTATIONS SECTOR

# I N D E X

## PREFACE

**Government of India has been concerned with the problems faced by the growers in the Plantation Sector and more particular those faced by the smaller growers whose entire subsistence is dictated by the forces of nature. Yields differ from year to year and the period of busts faced by the plantation industry leaves much distress among the growers. With this background, Government had constituted a Task Force on 24th July, 2006 to examine particularly the problems faced by the smaller growers.**

**The first meeting of the Task Force was addressed by the Hon'ble Minister for Commerce and Industry who highlighted the necessity to look into the problems faced by the small growers with some compassion and with a fresh approach which will lead to long lasting results.**

**The Task Force met from time to time and meetings were held in Delhi, Mumbai and Hyderabad. The Task Force invited representatives from the different stake-holders and had been very ably assisted by the Secretariat of the Department of Commerce. The Task Force is highly obliged to the assistance and guidance rendered to it by the officers of the Government.**

**The Members of the Task Force were highly impressed by the presentations made by the individual Commodity Boards in- charge of the different constituents of the plantation industry. They had given their view-points and also put forth the problems of plantation sector particularly of the smaller growers. The Task Force also invited some small growers who gave their views. The Task Force also had detailed discussions with the Bankers, Insurance companies, NABARD etc. What came out of these discussions is that whilst some immediate measures must be taken to solve the present problems of liquidity of the small growers in the background of a falling market in respect of some sectors of the plantation industry, a better**

**solution would be to find a more enduring method by which the growers would be protected right from the planting stage to marketing of their produce.**

**The Task Force has attempted to suggest long term solutions and in the pages that follow it has given its views on the subject. For the Members of the Task Force it was a great learning experience to know about the problems faced by the growers. The interactions the Task Force and the Members of the Government on one side, and the growers and the Commodity Boards on the other, revealed the true dimensions of the problem which beg for a solution.**

**The Members of the Task Force are hopeful that the suggestions made, if implemented, over a time frame would yield to a resolution of some of the problems faced by the industry and the growers. With this hope, the Task Force recommends its suggestions to the Government for adoption.**

**Before concluding, the Members of the Task Force would like to place on record their grateful thanks to the officers of the Department of Commerce, most ably led by Shri O.P. Arya, Additional Secretary and equally ably assisted by Smt. Aditi Das Rout, Director, Shri Vijay Kapoor, Under Secretary and Shri T. Narasimhan, Section Officer. In our recommendations on the strengthening of the Price Stabilization Fund Trust (PSFT), we were very lucky to have the assistance and guidance of Shri Amit Chatterjee, CEO, PSFT.**

**We should also recognize the help and guidance received from the Chairmen of all the Commodity Boards who had placed relevant data and material with us for our analysis and study. A special word of thanks is also due to Shri K.N Rao, Chief Manager, Agricultural Insurance Company of India Ltd. whose knowledge on risk-management and insurance was greatly helpful to us in projecting our suggestions. The Task Force was provided with the assistance of two experts, Prof. S. Gangopadhyay and Dr. Bharat Ramaswamy whose expertise on these issues have greatly helped us in making the suggestions contained in the Report.**

# EXECUTIVE SUMMARY

1. Today there is no credible alternative facility available to a grower to meet the risks of price movements and the art of price risk management is unknown to the small growers. (In this entire report, the Task Force designates a grower upto 10ha of holding plantation land as a small grower). To provide this, the Task Force recommends that an insurance cover may be provided to the small growers and the periodical premium may be shared between the beneficiary and the Government – PSFT, roughly on 50-50 basis.

2. The Task Force also feels that there is an urgent need to provide the personal accident cover to small growers. This facility is also to be extended to the plantation workers who are solely dependant on the plantations. The premium, in this case, also should be shared between the Government and the beneficiaries. We understand that such a facility is available on a pilot basis and is monitored by the Price Stabilization Fund Trust (PSFT). This has to be enlarged and made available to people as indicated above.

3. The Task Force would suggest that farmers, processors and exporters should be enabled to utilize the instrument of derivative contracts and options instituted by the Commodity Derivatives Exchanges of India. At present, such contracts exist for pepper, cardamom, chillies, coffee, natural rubber, coconut oil and copra. The Task Force understands that the facility for derivative contracts and options is being used only by large growers. To facilitate small growers also to derive the benefits under this scheme, the Task Force suggests that the small growers should be encouraged and enabled to form cooperatives.

4. An innovative market literacy programme on trading in general and future trading in particular is to be launched. This could be initiated at three levels (a) producers and processors (b) traders and (c) exporters and small corporates. The programme should be so designed as to be contextually appropriate and customized to be organization or household specific.

5. Option for subscription to IOU may be implemented on a pilot basis and in due course, the Task Force suggests a proper institutional framework to be put in place to replace the crop insurance programme. This will result in price rise management to be feasible.

6. The current system of banking regulations does not allow non-investment banks to participate in derivative trading. In view of the Task Force, this needs to be modified and all the banking institutions with exposures to futures trader's commodities, should, subject to position limits, be allowed to participate in futures trading.

7. The Task Force is of a view that development of infrastructure facilities in plantation areas will go a long way in providing market access. This will result in

remunerative prices to the growers for the crops. With this in view, the Task Force recommends the institution of plantation development bonds to be subscribed by the members of the public to be wholly available to development of infrastructure and plantation areas. The bond could be of long-term duration say of 10 years.

8. The Task Force feels that the above bonds should be issued by the PSFT already established by the Government and this Trust must be made into a statutory body considering the various recommendations that the Task Force has made that will make the Trust the focal body. Once this is done, the Price Stabilization Fund Trust would become very effective resulting in synergies between price stabilization functions in the sector and its management.

9. The Task Force recommends the introduction of measures to facilitate commodity boards – PSFT to help self-help groups and other farmers groups - in fair marketing for their produce. Today, part of the problem faced by the small growers is inadequate realization for their produce considering the ultimate price which the consumer pays for the final product. Such measures which enable the growers or groups of growers to process, store and market the products would enable them to realize a much better price for their products than what is happening today.

10. As far as tobacco is concerned, the Task Force advocates extension of group insurance and group life insurance to tobacco growers and labourers. As far as price stabilization is concerned, the Task Force notes that the price volatility for Flue Cured Virginia (FCV) tobacco has been somewhat tempered by the market intervention measures adopted by the Board, prescription of quota limit that constrains supplies and keeping FCV tobacco prices coming down. In this background, therefore, the tobacco crop stands in somewhat a different manner than other commodities for which price stabilization measures have been recommended by the Task Force.

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# CHAPTER – I

## INTRODUCTION

**1.0** Agriculture has been the oldest form of activity practiced by people in the civilized world. Though many of the developed countries have moved away from agriculture as their main stay of economic activity, there is no ruling out of agriculture as part of the basic economic activity in any part of the world, there are still certain areas of the globe, where agriculture is predominant and influential in determining the well-being of the people. India is one such country which is attempting to get out of a situation where agriculture was exclusively important to a stage where agricultural operations are still a major avocation to many of its citizens. This probably is due to the fact we in India have a large land mass given to growth of species. In recent years, however, the share of agriculture to the total gross domestic product (GDP) of the country has been coming down, but still retains an important role in the economy of the country. Plantation is a part of agriculture – in that the cultivation of crops is on a longer time-frame and is better organized and sophisticated. In that, there are organisations which have been in the business for hundred years and more and where the farming methods have been to a large extent modernized. The total number of people engaged in the plantation industry directly comes to more than two million but if one were to take note of the sprinkler effect of people who are peripherally connected to the sector and agencies that inter-act, the total number of people engaged in the sector would be more than three times the number directly employed.

**1.1** The cultivation of plantation crops has been taken up in areas which are conducive to their growth and they are mainly dictated by considerations of rainfall, altitude where estates are situated and the availability of labour. It is seen that the traditional areas of plantation crops are undergoing a change and newer and newer areas are taking to growing plantations crops. Such an expansion has been dictated by more than one ground, namely, the availability of land, the growth in markets both domestic and foreign which make the growth of plantation crops in non-traditional areas also worthwhile and the necessity to provide employment opportunities to a large number of people who are rurally bound.

**1.2** Some of these crops which are peculiar to the Indian conditions and where their growth potential has been found to be in sync with the climatic conditions and the availability of cheap labour have encouraged a spread to non-traditional areas; other countries fastly emerging from under-development have also adopted the strategy of growth of this crop areas, as foreign exchange earners and have tended to modernize production processes. These new areas get over the problems faced by the traditional areas like fairly old aged plants needing replacement, lower yields, the soil getting affected due to longer cultivation periods affecting once again the average yield of crops leading to increased cost of production making such a production uncompetitive in the world markets in a free market economy. It is for this reason that countries which have taken to growing plantation crops in the recent past such as Vietnam, Combodia, parts of Africa etc. enjoy price advantage over the Indian producers. This also makes the Indian sector uneconomic compelling the government to step in with assistance during the periods of financial stress and otherwise. The continuance of the operations in the sector is something which can not be compromised due to the strategic importance, potentiality to earn foreign exchange and above all the number of people who are directly and indirectly engaged in the sector. Economic, social and political reasons compel the continuance of operations in this sector as a matter of necessity and strategy.

**1.3** A plantation crop normally is mono-culture and includes growing of a variety of products like Tea, Coffee, Rubber, Pepper and other spices. In a larger coverage, spices also include products such as chillies, cinnamon and other products normally used in the Indian kitchens. Tobacco also is classified under this category.

**1.4** The domestic production from the Indian plantation sector had been in the past beyond the absorbing capacity of the indigenous market and hence there was a necessity to tap their export potential. Various schemes were put in operation by the Government either on its own or through the Commodity Boards which have been set up by the Government to enable quick and proper attention to be paid to the growers. The sector has also been subject to a catena of enactments which brought into existence a regulatory procedure. For each of the commodities, a Board exists under an Act of Parliament like the Coffee Board, the Rubber Board, Tea Board, the Spices Board, etc. Some of these Boards have extensive inter-action with the growers of their respective commodities and in effect provide all allied services necessary to make a product of the sector eminently marketable. These procedures, however, had to undergo a significant change where the growers fell that too much of their freedom had been affected and the Commodity Boards acted in a restrictive manner affecting their freedom. Some of these Boards still act as large store houses, where commodities are bought at the best possible prices by the

Boards and held till remunerative prices are prevalent for their sales. Some others like coffee growers have moved away from this concept to create individual niches in the market by production of quality products.

**1.5** The importance of the plantation sector in the general firmament of the Indian economy would be realized, if one were to know that 15% of the total agricultural export earnings come from crops like tea, coffee and rubber – although these industries occupy only one percent of the total plantation area. Another feature noticed in the sector is the prevalence of holdings by small, intermediate and large growers. Surprisingly, it is seen that the largest number of owners of coffee estate fall in the category of ownership of upto 10.12 hectares. Whereas in the case of tea, the situation is entirely different where it is noticed that 80% of the plantation area and production is controlled by big companies. The prioritization of the requirements of the sector have received recognition now at the hands of the Government because of the changing demography of these estates, a fall in production of the crops because of their age and the volatile nature of the international market which determines directly or indirectly the realizations from the product of the sector. In the absence of an organized market which would respond to the prevalent conditions, the prices of the Indian plantation crops get determined by the prices of these commodities prevalent in the world market though Indian producers may claim that the productivity and the acceptability of their product is much better than what is given to the products from the countries like Brazil, etc. Since the average cost of production of a product in the other producing countries is lower than what it costs to produce that product in India, there is always a fear that the Indian products and the Indian production still suffer because of the pricing mechanism adopted by the foreign growers.

**1.6** Of late, the realizations on the tobacco and the rubber products has been very good and the Indian levels of productivity are found to be larger than the productivity of the some of the countries where these products are grown. In the case of tea, a certain amount of depression seems to overhang in the market. There are certain incidental issues which have been raised by the representatives of the growers which merit an immediate attention and to which we have referred in the subsequent part of this Report. All said and done, the Indian plantation industry is today governed by the development in the international plantation arena and to a large extent movement of prices out side India decide the comparative strength of Indian growers.

**1.7** Government has been seriously contemplating a measure to correct these developments and some references to these are made in the subsequent chapters.

# CHAPTER – II

## BACKGROUND

**2.0** As was mentioned in the concluding part of Chapter – I, the Indian Plantation Industry is not free from the effects of the development of the International Plantation Industry. Many of the producing countries in Asia which divert a part of their production to their domestic markets, continue to rely on the London market or New York Stock Exchange where their products will be put on public display and with the efforts of intermediaries markets for the Indian produce would be determined and sustained. Tea options, coffee options, etc., take place outside India which decide the sort of support as far as price is concerned which the growers in the plantation sector in the country would receive.

**2.1** In the recent past, the performance of the coffee market in India has been so violent that the recoveries often times have been at below the cost. Though traditionally, we have been looking at the coffee business from the Indian organizational set up within the country – the fact of the matter lies in that the whole prospect of growth and marketing of the products gets indirectly assessed and determined by the world factors. In the last five years or so, the Indian coffee market has suffered a big blow – in that its projected realizations on the basis of coffee crop has been found not to meet even the cost of the production leave alone provide a margin for the growers.

**2.2** Certain measures taken to strengthen the hands of the producers by grant of loans, etc., at lower rates of interest, have led to a position where not much is being achieved. Price support measures taken by the Government by establishment of a price stabilizations trust have received only sporadic support from the industry and the growers.

**2.3** To sustain the sector as a whole and to make the sector viable and economic and to suggest measures that could be adopted by the Government of India in regard to failure of the crops, etc., Government came out with the proposal to constitute a task force consisting of the following individuals :

(1) Shri N. Rangachary, Chairman, Task Force

(2) Dr. Vijay Kelkar, Member, Task Force

(3) Prof. A. Damodaran, IIM, Bangalore

(4) Prof. S. Gangopadhyay, IDF, New Delhi

(5) Prof. Bharat Ramaswamy, Indian Statistical Institute

**2.4** The constitution of the Task Force, the Experts co-opted and terms of reference are given in **Annexure – I** to this Report.

**2.5** It will be seen that one of the primary conditions which the Task Force has to deal with is the creation of a mechanism by which the volatility in the market regarding prices may be eliminated and in more ways than one, adoption of non-traditional methods of tackling this problem have been prescribed to be desirable.

# CHAPTER – III

## METHODOLOGY

**3.0** The taskforce had intensive interaction with each commodity board/agency dealing with these products. Each organisation made a detailed presentation before the task force. The Task Force also had interaction with all other stakeholders particularly the growers and their organizations and identified the main issues of concerns that need immediate redressal. The Task Force further assessed the export potential of various plantation crops, tobacco, spices and floriculture and their potential to earn foreign exchange for the country. They were detailed discussions with bankers and insurance companies as well.

**3.1** The Task Force held detailed discussions with the Chairpersons and officials of the Commodity Boards and also interacted with representatives of small growers, insurance companies, NABARD and commercial banks.

**3.2** Apart from this, the task force analysed the historical performance of each sector trend of growth, productivity, prices trends in international market over a period of the last 10-15 years leading to a comparative position vis-à-vis other competing countries. The task force also analysed the average cost of cultivation of each crop and also the financial burden in the form of taxes, transportation cost and various duties like central excise, custom duty, VAT etc. on major inputs that are required for sustaining the plantation crops.

## CHAPTER – IV

## SECTORAL OVERVIEW – TEA / COFFEE / RUBBER / SPICES

**4.0** Keeping in view the differences in background, contexts and the industry needs, this section briefly highlights respective sectoral profiles followed with an overview of the emerging challenges facing the plantations in India keeping in view both the domestic and the overseas market conditions in the post-WTO regime.

**4.1** The Plantation Sector has been instrumental in developing under-developed regions in different areas of the country. Tea is cultivated in remote, hilly regions and coffee is an integral part of the ecology of the Western Ghats. While the bulk production of coffee, natural rubber and spices are dominated by small-holdings, in tea nearly 80% is accounted for by the corporate sector. This section briefly highlights respective sectoral profiles followed with an overview of the emerging challenges facing the plantations in India keeping in view both the domestic and the overseas market conditions in the post-WTO regime.

### (A) TEA

**4.2** India is the world's second largest producer of black tea employing a workforce of more than 2 million people. India produces around 927 million kgs accounting for 27% of world production. India is also the world's largest consumer of tea. Domestic consumption has gone up from 17 million kgs in 1951 to 790 million kgs at present.

**4.3** Production of tea is an important economic activity in Assam and West Bengal in the North and Tamil Nadu and Kerala in the South. Tea is also grown in non-traditional areas such as Himachal Pradesh, Uttarakhand and Kishanganj district of Bihar. Tea grows from the plains to an elevation of nearly 2500 metres, spread over different climatic zones which enables India to produce different types of teas.

**4.4** The area under tea cultivation is presently around 5.2 lakh hectares. The Tea Board of India and Indian Tea Association give a cut-off line of 10 ha cultivation area between small growers and estates. Small growers who number about 1,27,366 account for 21% of the total area under tea. Their contribution is presently about 21% of all India tea production with around 213 million kgs production of tea. The organized sector comprising around 1600 tea estates above 10.12 ha. Accounts for about 80% production of tea. Half of these are located in the North Eastern State of Assam, a quarter in West Bengal and the rest in South India. The state-wise and size-wise distribution is as follows:

<u>State-wise distribution – (2005-06)</u>

- Assam 476 million kg (51.2%)
- West Bengal 216 million kg (23.2%)
- Tamil Nadu 155 million kg (16.7%)
- Kerala 67 million kg (7.2%)
- Others 16 million kg (1.7%)

<u>Size-wise distribution – (2005-06)</u>

- Tea estates greater than 100 hectares – 1079 gardens (74.5% area)
- Total for greater than 10.12 hectares -1614 gardens (78.8% area)
- Upto 10.12 hectares (small growers) – 1,27,366 (21.2% area)

**4.5** The tea industry occupies an important place in the plantation sector in India not only because of the significant level of production of tea but also because this sector is related to the livelihood concerns of a large number of people employed directly and indirectly in this industry and its ancillary activities. The tea sector impacts the livelihood of 3 million persons comprising women and disadvantaged sections of society. This workforce possess no skills other than plucking green leaf and are mostly landless.

**4.6** In India the small growers are mainly located in Nilgiris (Tamil Nadu) but the number of small growers is growing significantly in West Bengal, Assam, Bihar and NE States as well. In the last 10 years, there has been phenomenal growth in the small growing sector compared to the traditional organized tea sector. During mid 1990s many small farmers in Assam and North Bengal and unemployed youth started taking up tea cultivation given the abundance of uplands, proven agro-technology, skilled labour and assured green leaf market.

**4.7** The smallholders only grow tea whereas the corporate sector has manufacturing facilities as well which transforms the green leaf into a ready to consume beverage. The fairly large quantity of 'ordinary' tea produced by the small growers is sent to bought-leaf factories for processing. This often results in low returns to the grower and impacts prices in the market. The bought-leaf factories produce approximately 175 million kgs of tea,. Concerted efforts have been made by the Tea Board to help the small growers to not only improve their plucking standards, but also handle the plucked leaf in a proper manner.

**4.8** The gains from productivity and profitability which arise in processing for the market are not always passed on to the smallholder. Smallholdings in India, especially in the south, generally use their own family labour. Their reliance on hired workers is minimal. Some of these smallholders even work as wage labour in the estate sector.

**4.9** Women workers on tea plantations have their own labour identity. In North India the division of labour between men and women, is based on shared relationships rather than on domination and exploitation. Which exists in most rural households.

**Table showing important parameters : 2005-06**

| **Parameters** | **Tea** |
|---|---|
| Production | 930,850 |
| Area ( in lakh ha) | 5.21 |
| Productivity (kg/ha) | 1785 |
| Exports : Quantity (MT) | 181,060 |
| Exports: Value (Rs in crore) | 1631.60 |
| Imports : Quantity (MT) | 16,400 |
| Imports : Rs. In crore | 99.26 |
| Prices Rs/ Kg. | 58.06 |

**(B) COFFEE**

**4.10** Some of the world's finest Arabicas and Robustas are grown in India on high elevations in thirteen geographically unique regions including the Anamalais (Tamil Nadu), Araku Valley (in Orissa), Bababudangiris (Karnataka), Shevaroys (Tamil Nadu), Nelliampathys and Wayanaad (Kerala). Indian coffees are shade grown, hand-picked and sun-dried on plantations abundant with rich flora and fauna. India cultivates all of its coffee under a well defined two-tier mixed shade canopy, comprising evergreen leguminous trees. A wide variety of spices and fruit crops like vanilla, orange and banana grow alongside coffee plants.

**4.11** Coffee is produced in an area of around 3.5 lakh hectares, pre-dominantly in Karnataka, Kerala and Tamil Nadu. The share of Karnataka, Kerala and Tamilnadu are 70.7%, 21.3% and 6.9% respectively whereas the share of NTA & NE Region is 1%. The estimated production of coffee is 2,81,900 tonnes comprising of 98,550 tonnes of Arabica and 1,83,350 tonnes of Robusta (35% & 65% respectively).

**4.12** India has over 1.78 lakh coffee growers, out of which 1,75,475 of which fall within the small growers' category and balance 2,833 holdings fall under large holdings (above 10 Ha category). Small holdings account for about 71.8% of the total area i.e, 2,54,932 ha. Due to its labour intensive nature, it is an important source of rural employment for men & women, especially in parts of South India.

**4.13** The coffee sector has inherent limitations in increasing the productivity to bring down the cost of production. Coffee is grown in harsh conditions under unpredictable weather situations, lack of options for organizations and accessibility and infrastructure bottlenecks in hilly coffee growing tracts etc.

**4.14** Although India contributes only around 4.5% of the world production, Indian coffee has created a niche for itself in the international market, particularly Indian Robusta which is highly preferred for its good blending quality. The Indian Coffee Industry is now gaining recognition among reputed global roasters, who are sourcing coffees from India for their numerous blends

**Table showing important parameters : 2005-06**

| Parameters | Coffee |
|---|---|
| Production | 274,000 |
| Area ( in lakh ha) | 3.79 |
| Productivity (kg/ha) | 723 |
| Exports : Quantity (MT) | 201,517 |
| Exports: Value (Rs in crore) | 1509.71 |
| Imports : Quantity (MT) | 24028 |
| Imports : Rs. In crore | 100.71 |
| Prices Rs/ Kg. | Arabica: 114.29<br>Robusta: 53.37 |

## I RUBBER

**4.15** Rubber plays an important role in the industrial and economic development of the country. Rubber plantations provide the principal raw material required for manufacture of around 35,000 items of rubber products ranging from toy balloons to tyres of giant earth moving equipments.

**4.16** Cultivation of rubber was introduced in the country during the first decade of this century. Rubber is primarily grown in the State of Kerala and adjoining Kanyakumari district of Tamilnadu, which are the traditional rubber growing areas of the country. Both areas are geographically and agro-climatically suitable for rubber cultivation. However, there has been a shift in the geographical composition of area over the years due to the Rubber Board's policies and programmes implemented during the VI and VII Five-year Plans for the introduction and promotion of rubber cultivation in non-traditional regions, especially in the North-east. Currently, Rubber is also grown in Tripura, Assam, Megahalaya , Mizoram, Manipur, Goa and Coastal Karnataka. Besides, rubber has recently been introduced in the states of Orissa, Andhra Pradesh, Madhya Pradesh and West Bengal.

**4.17** Rubber plantations are spread over 5.78 lakh hectares in 16 states of the country. The production sector of the country is dominated by small holdings, which accounts for 91% of the production and 88% of area with an average holding size of 0.5 hectare. There are nearly 1 million producers and about 0.7 million people engaged in the plantation sector as workforce either directly or indirectly.

**4.18** With sustained research and development activities being carried on by the Rubber Board coupled with extension and advisory services and transfer of technology to the fields, India has become the fourth largest rubber producer in the world next to Thailand, Indonesia and Malaysia with an average productivity of around 1796 kg. per ha., the highest amongst the major natural rubber producing countries in the world. The country is also the fourth largest consumer of natural rubber.

**Table showing important parameters : 2005-06**

| **Parameters** | **Rubber** |
|---|---|
| Production | 803,000 |
| Area ( in lakh ha) | 5.94 |
| Productivity (kg/ha) | 1796 |
| Exports : Quantity (MT) | 73,820 |
| Exports: Value (Rs in crore) | 458.29 |
| Imports : Quantity (MT) | 45285 |
| Imports : Rs. In crore | 274.51 |
| Prices Rs/ Kg. | 66.99 |

## (D) SPICES

**4.19** India is the land of oriental spices. Indian spices are used in over 130 countries and their intrinsic quality in terms of taste, flavour, colour and fragrance has further increased the demand for Indian spices. Major spices and spice products, exported from India are Black Pepper, Cardamom, Ginger, Turmeric, Chillies, Seed spices, Mint Oils and Oleoresins. The world demand of spices is projected at 7.50 lakh tones valued at 1650 Million US $ during 2003-04.

**4.20** Spices are cultivated in almost all the States in the country. There is an area of about 25.3 lakh ha. (2004-05) under spice cultivation. 75 spices out of the 109 spices listed in ISO list are grown in this country and production is about 4.04 million tones. The major spice producing states in India are Kerala, Karnataka, Tamilnadu, Andhra Pradesh, Madhya Pradesh, Gujarat, Maharashtra, Orissa, Rajasthan and North Eastern states.

**4.21** India is endowed with a rich diversity and excellent collection of spices having intrinsic quality. The center of origin of two major spices, viz., Black Pepper and Cardamom are the western ghats of India. The country has excellent infrastructure for research and development of spices with Indian Cardamom Research Institute (Spices Board), Indian Institute of Spices Research, Directorate of Arecanut and spices development, State Agricultural Universities etc. Value addition in spice industry is well developed in the country. The organic spices market is also showing desirable annual growth rate. There is an expanding global organic market for organic spices. Alternative systems of medicine are gaining importance in the western world and India has a rich tradition of Ayurveda and many of the spices are having medicinal properties and are mainly used in Ayurvedic medicines. Research efforts are being put into validate the medicinal, therapeutic and nutraceutical properties of Indian spices in the modern medicine.

**4.22** Although historically India is the land of spices, India's leadership position has been facing ups and downs both in volume and value terms. The major constraints in spice production and export are low productivity leading to insufficient exportable surpluses, increasing stringency in quality norms of the importing countries (such as pesticide residues, mycotoxins, microbial infection and poor quality control) and increasing competition from newly emerging producers in South East Asian countries like Vietnam, with practically no internal demand.

**4.23** Effort of Spices Board is to address issues like low productivity, improvement in quality and high end value addition and for broadening the export basket of spices from India.

Following tables show the important indices of the spices.

**TABLE SHOWING IMPORTANT PARAMETERS**

| **Parameters** | **Spices** | **Year** |
|---|---|---|
| Production | 4.04 Million tones | 04-05 |
| Area ( in lakh ha.) | 25.3 | |
| **Productivity (kg/ha.)** | | |
| 1. Cardamom (Small) | 209 | 06-07 |
| 2. Cardamom (Large) | 195 | |
| 3. Pepper | 310 | |
| 4. Ginger | 4636 | |
| 5. Turmeric | 4536 | |
| 6. Chilli | 1608 | 04-05 |

| Parameters | Spices | Year |
|---|---|---|
| 7. Cumin | 479 | |
| 8. Fennel | 1279 | |
| 9. Fenugreek | 1245 | |
| 10. Coriander | 726 | |
| **Exports : Quantity (MT)** | 320527 | 05-06 |
| Exports : Value (Rs. In crore) | 2295.25 | |
| Imports : Quantity (MT) | 84500 | |
| Imports : Rs. In crore | 515.40 | |
| **Prices : Rs/Kg** | | |
| 1. Cardamom (Small) | 215.56 | |
| 2. Cardamom (Large) | 107.84 | |
| 3. Pepper | 66.44 | |
| 4. Ginger | 99.40 | |
| 5. Turmeric | 49.45 | |
| 6. Chilli | 24.57 | |
| 7. Cumin | 64.47 | |
| 8. Fennel | 57.58 | |
| 9. Fenugreek | 16.72 | |
| 10. Coriander | 20.72 | |

## (E) FLORICULTURE

**4.24** India produces a wide variety of flowers- rose, chrysanthemum, marigold , jasmine, heliconias, carnations, etc., in various agro-climatic conditions in the country. 115921 hectares of land is under floriculture cultivation. Major states producing flowers are Tamil Nadu, Karnataka, Haryana, Andhra Pradesh, Maharashtra, West Bengal and Gujarat. The total production in 2004-05 is estimated to be 654837 metric tons and 19515 lakh stems. This includes open air cultivation and green house cultivation.

**4.25** Department of Commerce is concerned with the export oriented floriculture viz the green house cultivation. 500 hectares is presently under green house cultivation. The export of floriculture products is given below.

**(Qty in Mts;Value in Rupees crs)**

| 2002-03 | | 2003-04 | | 2004-05 | | 2005-06 | |
|---|---|---|---|---|---|---|---|
| Qty | Value | Qty | Value | Qty | Value | Qty | Value |
| -- | 165.86 | 30659.53 | 249.55 | 26262.35 | 210.99 | NA | 305* |

(*Fresh cut flowers accounted for exports valued at Rs 74.13 crs.
This includes dry flowers, greens, potted plants etc.)

**4.26** Trade in floriculture is one of the most rapidly expanding global enterprises today. The international trade in floriculture is expected to grow to US$ 16 billion by the year 2010 from the present level of US$ 11 billion. Although, the value of export of floriculture products from India has registered impressive growth from Rs. 18.83 crores in 1993-94 to Rs. 305.00 crores in 2005-06, India is still only a marginal player in the world floriculture trade with less than 1% share. With the wide range of agro-climatic conditions available in the country, India could emerge as a major supplier to the international flower market provided we address some of the constraints impeding our competitiveness in the world market. The growth in exports would generate rural employment and income to the farmers and bring in efficiency to the entire production process through better technology and international quality standards.

**4.27** A large number of floriculture units had come up during the early 1990's with focus on exports. For various reasons they could not perform well and a large number of them are sick and declared NPA's by banks. APEDA had entrusted a study of these units with a view to assist in their revival/rehabilitation. The reasons for their sickness range from lack of due diligence on the risks associated with the projects on the part of the promoters due to lack of technical knowledge, high capital costs, poor yields, older varieties etc.

**4.28** Most of the floriculture units are not operationally sick, i.e. at the operational level the business is generating profits, albeit only at a marginal level and most units do make cash profits before providing for their interest obligation. However due to the high interest burden most units have become financially sick and unable to repay the lenders.

**4.29** The banks and financial institutions have provided either fully or a large part of the loans based on the RBI provisioning norms for NPAs. Most of the cases have been referred to the Debt Recovery Tribunal (DRT) or to Civil Courts by the lenders.

**4.30** Steps are underway to assist in rehabilitation of the sick units which should pave the way for renewed interest and activity in this sector which has a very good potential for exports and for employment generation.

**(F) TOBACCO**

**4.31** Tobacco is one of the most important crops in India, with around 26 million people relying on it for their livelihood, both directly and indirectly. India is the second largest producer of all types of tobacco after China constituting 10% of world production of tobacco. It is the sixth largest exporter of all types of tobacco having 4.5% share in the world market. India is the only country growing different types of tobacco in varied agro-climatic conditions. Tobacco in India is grown mainly in A.P. and Karnataka, and to a small extent, in Maharashtra, Gujarat and Orissa. It is a significant source of foreign exchange with Rs. 1345.83 crores being generated through export of tobacco & tobacco products export in 2004-05 and Rs.1404.72 crores in 2005-06.

**4.32** Approximately 680 million Kgs. Of tobacco is produced annually in about 4 lakh hectares in India of which the share of various categories is as below:-

| | |
|---|---|
| Flue Cured Virginia (FCV) Tobacco | 35% |
| Beedi Tobacco | 30% |
| Hookah Tobacco Paste | 10% |
| Snuff and Cigars | 5% |
| Chewing Tobacco | 12% |
| Natu, Burley and others | 12% |

**4.33** **FCV tobacco** is the most important of these varieties; both from the point of view of export earnings and excise revenue. It constitutes about 70% of tobacco exports. India is the 5th largest producer of FCV tobacco in the world after Brazil, Zimbabwe, USA and China and it is primarily grown in the states of Andhra Pradesh and Karnataka.

**4.34** The Tobacco Board was constituted in 1976 with the objective of promoting the planned development of the tobacco industry, under the overall control of the Union Government. The Board regulates the production, curing and marketing of **FCV tobacco**. It also monitors fluctuations in market demand, both domestic and international. For FCV tobacco in order to help in devising appropriate market strategies. In addition, it conducts extension and developmental programmes for the benefit of the growers. In essence, its function is to further the interests of the growers, manufacturers and exporters of FCV tobacco, while keeping the larger interests of the nation in mind

**4.35** As per the Tobacco Board Act, the FCV Tobacco Industry has been brought under the control of Government of India. The Tobacco Board is responsible for regulating the production and curing of Virginia tobacco keeping in mind the demand for tobacco, both domestic and international, the marketability and the need for crop rotation. The Board carries out is responsibility by registering the nurserymen and growers and licensing the barn operators. Every year, the Board lays down the production policy, fixes the crop size and registers the growers and

barn operators. FCV tobacco is marketed through auctions conducted on the auction platforms of the Tobacco Board.

**Period of harvest and auctions etc.**:-

| | **Andhra Pradesh** | **Karnataka** |
|---|---|---|
| Plantation | 3rd week of September to 2nd week of December | Last week of April to May end |
| Curing | 4th week of November to February end | 1st week of July August end |
| Marketing Auctions | 2nd fortnight of January May | September 2nd week to December end. |

AP includes AP + Maharashtra + Orissa (Source: Tob. Board)

**4.36** The Department of Commerce is concerned with regulation of the production, curing and marketing of **FCV tobacco**. The details of production of the same are given below.

**PRODUCTION STATISTICS**

**(Area in Ha., Crop in M.Kgs.)**

| Crop Season | State | No. of growers Regd. | Crop size fixed | Crop autho Rised | Area Regd. | Area Planted | Crop Mar keted |
|---|---|---|---|---|---|---|---|
| 1998-99 | A.P. | 44546 | 99.82 | 99.29 | 90640 | 129230 | 147.18 |
| | Karnataka | 18371 | 40.00 | 39.97 | 27588 | 54236 | 54.69 |
| | Total | 62917 | 139.82 | 139.26 | 118228 | 183466 | 201.87 |
| 1999-2K | A.P. | 44629 | 101.61 | 101.28 | 89883 | 128760 | 131.37 |
| | Karnataka | 18427 | 40.00 | 39.98 | 38221 | 51989 | 45.30 |
| | Total | 63056 | 141.61 | 141.26 | 128104 | 180749 | 176.67 |
| 2000-01 | A.P. | | C R O | H O L | I D AY | | |
| | Karnataka | 18131 | P | 23.46 | 19512 | 40012 | 41.98 |
| | Total | 18131 | 25.00 | 23.46 | 19512 | 40012 | 41.98 |
| | | | 25.00 | | | | 41.98 41.9 |
| 2001-02 | A.P. | 44029 | 107.45 | 102.58 | 86884 | 87754 | 120.04 |
| | Karnataka | 18751 | 38.07 | 36.99 | 29852 | 47699 | 57.68 |
| | Total | 62780 | 145.52 | 139.57 | 116736 | 135453 | 177.72 |
| 2002-03 | A.P. | 44782 | 105.48 | 103.77 | 88498 | 93209 | 127.67 |
| | Karnataka | 19351 | 50.00 | 49.18 | 31063 | 56364 | 63.25 |
| | Total | 64133 | 155.48 | 152.95 | 119561 | 149573 | 190.92 |
| 2003-04 | A.P. | 45583 | 111.06 | 110.42 | 94985 | 109188 | 147.98 |
| | Karnataka | 19702 | 53.00 | 45.02 | 34225 | 69159 | 73.69 |
| | Total | 65285 | 164.06 | 155.44 | 129210 | 178347 | 221.67 |
| 2004-05 | A.P. | 45187 | 111.06 | 108.16 | 89332 | 113334 | 153.01 |
| | Karnataka | 39498 | 67.00 | 66.50 | 48844 | 69701 | 90.34 |
| | Total | 84685 | 178.06 | 174.66 | 138176 | 18303 | 243.35 |
| 2005-06 | A.P. | | | | | | 0.1** |
| | Karnataka | | | | | | 58.97* |
| | Total | | | | | | |

*As on 11.1.2007 ** As on 18.1.2007

Note: - C.H. Crop Holiday (Source: Tobacco Board)

# CHAPTER – V

## FUTURE CHALLENGES

### (A) Within the domestic market

**Price Volatility**

**5.0** The plantation sector has witnessed growth with periodic booms and busts. The prices of these commodities have been cyclical in nature and subject to international price volatility. This is attributable to an over supply situation and increasing uncertainty in market conditions. Volatile and unpredictable prices have inhibited investment and adjustment to market conditions, particularly for small growers and destabilized their incomes and savings. Low grower realizations lead to reduction in farm inputs and farm operations resulting in reduced productivity.

**5.1** While tea accounts for 27% of world production, coffee and rubber account for 4.5% and 8.6% respectively. In India, movements in the prices of these commodities are caused by the international reference price but not vice versa due to the relatively low share of India in global exports. In the long run, prices in India tend to move in accordance with international prices.

**5.2** As a commodity, coffee has mainly been an exportable product for almost all producing countries. It is estimated that 70% of global coffee is grown in farms of less than 10 ha. Traditional producers who are not cost competitive are subjected to a severe competitive squeeze. In India, small farmers in the coffee community accounting for a major share of the total output do not have a realistic option of diversifying into a crop or activity that provides a viable return when coffee cultivation does not yield the desired returns. Small holders find it most difficult to adjust to free market conditions especially when they were hitherto protected by pooled marketing systems. The challenge therefore is how to achieve an orderly market balance where coffee prices will guarantee a reasonable return not just to the efficient producer but to the average and smaller producers.

**Supply-Demand Equilibrium**

**5.3** Historically, the tea and coffee sectors have had excess supply over demand. In tea, persistent surplus production and intense competition among major producers for increasing respective shares in stagnant markets has driven down international prices of tea.

**5.4** In the world coffee economy the supply constraint caused by the frost in Brazil in the mid nineties was followed by a period of abnormally high prices which in turn prompted a surge in production that substantially altered the global production structure leading to the worst ever coffee crisis in terms of producers' income. Coffee growers went through a period of serious crisis on account of historically low prices that prevailed between 2000 and 2004, owing to a supply – demand mismatch. The growers are still to come out of the economic trough owing to the overhang of accumulated debt commitments of the past 4-5 years.

**5.5** Small and marginal holdings account for 91% of the production of Natural Rubber in the country involving about 1 million small growers among whom more than 15000 are 'jhumia families' in the North East. Violent fluctuations in price would therefore have far reaching socio-economic consequence for this sector. In India the production sector is dominated by sheet grades and there exists also a captive domestic market. Domestic rubber consumption is dominated by the unorganized non-tyre sector which primarily consumes sheet grades of rubber. The emergence of this fast growing consuming industry ensured that not only the entire rubber produced was consumed but the gap between production and consumption was also filled up through import. Since the supply, in general, was short of demand, domestic rubber commanded a better price than in the international market. This position was maintained up to the 1990s by protectionist policies. The situation changed during 1990s in the post-WTO scenario when liberalization policies were adopted.

**Pests and diseases / Vagaries of weather**

**5.6** Plantation farming activities are vulnerable to biotic and abiotic disturbances, specifically to pests and vagaries of weather. The latter include rainfall- its deficit or excess, distribution, extreme temperature conditions, hail incidence, extreme wind speed, humidity variations etc. While biotic risks (typically pests, diseases, weeds ) can be mitigated with the use of technology/appropriate inputs, the challenge lies in providing risk mitigation measures for abiotic risks.

**5.7** In the coffee sector, drought conditions and build up of temperature in coffee growing regions are conducive for the white stem borer pest to manifest and spread rapidly in all most all Arabica growing tracts. The quality of coffee beans is also affected as the beans harvested out of dying borer attacked plants produce hollow/light beans. For long term sustainability in the plantation sector, necessary relief is required to be made available to growers by providing insurance cover against adverse weather incidence whose frequencies and impact are generally correlated with the eco-zone. The tea sector has been affected by drought conditions and with pests like tea mosquito. NR is prone to natural calamities (fire, earthquake and other natural hazards). High crop loss in NR is due to abnormal leaf fall disease.

**Competing beverages and presence of overseas suppliers**

**5.8** With the onset of globalization, the sector is today faced with different challenges including that of new global competition from low cost producers and shrinking markets. The larger beverage market has numerous competing products. While tea and coffee compete amongst themselves for the larger share of the consumer market, they also face competition from the soft drinks sector. Imports are also being effected into the domestic market with the onset of trade liberalization. For sustained development in the face of stiff international competition, especially from new entrants such as Vietnam, it is imperative to arrest declining productivity, boost global competitiveness and render plantation operations viable. In tea, it is difficult to establish a direct correlation between the auction price and the retail price on the tea as the product is transformed from a "commodity" as the auction level to a "brand" before it reaches the final consumer. The emergence of a large number of players has also distorted the domestic tea market.

**5.9** Small growers in tea are fragmented. This enables the leaf collection agents to play a larger role which further distances the farmer from the primary market price of made tea. Small growers are 'price takers' and do not exercise any control over green leaf pricing. Further, since the green leaf price paid to the small growers is linked to the auction price, any price fluctuations in the auctions directly affect the price realized by the small grower, more noticeably in South India. Since small growers cannot control green leaf price, their emphasis often shifts to increasing volumes (to increase earnings) at the cost of quality.

**Non-Availability of credit and Debt overhang**

**5.10** The low prices prevailing over the last four-five years has resulted in small growers being unable to recover their cost of production. In the coffee sector, adverse weather conditions during the past few years, resulting in lower production of coffee, added to the difficulties faced by them in servicing their debt burden, which related mainly to loans taken when the prices were at peak levels during the mid 1990s.

**5.11** At present, the growers are not in a position to take up capital investments like replanting, in addition to regular estate operations. Due to the existing debt burden, the banks are also not forthcoming to extend further loans to the growers for making capital investments. Hence, credit flow to the coffee grower sector is very crucial. The Government had introduced a package of relief measures primarily aimed at debt amelioration to bail out the coffee industry and to ensure its future growth.

**Inability to shift to alternate economic activity**

**5.12** Plantation growers are linked to the land and the standing crops they have harvested for generations. Being unskilled, they cannot take up any other economic activity. Further, they lack other economic assets. The majority comprise women and persons from economically deprived sections. The size of the labour (direct as well as indirect) and their dependants is huge.

**(B) Shrinking international markets**

**Emergence of low-cost competitors**

**5.13** The major reasons for overall decline in the share of the Indian tea in the world market are the stiff competition being faced from other low-cost competitors and exporting countries like Sri Lanka, China, Indonesia, Vietnam & Kenya, various tariff and non-tariff measures imposed by some of the tea importing countries like Russia, Egypt and Iran, lower offtake by Russia due to change in consumer preferences and higher prices of Indian tea due to high cost of production. Further, due to a substantial domestic market, export of tea has not been a primary concern for the tea industry. The focus was on the domestic market, rather than on creation of a competitive product to meet global demand. Traditional coffee markets have like Russia have seen competition from low cost producers like Vietnam. The situation with regard to other plantation crops and spices is facing stiff international competition. And the domestic prices are also affected by the volatility of international prices. Even in floriculture crops, there is a very tough competition from African countries where costs of production are lower and, in any case, their products are cheaper in the international markets due to lower costs of transportation whereas Indian industry suffers due to freight disadvantage.

**Growth of Mature/differentiated markets**

**5.14** In today's competitive global market, the scenario is fast changing. In developed markets tea and coffee are no more merely commodities. They are niche and lifestyle products. On the contrary, in India they are still perceived to be commodities. The instant coffee market in India, however, has been a duopoly of Nestlé and Hindustan Lever for decades. Of late, other players have come in. These players differentiate their products through branding and packaging. Hence, the challenge before the industry, today, is to graduate to these niche markets though a process of constant differentiation of products. The industry has to reconfigure to become a fast changing, high value adding creator of markets to cater to the demand for niche-products. At the same time, the challenge would lie in addressing the issue of price percolation to the grower for sustainable development. There has to be greater synergy between the industry and the growers of these commodities.

**5.15** Possible Remedial Mechanisms analysed in various sections of this report seek to protect growers' incomes in the face of price volatility and put in place risk mitigation measures for tackling Pests / Diseases / Weather / Natural Calamities as per individual sectoral needs.

**Treatment of Plantation Crops under the WTO Regime**

**5.16** Due to its labour intensive nature, these sectors are an important source of rural employment for men & women. A huge rural population is dependent on their cultivation. In the absence of alternative economic employment opportunities, the sustainability of these sectors is vital for protecting the livelihood concerns of people directly and indirectly engaged in production in these sectors. Coffee is cultivated in fragile eco systems, and the contribution made by the coffee farming communities through maintenance of tree cover is extremely significant, both for the sustenance of flora and fauna in the region and for safeguarding the socio economic fabric of these remotely located regions. Small farmers do not have a realistic option of diversifying into a crop or activity that provides a viable return when cultivation of these commodities do not yield the desired returns. This is partly due to restrictions of market access to other crops in developed countries. Further, several commodities which are of great significance for food security in developing countries are subjected to high levels of export subsidies in developed countries. These subsidies artificially depress international prices and lower the farm incomes of producers in importing countries and thus adversely affect their livelihood.

**5.17** WTO members adopted a framework on 31st July 2004 for establishing modalities in agriculture. This framework has drafted provisions for according Special and Differential Treatment (SDT) to Developing Countries as part of the Doha Round. The two instruments/components proposed under the SDT include the following:-

**(a) Designation of Special Product (SPs)**
**(b) Special Safeguard Mechanism (SSM)**

**5.18** Products designated as SP would be submitted to special treatment in terms of market access commitments. Provisions on SSM would provide developing countries with an instrument to address import surges and price drops. India needs to establish a strong case for designating tea and coffee and other plantation commodities as 'Special Products' in the context of a developing country such as India. This is in view of the following:-

- A significant proportion of the domestic consumption of plantations in its unprocessed or processed form is met through domestic production;
- The domestic consumption of the product is significant in relation to total world exports of that product (as in the case of tea);
- A significant proportion of the total domestic production is produced on farms or operational holdings of size 20 hectares or less;
- A significant proportion of the producers engaged in the production of the plantation crop are low income, resource poor or are subsistence farmer or disadvantaged producers;
- A significant proportion of these plantation commodities is produced in drought-prone or hilly or mountainous regions;
- A significant proportion is produced by vulnerable populations such as tribal communities, women, aged people.

## CHAPTER – VI

## PROBLEMS FACED BY THE PLANTATION SECTOR

**6.0** The main problems plantation sector have been facing are (a) Unremunerative prices in certain years due to volatility of prices in the international market. The fall in prices is almost a cyclical phenomenon and takes place every 4-5 years. Since most of the produce is exported, the prices in the international market do have very strong impact on the domestic prices. As has been stated earlier in the international market exports are being made from other producing countries at very low prices. Though the cost structure of plantation in these countries have not been studied in comparison to the cost structure in India, the fact remains that international prices do go down because of the low prices quoted by other producing countries. And in fact the Price Stabilization Fund Trust was established in 2003, primarily from the point of view of giving some relief to the growers on this account. Though the scheme did not succeed and problem still stands and in fact it is getting aggravated as other countries increase their production and strengthen their presence in the international market. So the first issue is remunerative prices to the growers so that the plantation sector remains an attractive economic option.

**6.1** Apart from the price, the plantation sector including spices, floriculture and tobacco are exposed to weather risk disadvantages. This results in decrease in productivity and sometimes wipes out the plantation crops altogether. In the recent past, the plantation sector has not seen very good results. It is not possible for the growers to undertake best practices for plant protection, irrigation, rejuvenation and replanting wherever it is necessary. Most of the plantations have become very old and due to lack of intensive management, their productivity has also declined. The question is to find a mechanism by which the growers are in a position to fund best farm practices and create surpluses to rejuvenate the plantation. In this context, the first requirement is to insure crops against both biotic and abiotic risks.

**6.2** Together with this, it would be necessary to make the finance available to the growers so that they can undertake replantation and rejuvenation well in time and not to allow the plantations to grow very old much beyond the stage of their prime productivity. The interest rates on bank borrowings appear unaffordable to the plantation growers.

**6.3** The other issue which needs redressal particularly in the case of very small growers is some kind of personal social security in the event of accidents and death. The plantation workers who have been traditionally working on the plantation and have no other skill to seek alternate employment also have to bear the consequences of low prices, low productivity and crop failures. They also need to be provided with some kind of social security so that in the event of permanent disability and death, their families do get some financial assistance.

**6.4** The other factor which is most important in ensuring proper prices for the produce is the infrastructure. As most of the plantations are located in remote areas in the country, they do not have easy access to markets and the infrastructure in these areas is extremely poor. The time and the cost involved in getting the produce from the plantations to the market centres is sometimes prohibitive and if the product is to be sold in international market, exporters have to compete with countries where the costs of production and transport are much lower. This factor also contributes substantially in lowering the returns to the farmer. So it is very essential that plantation sector is provided with proper infrastructure and till such time it is not in place the disadvantage needs to be compensated by giving transport subsidy. This would, to a large extent, ensure that the increasing costs of transportation that are passed on to the growers in some form or the other at present are taken care of and to that extent the growers do not lose.

# CHAPTER – VII

# POLICY OPTIONS

## (A) PRICE RISK IN PLANTATION SECTOR

**7.0** Agricultural enterprises in general and plantation commodities in particular are known to experience many risks and notably those arising from volatility of commodity prices. Price volatility affects every layer in the commodity value chain. However its effects are extreme for the primary producers, namely, farmers. Plantation farmers take the brunt of falling prices, in the form of reduced price realization. All the same, they also do not experience any perceptible increase in price realization at the farm gate level during price upswings.

**7.1** One of the main consequences of price related risks are that farm level investments get adversely affected. While during the downswings, there are clear constraints on farm investments due to liquidity crunch, during upswings, farmers tend to keep away from investments in their holdings, as they have to meet the debts incurred by them during the downswing phase. Since every act of capital investment in plantation agriculture is associated with property improvement and more specifically with new planting or re- planting activities, where cash outflows tend to be greater than cash inflows, there is a relative disinclination to carry out capital investments. For crops such as coffee, pepper, cardamom, tea and rubber, the gestation period of 5 to 6 years associated with tree/ horticultural crops causes farmers who take up new planting activities undertake new planting to suffer from liquidity crunch.

**7.2** Table below provides details of the subsidies administered by different commodity boards. Studies by Prof. Damodaran (1999) on Coffee Board subsidy schemes bring out the fact that these subsidy schemes are not adequate to meet the liquidity crunch of coffee farmers. Similar is the situation for tea and rubber enterprises. Figure 1 captures the situation of adverse net cash flows for plantation enterprises. As the figure indicates a new plantation or a re – planted estate or holding suffers from greater outflows of cash as compared to inflows due to the fact that yields of new plantations do not attain economic levels until they are 5 to 6 years of age. Once the economic yield levels are attained, the situation of negative net cash flows gives way to a break-even situation and finally to a net cash inflow situation with advancing years. Though Commodity Boards have a long-established system of paying subsidies for re–planting and new planting activities these subsidies are not adequate to the cash flow positions of growers.(Damodaran,1999) .

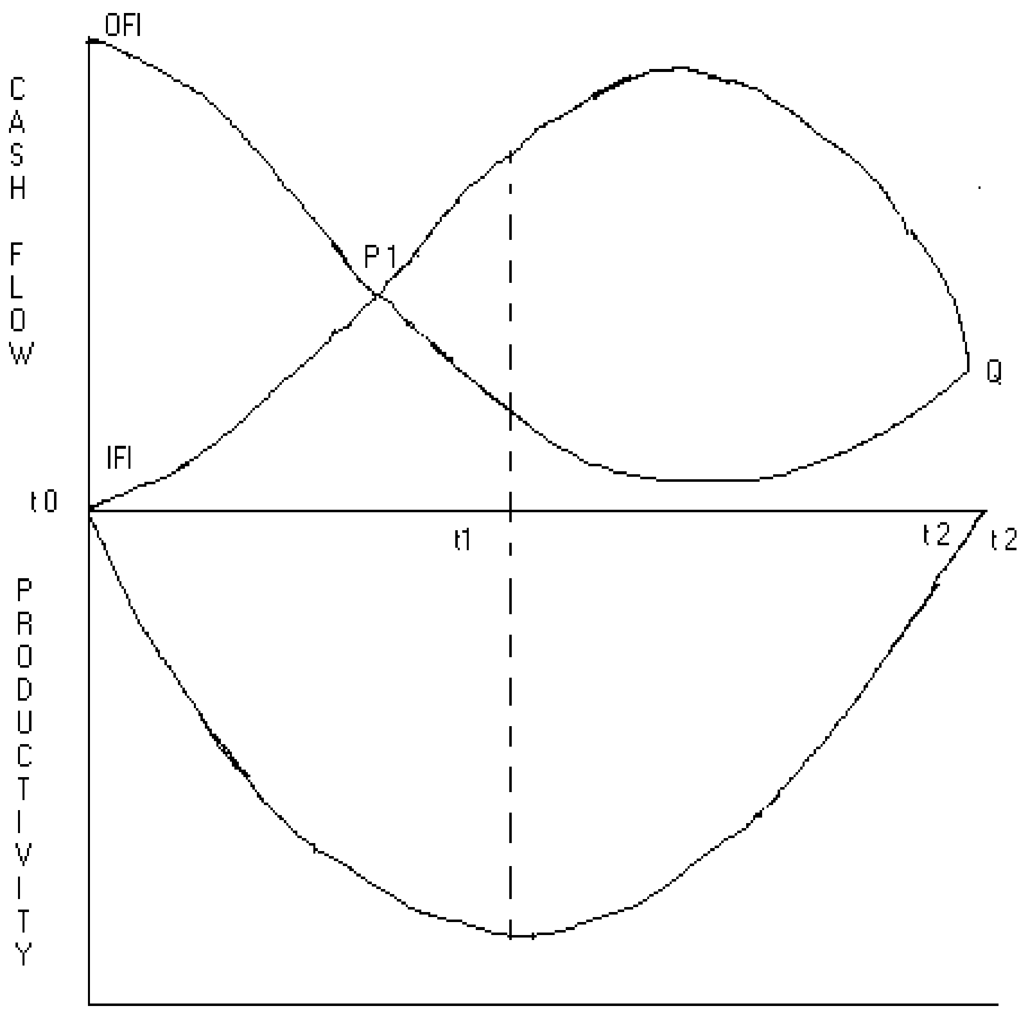
**SUBSIDIES GIVEN BY THE COMMODITY BOARDS UNDER VARIOUS SCHEMES DURING THE X PLAN PERIOD**

1. **TEA BOARD** 2. **COFFEE BOARD** 3. **RUBBER BOARD** 4. **SPICES BOARD**

| | Scheme | X Plan Outlay [Rs. In Crores] | Scheme | X Plan Outlay [Rs. In Crores] | Scheme | X Plan Outlay [Rs. In Crores] | Scheme | X Plan Outlay [Rs. In Crores] |
|---|---|---|---|---|---|---|---|---|
| **1.** | **Tea Plantation Development** | **98.59** | **Step up Production, Productivity & Quality** | **21.68** | **Replanting / Newplanting** | **67.61** | **Productivity improvement of small and large cardamom** | **9.86** |
| **2.** | **Quality Upgradation & Product Diversification** | **76.80** | **Support to small grower sector** | **22.30** | **Rubber Plant Project for Tribal Settlements & Producvity enhancement** | **9.07** | **Post harvest improvement of spices** | **17.49** |
| **3.** | **Market Promotion & HRD** | **104.61** | **Interest Subsidy to Growers [small & large]** | **38.00** | **Assistance for NT area [Groups & SHG's] & other components** | **15.08** | **Development of Exotic and High value prices** | **1.37** |
| | **Orthodox subsidy Scheme from AED Funds** | **65.00** | **Transport subsidy & Infra.Devpt. capacity building & Trfr. Of Tech.** | **9.69** | **Integrated village level Rubber Development and Quality Upgradation** | **18.22** | **Organic farming** | **6.33** |
| **5.** | **Price Subsidy Scheme** | **23.25** | **-** | **-** | **-** | **-** | **Export oriented Spices Development in North East** | **7.71** |
| **6.** | **-** | **-** | **-** | **-** | **-** | **-** | **Export Development & Others** | **12.28** |
| | TOTAL | 368.25 | | 91.67 | | 110.00 | | 55.04 |

**GRAND TOTAL: Rs. 625 crores.**

Figure 1: Cash Flow Patterns For a New Plantation



**7.3** What adds to the problems is the volatility of commodity prices mentioned earlier which prevents plantation enterprises from meeting their debt re-payment obligations during the phase when the physical productivity of their holdings reaches economic levels of yield. Plantation commodities undergo cycle of booms and busts. These last for 6 to 7 years duration for coffee. In the case of tea, Cashin, Liang and Mc Dermott (1999) assess that the price shocks last from 7 to 21 months. In the case of rubber, price shocks last for 18 months and above.

**7.4** Based on spot and futures prices maintained by the Multi-Commodity Exchange (MCX), the country's commodity exchange that is the largest in terms of trading volumes, an analysis of price volatility has been attempted in the ensuing sections. It may be noted that for tea and coffee, analysis of futures prices have not been attempted, as futures trading does not exist for the former while it has been of miniscule volume for the latter. For tea the problem is compounded by the fact that auction wise prices are not available.

**Analysis of Spot Prices for Coffee**

**7.5** Spot Prices for Arabica Coffee during 2006 showed high volatility as the figures below indicate. Prices have fallen below the trend line on 8 occasions during the period from January to July 2006 when harvested crops enter the market. However during the period from July to December 2006 though the frequency of downside prices was 10, and the amplitude of fluctuations was comparatively low, the downside was protracted during September.

**Figure 2: Spot Prices of Arabica Coffee: January to July 2006**

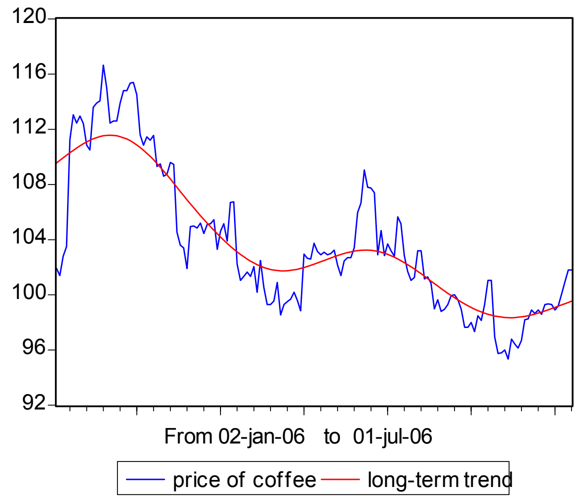
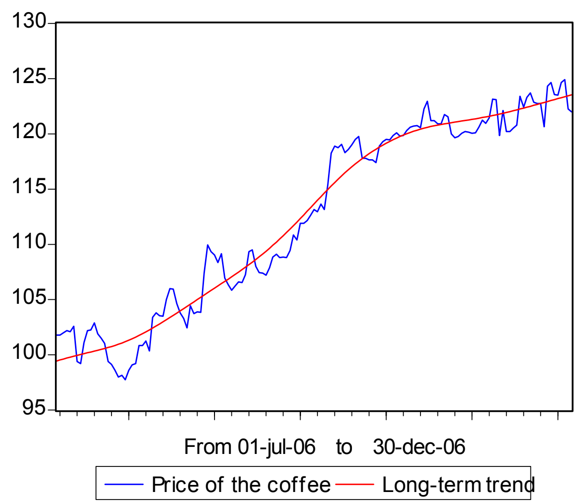



**Figure 3: Spot Prices of Arabica Coffee: July to December 2006**



**Analysis of Spot and Futures Prices for Pepper**

**7.6** Figure 3 indicates how daily spot prices for Pepper have fluctuated during the period from September 2004 to September 2005. The amplitude of fluctuations is sharp as indicated by the gaps between the trend line and the actual spot prices. It is also clear that downward volatility is a major problem that affects pepper crops. It is certain that such volatility is fundamentally harmful for producers and primary traders of pepper in India. During the year 2006, the price of black pepper ranged from Rs. 6005 /100 kgs to Rs.13050 /100 kgs. Pepper futures markets show disturbing trends. As Figure 5 brings out, during the year 2006 intra-day volatility was pronounced during November – December and that too in the bearish direction as evidenced by closing rates being lower than opening rates. This is not desirable, bad for sellers who tender or plan to give physical deliveries in futures exchanges. It is likely that this is on account of inadequate participation in futures markets by all stakeholders.

**Figure 4: Spot Prices of Pepper 2004-2006**

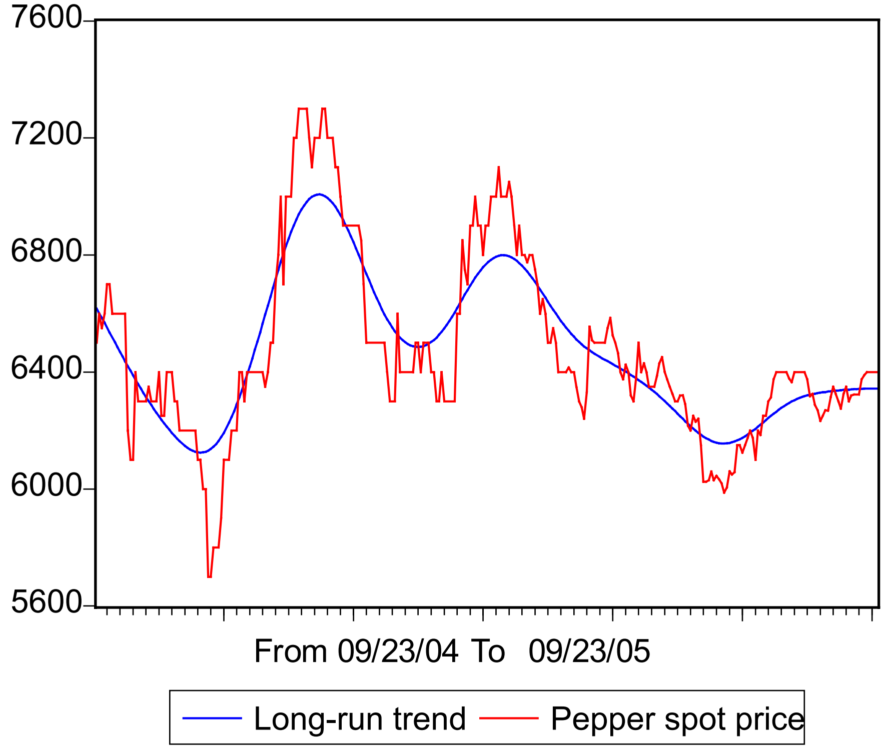
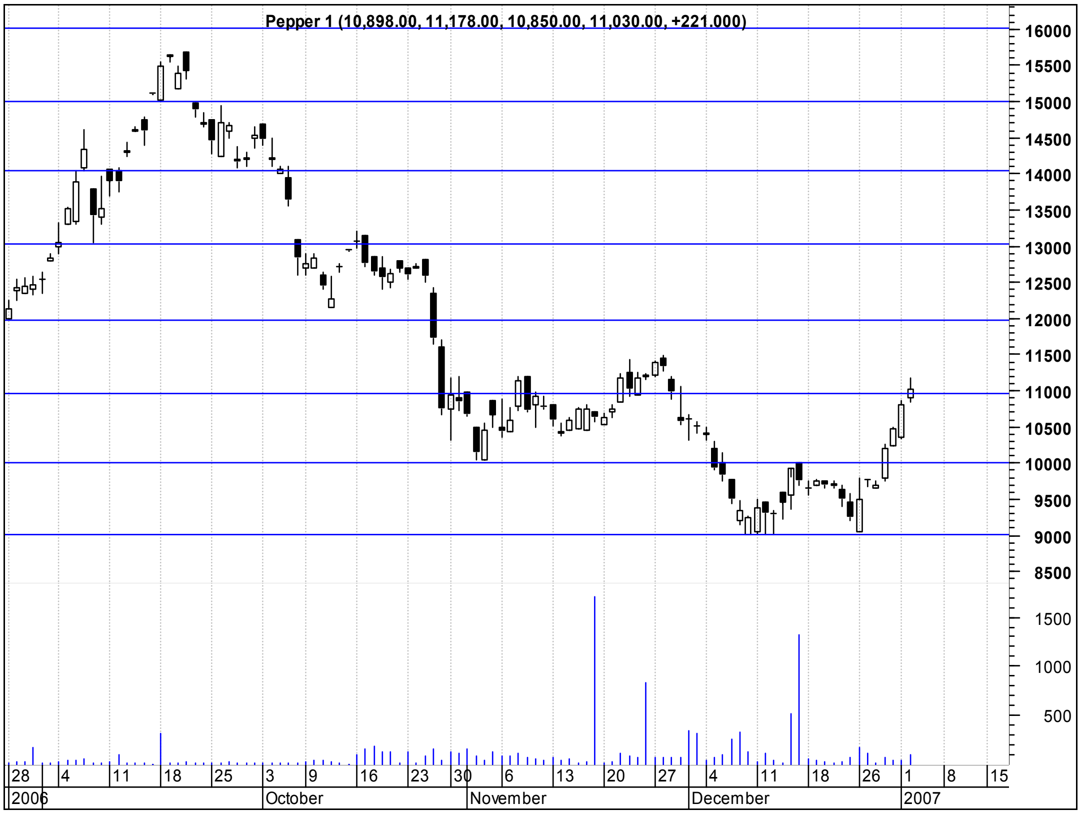


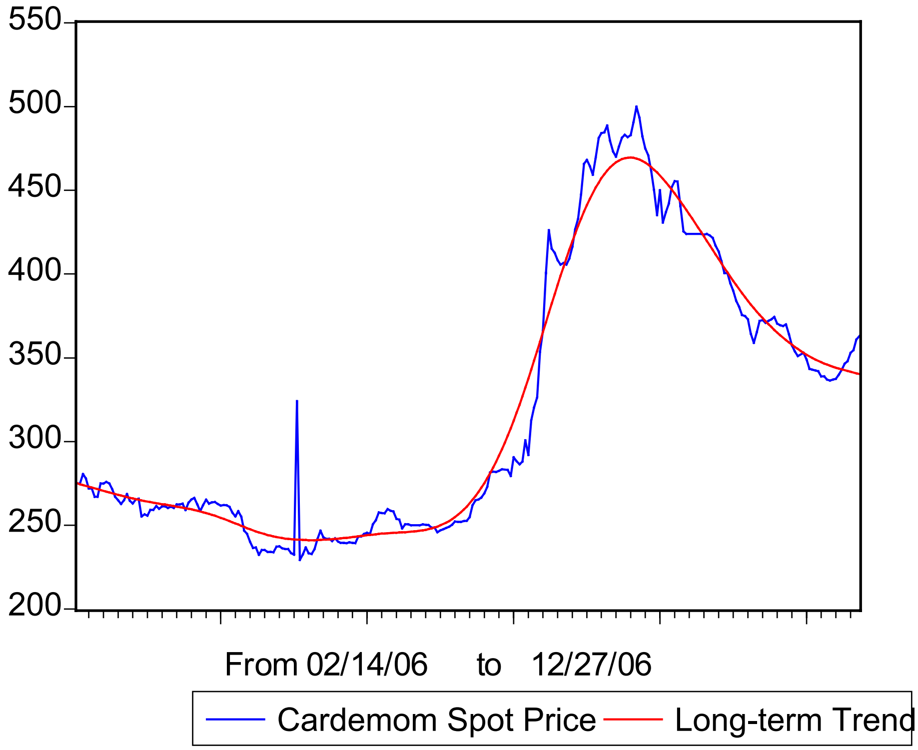
**Figure.5: Technical Analysis of Daily Pepper Futures Prices – 2006**




**Analysis of Spot and Futures Prices for Cardamom**

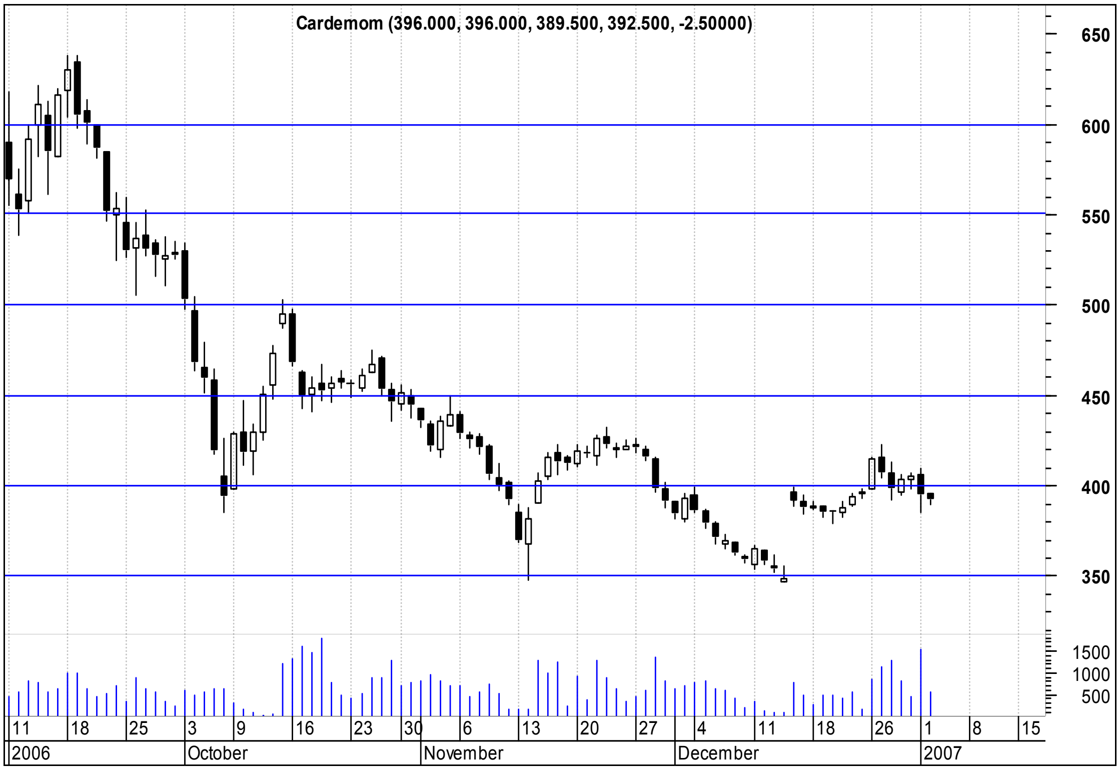
**7.7** Figure.4 indicates the situation with regard to cardamom during the period from February 2006 to December 2006. The inter-day volatility is pronounced for cardamom particularly during the latter half of 2006, indicating uncertainty for growers and traders. However the incidence of downward volatility has not been pervasive for cardamom except during the latter part of 2006. During the year 2006 prices of cardamom ranged from Rs.234/ kgs to Rs.470/ kg.

**Figure 6: Spot Prices of Cardamom 2006**




**7.8** Figure 7 provides technical analysis of daily cardamom futures prices during 2006. Unlike in the case of pepper the incidence and frequency of intra-day volatility is more for cardamom. Further the basic characteristic of cardamom futures indicates bearish trends; though one also sees evidence of buoyancy the amplitude is less**.**

**Figure.7: Technical Analysis of Daily Cardamom Futures Prices : 2006**




Analysis of Spot Prices for Chillies

**7.9** Figures 8 and 9 illustrate the behavior of daily prices for Red Chillies for the year 2006. The amplitude of price fluctuations is noteworthy, though not as pronounced as that of cardamom and pepper. During 2004-2005, while the downward trend was evident for Red Chilly prices, during 2006, the trend was one of fluctuations in the upward direction (Figure 4).

**Figure 8: Spot Prices of Chillies 2004-2006**

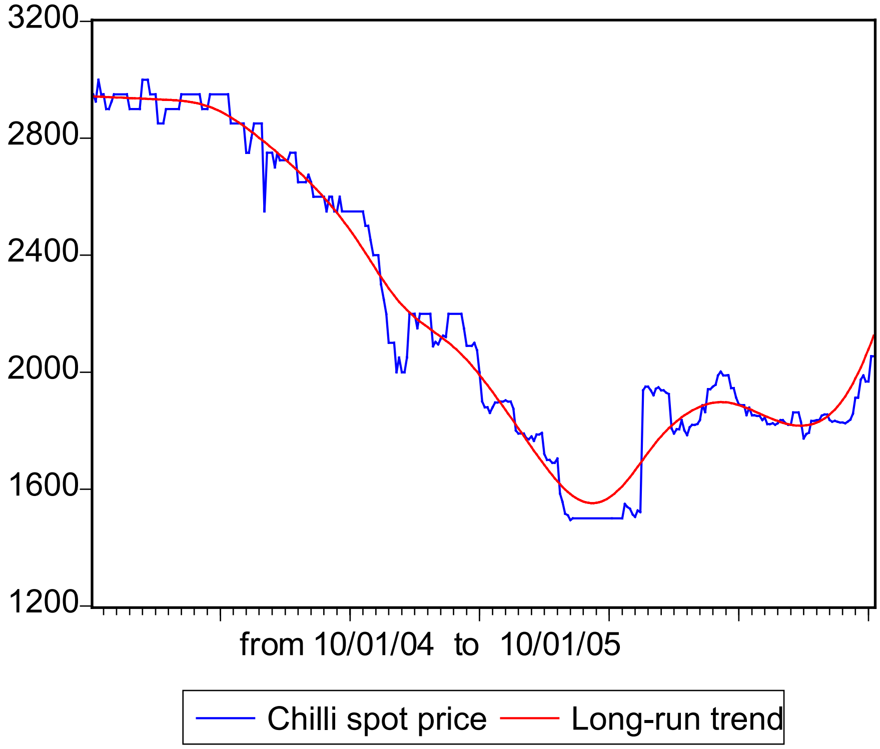
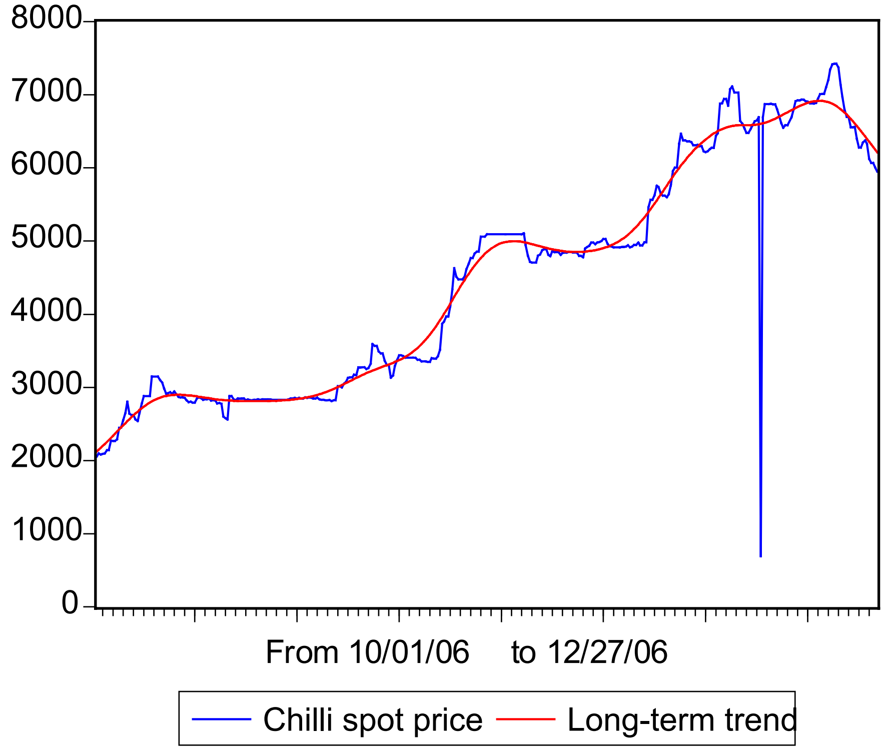


**Figure 9: Spot Prices of Chillies – 2006**




**Analysis of Spot and Futures Prices for Natural Rubber**

**7.10** Figures 10 and 11 illustrate the volatility of Natural Rubber spot prices during 2004 – 2006. As is evident from figure 5 the volatility of Natural Rubber during 2004-2005 showed 6 instances of downward volatility as the number of occasions on which spot prices fell below the trend line indicates. During the year 2005-2006 the frequency of downward volatility was almost the same as in 2004-2005. However the amplitude of downward volatility was comparatively less. During 2005-2006 spot prices of Natural Rubber ranged from Rs.5000 to Rs.11500/ 100 kgs, which shows the wide range of variations in prices. Indeed Figures 12 which illustrates the results of technical analysis based on 2004 Futures metastock Japanese candle stick price, clearly brings out the dynamics of *intra-day volatility* experience by natural rubber in the bullish direction.

**Figure 10: Spot Prices of Natural Rubber (RSS – 4) : 2004 – 2005**

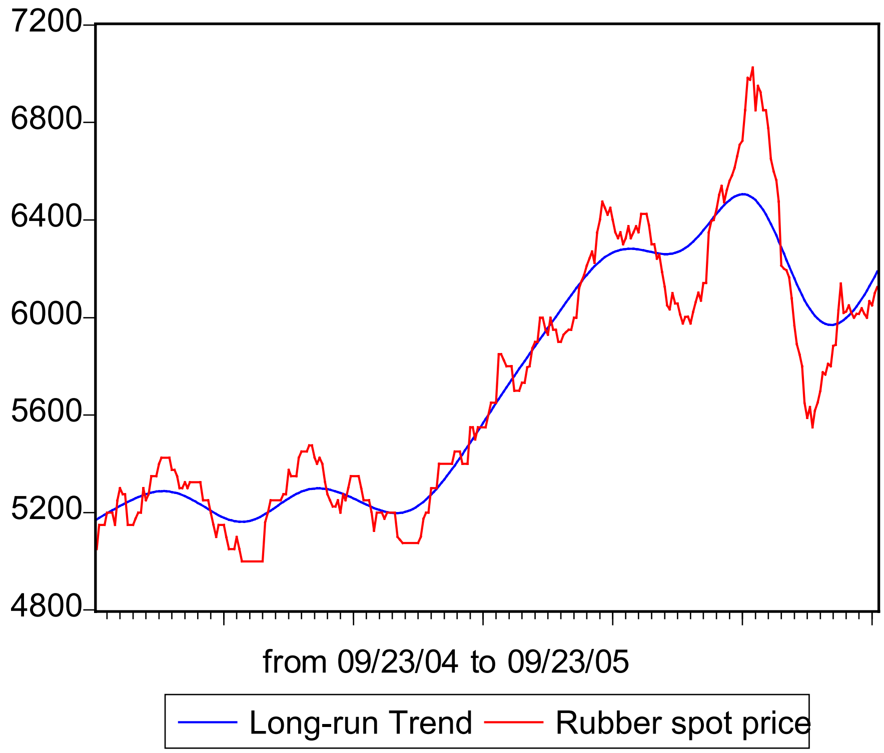


**Figure 11: Spot Prices of Natural Rubber (RSS – 4) : 2005 – 2006**

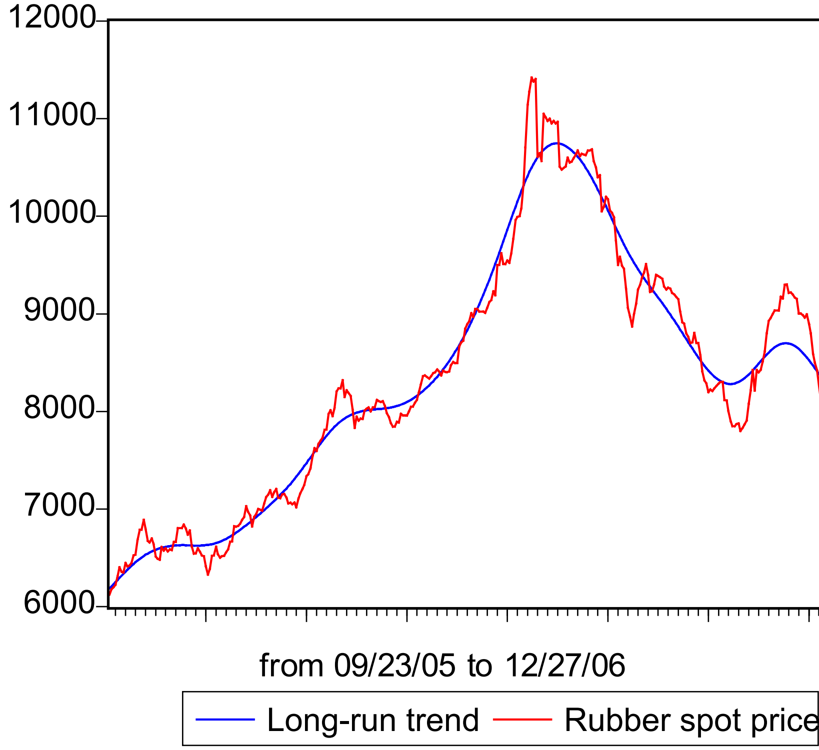
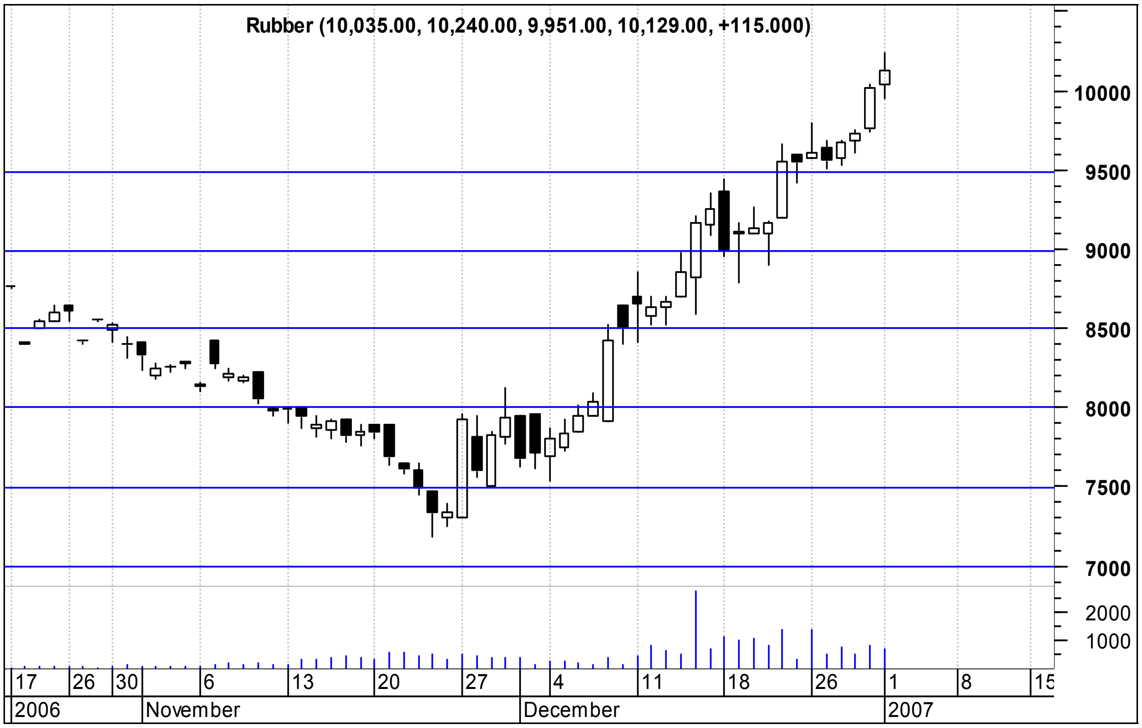


**Figure.12: Technical Analysis of Rubber Futures Prices: 2006 – 2007**




## Price Analysis for Tea

**7.11** Data on spot prices of Tea are not available with the Task Force. However based on the annual average figures cited in Table 1, it is evident that Tea is also prone to major fluctuations in prices. In 1997, annual average prices of tea moved up from Rs 48.77 per kg to Rs 66.89/kg following a disastrous Kenyan crop. On the other hand prices fell from Rs 64.54/kg in 2004 to Rs 58.05 / kg in 2005. Since Tea is a continuous crop, the possibility of seasonal scarcity is less as compared to Coffee and Pepper. However international developments such as a bumper crop in Kenya could fundamentally affect domestic prices, the chances of price fluctuations positively.

**7.12** It is clear that volatility of all the crops is a matter of grave concern. The NCAER Report on Price Stabilization of Selected Commodities' (2002) mentions how rubber and coffee has been witnessing the alignment of domestic prices with international prices. Similarly the same report also talks of how real domestic prices of tea had not exhibited in a significant role during the 1990s in the northern markets, while significantly declining in south. What is more significant is the NCAER observation that in the case of rubber and coffee, fluctuations in domestic prices have been due to irregular factors than in the case of tea and tobacco due to the fact that random effects in prices were higher for the former.

**(a) Price Stabilization Fund**

**7.13** The issue of price stabilization has been engaging the attention of Government of India for some time. Conventionally, for plantation commodities such as coffee, price volatility shocks could be cushioned by the Coffee Board, which was tied to the international quota regime of the International Coffee Agreement until 1989. The other traditional method was adoption of direct market intervention methods to mop up of surpluses of commodities through procurement at designated floor prices. The current emphasis of Government of India is on working out 'indirect' market intervention methods. A notable scheme, which has been introduced by the Government of India, is the price stabilization scheme for tea, coffee and rubber through the setting up of a price stabilization fund trust in 2003. The Price Stabilization Fund Scheme which was launched in April 2003 with a corpus fund of Rs.500 crores, kept in a public account of the Government of India, is based on a price spectrum band in the range of + / - 20%

based on a 7 year moving average of international prices. When the domestic price falls below the lower band, the same would be treated, as "Distress year" and the PSF trust would deposit Rs.1000/- in the S/B account of the grower. However the domestic prices role about the upper band the same would be treated as a boom year and grower would have to contribute Rs.1000/- in his PSF S/B account. Thus every year an inflow of Rs.1000/- would be credited to the account of grower and at the end of 10 years the grower could withdraw the balance amount, including Government's contribution and interest earnings. Though nearly 11512 coffee growers, 14681 tea growers and 18591 rubber grower have been enrolled under the scheme until March 2005, the enrolment fee deposited by the Government of India has been found to be extremely limited due to low coverage. Further the real return by way of accrued interest on balances in saving banks account has also been negative due to inflation rates been higher than the interest rates. This has naturally limited the enthusiasm of farmers as well as that of the banking sector since there is a time lag notice between assistance available to members of the plantation community and loss suffered due to price decline. (Anon 2005)

**(b) <u>Futures Market</u>**

**7.14** Though, since the 1990s, commodity derivatives markets have been active in India, there has been no major effort to put in place a pro-active policy support for promoting participation of agricultural producers and financial institutions providing assistance to producers, to participate in these exchanges. There is a need to attend to this issue in far greater detail. This is because the conventional instruments for price intervention are fiscally unsustainable particularly when it is applied to commodities that have long durations of price shocks as is in the case of rubber, pepper and coffee. Ensure that farmers, processors and exporters actively utilize the instrument of derivative contracts instituted by commodity derivatives exchanges of India. At present derivative contracts exist for pepper, cardamom, chillies, coffee, natural rubber, coconut oil and copra. Though a futures contract was developed for 'Tea', this has not been operationalised for various reasons including lack of financial capabilities on the part of the UPASI, which was given the license to launch the tea futures exchange in India. Similarly Coffee futures contracts have not been functioning well in India. However, this facility is not being made use of by the small growers at present because of their own limitation. Collectivization of small growers should be able to enter this area. Warehousing futures for the entire section have to be improved.

**7.15** Therefore, new approaches need to be thought of that improve upon existing approaches. It needs to be realized that there is no one solution for redressing the problem of price uncertainty. A restructured price stabilization programme for Plantation Commodities' must provide varied options to producers, processors and financial institutions dealing with plantation and agriculture products.

**7.16** All plantation crops have a substantial presence of small and medium farmers. A substantial majority of plantation farmers and primary processors depend on institutional finances for meeting working capital and term capital needs. In absence of securitized collaterals, it becomes difficult for them to source their liquidity requirements for carrying out annual cultivation operations. Co-operative Banks and related financial institutions have been deducting large margins on working capital loans sought for by farmers on account of the uncertainty associated with prices of plantation commodities in both international and national markets. Indeed Commercial banks such as the Canara Bank and Syndicate Bank have high portfolio exposures to Coffee, Pepper and related plantation commodities on account of providing working capital and term finance credits to these farmers and exporters. On account of the fact that prices for these commodities are highly volatile, these financial institutions run the risk of getting saddled with non-performing assets and bad loans. The present system of banking regulations does not allow non–investment banks from participating in derivative trading. In our view this needs to be changed and all the banking institutions with exposure to futures trader's commodities, should, subject to position limits, be allowed to participate in futures trading for commodities concerned.

**C. Plantation Development Bonds**

**7.17** One of the critical limitations of the plantation industry in India is that it is located in regionally disadvantaged zones of Western Ghats and eastern Himalayas. Communications and transportation networks have been a major constraint and this has affected movement of produce from farms to sea-ports and other domestic areas of consumption. In recent times plantation industries have been considered as potential areas for eco-tourism in view of their ecological attributes. It is also a well-known fact that plantation industries surround forests and wetlands or are adjacent to them. Plantations can absorb the pressures of tourism on wild life parks and sanctuaries. Further, eco-tourism enables the plantation farmers to diversify their income base, thus reducing risks arising from volatile commodity prices and adverse climatic conditions. For eco-tourism to flourish in plantations, it is necessary for enabling infrastructure to be located in plantation areas, which control pollution and provide for sustainable disposal of municipal wastes. Another area of critical priority is the possibility of introduction of clean technologies in the form of renewable energy and carbon offset projects, which could address climate change concerns. Keeping in view this background, the task force recommends the institution of 'Plantation Development Bonds' to finance infrastructure development in plantation areas. The bond could be for a duration of 10 years and the proceeds of the same will be utilized as investments in bankable infrastructure and eco-tourism projects. The task force recommends that the price stabilization fund trust may be converted into an authority or a public limited company, which could issue the Plantation Development Bonds (PDB). The advantage of such an arrangement would be that the price stabilization dimension of the Price Stabilization Fund Trust would become more effective, resulting in synergies between price stabilization functions and issue of bonds.

### (d) Marketing Support

**7.18** As has already been mentioned, plantation commodities are largely produced by small and medium farmers who do not have the economic muscle to bargain for improved farm gate prices. It is also a fact that middlemen and traders take away a substantial margin of value added for pepper, rubber, cardamom and coffee. There are many development schemes intended to improve the production and post harvest processing and warehousing systems, administered by the Coffee Board and the Spices Board which do not achieve their intended purpose of promoting the export competitiveness for these products due to the absence of market access. Presently none of the commodity boards has the mandate of carrying out marketing functions. Nor is it desirable for them to enter into marketing and trading functions. At the same time corporate enterprises in India have not displayed any interest in schemes that promote fair trade practices that promise fair returns to producers. Accordingly, the Task Force recommends that a public limited company may be promoted by commodity boards concerned to facilitate participation of farmers and self-help groups in fair trade systems through direct selling of small grower plantation products (including organic spices and coffee) both in India and abroad. Besides, such a company could also carry out and implement market literacy programmes for self-help groups besides providing them with assistance to carry out futures trading for the commodities concerned. This company would effectively intermediate on behalf of the farmers, thus enabling them to protect themselves from volatility of prices. Considering the fact that state run undertakings do not exhibit professional competence, it is recommended that the Commodity Boards may facilitate promotion of such activities in private and co-operative sector.

**(e) Put Options**

**7.19** The other recommendation of the Task Force is the institution of a price insurance scheme based on put options contracts. While the existing efforts to link put options contracts with international commodity derivative exchanges has proved to be problematic due to a combination of regulatory and economic issues, it will be still desirable to pursue a national price insurance scheme which provides for trading in commodity option in national commodity exchanges. It is strongly recommended by the Task Force that options trading may be introduced in India for principal commodities that suffer from volatile prices. The Commodity Boards may be requested to provide budgetary support by way of subsidizing premium payments that are presently considered to be burdensome for farmers and farmers' organizations.

## B. Crop Insurance for Plantation Crops, Tobacco, Spices and Floriculture

### Introduction

**7.20** Growers have traditionally used a variety of strategies to reduce exposure to production risks. These include crop diversification, intercropping, reliance on drought-resistant crops and varieties, use of short-duration varieties, delayed sowing, and investment in risk-reducing inputs such as pesticides and irrigation. These choices that farmers make to ward off calamities – big and small – often mean turning away from profitable opportunities.

**7.21** The trade-off is most acute for small farmers because their opportunities for ex-post management of risk through credit are limited. When all other measures fail, farmers have no option but to neglect maintenance of their assets (principally perennial trees in the case of plantations) or to migrate out to regions with better work opportunities. Use of the first option affects adversely their future livelihoods while distress migration is socially disruptive with the costs often borne by children. Thus, coping with risk whether ex-ante or ex-post inflicts severe costs on poor farmers that often have such long-term consequences as to keep them mired in poverty. This chapter considers the feasibility of a risk management support mechanism to small growers to mitigate the effects of adverse weather and pest related risks (point 4 of the terms of reference of the Task Force). In particular, it proposes crop insurance schemes that could assist growers in coping with production risks.

## PRODUCTION RISKS

**7.22** Production risks arise because of two factors: uncontrolled random inputs of weather and exposure to pests and diseases. Weather risks could arise because of fluctuations in temperature, rainfall, humidity, and wind and hail. Of all these, rainfall is in most cases the variable that has the highest fluctuation and is the least predictable. Weather also plays a big role in the development of diseases and growth of pests. Usually, the pest and disease organisms are always present at a low level of intensity but can multiply rapidly when the weather conditions are favourable and the plant susceptible to attack. In particular, disease epidemics are almost always due to favourable weather conditions. The causative relationship between weather parameters (such as rainfall, temperature, humidity) and pest build up is however very complex and is specific to the pest, crop, soil and management practices (Ramaswami, Ravi and Chopra, 2004). Tables 1 and 2 list the principal production risks for the plantation crops & spices.

## CROP INSURANCE

**7.23** An ideal crop insurance scheme would follow an `individual approach' where the insurance would indemnify the farmer to the full extent of losses and the premium would be determined with reference to the grower's past yield and loss experience. For the fixation of premium on an actuarially sound basis, the 'individual approach' basis necessitates reliable and accurate data of crop yields of individual farmers for a sufficiently long period. The other difficulty is that of `moral hazard' because the insured risk also depends on actions of the grower. As a result, `individual approach' insurance is generally expensive.

**7.24** Crop insurance on the basis of individual assessment has been extensively used in the United States. Even though farm sizes are large and the number of growers is relatively low in U.S. agriculture, the `individual approach' has required subsidies in excess of $3 billion dollars (or more than Rs. 13000 crores) annually (Glauber, 2004). For this reason, the US program is regarded as a poor model for small-holder agriculture in developing countries where the `individual approach' would be even harder to administer (Hazell, Skees and Miranda, 1999).

**7.25** These difficulties were anticipated in India, where policies and programs have emphasized an `index approach'. Here the underlying insured risk is an index which is immune to grower actions (and hence moral hazard) and on which data is relatively easier to obtain. The index that has been used most often is `area yield'. In an area approach, farmers are compensated for losses according to an index of yield for a region to which they belong (e.g., village, taluka). The latter yield is called the area yield. The idea behind such insurance is that individual yields would be correlated with the area yield provided the area is reasonably homogenous. Further, area yield data is more easily obtainable than individual yield data and is not subject to moral hazard in the same way as individual yields. In an area approach, farmers within the same `homogenous area' pay the same rate of premium and receive the same benefits (as they are determined by the area yield relative to its average), irrespective of their individual fortunes.

**7.26** In recent years, an alternative index that has been considered is a weather index. The appeal of this is transparent in rain-fed areas where rainfall is the dominant production risk. There are, however, many attributes of rainfall – the relevance of the onset date of monsoon and the distribution of rainfall through the season varies according to crop and soil type and the rainfall index insurance would have to be appropriately designed.

**7.27** The existing National Agricultural Insurance Scheme (NAIS), which is a area-yield index programme charges flat premium rates ranging from 1.5% to 3.5%, and, hence, is not commercially viable. The Government finances the claims over and above the premiums. If the premiums are charged on actuarial basis, which could be about 10% to 12%, the programme becomes viable. However, these actuarial rates are not affordable to a great majority of farmers.

**7.28** The Task Force, therefore, recommends an insurance model based on actuarial premium pricing, supported by up-front subsidy in premium by the Government. The insurance company having received commercial premium (partly from growers and partly from the Government), would be responsible for all the claims.

**Existing Insurance Schemes for Plantation Crops, Spices & Floriculture**

**7.29** Existing insurance programs in the agricultural sector provide risk protection to only some of the plantation crops & spices. These programs range from input based cover to yield protection. The details of these insurance covers are as follows:

i) Plantation insurance scheme of General Insurance PSU companies – The cover is available against specified perils like fire, lightening, floods, cyclones, riot & strike, specified pests & diseases, etc. The cover in the event of loss to trees due to perils insured pays for the input cost. Some of the plantation crops insurable under the scheme are Coconut, Rubber, Oil Palm, and Betel vine. Insurance coverage under this scheme is miniscule. Rubber Plantation Insurance is implemented by Rubber Board in collaboration with National Insurance Company Limited (NIC), and New India Assurance Company Limited (NAC), but the response has not been encouraging.

ii) State government run schemes: Kerala State government implements a Crop Insurance Scheme from 1995-96 covering 25 Crops grown in the State, of which, as many as 20 are horticultural/ plantation crops. The cover is against named natural and non-preventable perils, and provides protection on per tree / palm basis, which only covers the present worth of the tree / palm. The plantation crops & spices insurable are: coconut, areca nut, rubber, cashew nut, pepper, cardamom, ginger, turmeric, coffee, tea, cocoa, nutmeg, cinnamon, betel vine, tobacco etc. The scheme is not popular and consequently the coverage is small.

Over the 7 years (1995-96 to 2001-02) the Scheme generated a premium of **Rs. 2.84 crores** and paid claims of **Rs.10.62 crores**. Coverage statistics reveal that in terms of premium income, the major share is attributed to Banana (38%), Rubber (35%) and Coconut (16%). Similarly in terms of claims outgo also, the major share had gone to Banana (44%), Rubber (37%) and Coconut (11%).

iii) Area Yield Insurance (National Agricultural Insurance Scheme) of Ministry of Agriculture administered through AIC. The scheme operates on area basis (Block / Tehsil etc.) and is mandatory for borrowing farmers. However, the crop is notified for insurance only in areas having 10 years historical yield data. Risk insured is equivalent to amount of the loan availed. Compensation becomes payable if the yield recorded at the area level (on the basis of sample crop cutting experiments) falls short of the pre-defined threshold yield (60% / 80% / 90% of preceding five years' average yield). Coverage so far has been limited because of area approach. The plantation / spices crops presently insurable are turmeric, chilly, ginger, coriander, cumin, and fenugreek.

iv) Weather Based Insurance piloted by AIC & Private Sector Insurance Companies – Rainfall based insurance model has been designed by AIC for coffee in the states of Karnataka, Tamilnadu & Kerala against yield losses arising out of deficit rainfall during blossom & fruiting stage and excess rainfall during maturity stage. The index has been prepared at coffee zone level for about 45 coffee zones in the above three states. The proposal in terms of providing premium subsidy to small growers has got cleared by the Group of Ministers (GoM) and would go to the CCEA for clearance shortly. AIC is presently conducting a pilot on use of satellite imagery and weather based insurance triggers for tea crop. ICICI Lombard General Insurance Company is marketing weather based insurance (temperature & relative humidity) for coriander in a few districts of Rajasthan, which also enjoys some subsidy in premium from the state government

**Crop Insurance: A Proposal**

**7.30** A successful insurance product would satisfy the following conditions:

(a) it should be cheap enough that even small growers can afford it.
(b) it should provide significant and substantive risk cover
(c) it should involve a cap on the liability of the government

If conditions (a) and (b) are violated, the product will not be popular with growers. If (c) is violated, it would be difficult to scale up the program to cover all crops and growers.

**7.31** The Task Force, keeping in mind the importance of various commodities within plantation, spices & floriculture sector, and the ambit of Ministry of Commerce & Industry, identified the following commodities for production risk insurance:

(a) Plantation crops: Coffee, Tea, Rubber
(b) Tobacco
(c) Spices: Chilly, Pepper, Turmeric, Ginger, Cardamom (small & large)
(d) Floriculture: Loose Flowers, Cut flowers & Cut Flowers for Export purpose

**7.32** For perennials and tree crops (rubber, tea, cardamom, coffee etc), yield loss is one dimension of production risk. The other dimension is the loss of the tree itself due to a calamity such as wind or hail. Named peril insurance is the best approach for insuring trees and bushes. Here the insurance is offered against damage due to specified perils such as fire, lightening, floods, cyclones and specific pests & diseases. Such named peril insurance already operates for rubber (although coverage among growers is limited). Named peril insurance usually operates on the basis of individual assessment. The proposed crop insurance scheme is directed at yield loss for a few commodities and asset loss for others.

**7.33** The proposal is likely to adopt the following insurance approaches for different commodities:

**Table-: Insurance Models for Plantation & Spices Crops & Floriculture**

| S.No | Insurance Model | Crops | Nature of Protection |
|---|---|---|---|
| 1 | Traditional Insurance based on Named Peril Insurance & individual assessment | rubber, tea & cardamom, floriculture | Loss / damage to tree / bush / plants |
| 2 | Crop insurance based on 'Yield assessment at Area level' | chilly, ginger, turmeric, cumin, coriander, tobacco | Loss of Yield |
| 3 | Crop insurance based on 'Weather Index' (rainfall, temperature, relative humidity, radiation) | coffee, tea, coriander, pepper | Loss of Yield |

**Considerations of Insurance**

**7.34** The Task Force examined the plantation and spices crops for insurance and identified the important crops for insurance. These are Rubber, Tea, Coffee & Tobacco under Plantation crops and Chilly, Ginger, Turmeric, Pepper & Cardamom under Spices. The Task Force also identified floriculture sector for insurance against production losses.

**7.35** Task Force requested Agriculture Insurance Company of India Limited (AIC) to work out the broad estimates of sum insured, coverage and premium at different coverage level. Normally, a crop insurance program involves 'deductible' in coverage. Deductible is a provision whereby an insured may be required to self-insure and pay part of the loss, the insurance being excess over the amount of the deductible. Higher the deductible, lower the premium rate and vice versa. Deductible is a provision / mechanism helps generating affordable premium rates and to a large extent removes the taint of moral hazard.

**7.36** The Task Force accordingly have chosen and presented the premium at three levels of deductibles, viz. (i) 15% / 20%; (ii) 30% and (iii) 40%. The insurance coverage considered all the holdings of marginal / small growers in States predominantly growing the identified plantation and spices crops, which ranges from 25% of acreage in case of Tea and 85% of acreage in case of Rubber.

**7.37** Sum insured is the maximum value of protection (risk), which becomes payable in the event of total loss, and is the value on which premium amount is paid. Sum insured for this purpose is chosen in the range of 100% - 125% of the cost of production for different commodities, in consultation with commodity boards.

**7.38** The premium rates would be worked out though at District level using the insurance model appropriate for each commodity, the overall premium estimates are made using a nationally weighted premium rate, which as per the estimates may range from 3% for rubber to 10% for coffee at 80% coverage level. The annual premium for the identified crops is estimated at Rs. 656.16 Crs; Rs. 443.70 Crs; and Rs. 334.22 Crs for 15% / 20%; 30% & 40% deductibles, corresponding to 85% / 80%; 70% & 60% coverage, respectively.

**Insurance Penetration & Premium Size**

**7.39** For the usual kind of insurance coverage, actuarial premiums are 8-10% of the assured loss and sometimes even higher. It is quite clear that small growers find these rates unaffordable. Hence if the goal of providing a safety net to small growers is to be met, some state support in terms of a premium subsidy would have to be provided. What form should this subsidy take and what should be the efficient provision of such a subsidy?

**7.40** The Task Force considered different ways of providing premium subsidy. These are: (i) risk-layering into social insurance (coverage of 60%) and commercial insurance (coverage between 60% and 80% / 85%) followed by higher subsidy (almost 80%) for social layer and lower (about 20%) for commercial layer; (ii) different levels of premium subsidy for marginal; small & other growers; (iii) Rupee subsidy per Hectare; (iv) Premium capping for grower beyond which is the subsidy of the government; (v) Percentage subsidy in premium; and (vi) Percentage subsidy with cap on subsidy amount.

**7.41** The Task Force after examining the different subsidy options, and chosen the 'Percentage subsidy with cap in subsidy amount' applicable at each unit of coverage. As an illustration, premium subsidy for Rubber could be 50% of premium subject to a maximum of Rs. 2500 per Hectare. Further, subsidy could be availed only by those growers with holding size upto 10 Hectares. The Task Force felt that it's a simple and straight forward method, with advantage for the government to cap the subsidy beyond a point.

**7.42** Assuming penetration levels of 25%, 35%, 50%, 65% and 80% in the course of next five years, the government's premium subsidy liability is estimated for XI Year Plan at Rs. 836.60 Crs; Rs. 565.72 Crs; and Rs. 426.14 Crs at 85% / 80%; 70% & 60% coverage, respectively.

**7.43** The estimates of acreage considered for insurance, sum insured, premium estimates, government's premium subsidy liability and the phased insurance program financial support required from the government for the XI Five Year Plan and are shown in Table-3 to 5.for the three different levels of coverage, viz. 85% / 80%; 70% & 60% coverage.

**7.44** Task Force recommends that 80% coverage level be provided for all the commodities, as levels lower than 80% may not be found attractive to the growers.

**7.45** Task Force recommends that the proposed insurance program is thrown open to all the insurance companies both in public sector and private sector. However, Agriculture Insurance Company of India Limited (AIC), being the exclusive entity for agriculture insurance created by the government, would take the lead.

**Future Directions and enabling role by the Government & Commodity Boards**

**7.46** Crop insurance to be successful and farmer friendly, would need the infrastructural support and enabling role of the government, apart from the premium subsidy support. Some of the enabling roles of the government / commodity boards / financial institutions are discussed below:

(i) **Infrastructure:** Insurance companies at least in the initial stages would need the infrastructure support of the government / commodity boards at grass-root level, both as insurance delivery mechanism, and as nodal agency to create insurance education and awareness.

(ii) **Linking with Other Support & Extension programs:** Insurance could be successful and cost effective when delivered along with other support and extension programs run by the government / commodity boards for plantation & spices sector. It's, therefore, suggested that insurance is coupled with other government programs to achieve maximum success.

(iii) **Maximizing insurance penetration:** Insurance to be successful should have proper risk spread, both spatially and temporally. To have reasonably good level of insurance penetration, it's essential, at least, in the initial stages to make every grower who receive other support from the government / commodity boards, join the insurance scheme.

(iv) **Credit Linkage:** Banks have been lending large amount of operational credit to the plantation and spices sector, making it possible for insurance to have credit linkage. As incentive, banks may share a part of the premium with the farmer. Alternatively, the farmers with insurance coverage may be offered lower rates of interest.

(v) **Service Tax Exemption:** Presently insurance service is charged 'service tax' as applicable for the insurance sector. Its 12% for the year 2006-07 + 2% (of service tax) as education cess. In other words, service tax alone accounts for almost $1/8^{th}$ of the premium, making it highly dis-incentivized. It's, therefore, proposed that plantation & spices crop insurance be exempted from service tax, on the same lines as National Agricultural Insurance Scheme (NAIS).

(vi) **Weather Stations (AWS):** Tamper-proof, accurate and timely reporting of weather data is critical for implementation of weather based insurance. The government / commodity boards may install such stations at 5 -10 km radius in all the plantation / spice growing areas in due course to make the insurance cover more realistic.

**Table-1: Plantation crops – Important Abiotic & Biotic Risks**

| Name of crops | Major Abiotic risks | | | | | Major Biotic risks | |
|---|---|---|---|---|---|---|---|
| | Temp. | Rainfall | Humidity | Wind/ Hail | Sunshine | Pests | Diseases |
| Areca nut | High temp | ---- | Very high humidity | High wind | High | bug, mites, caterpillar, scale | Fruit rot, bud-rot, yellow leaf, die-back, blight |
| Cashew | Low /High temp | Long dry spell | Fog | Cyclone | Low | borer, bug, thrips, beetle | blight, die-back |
| Cocoa | Low temp/Frost | Very Long dry spells | Very Low/High humidity | Cyclone | | mealy bug, aphids, borers | black pod, canker, pod –rot, pink disease |
| Coconut | Frost | Drought | Low /High humidity | Cyclone | | caterpillar, bug, Scale, termite, borers | root wilt, rot, Fruit –rot |
| Coffee | | Lack of blossom showers / rain on day of blossom / backing showers | High humidity | Hailstones/ High Wind | | bug, hairy caterpillar, borer, thrips | leaf rust, black rot, berry blotch, anthracnose, Brown eye spot |
| Rubber | Low temperature | Drought / Dry spells | Low humidity | Cyclone | | scale insect, mealy bug, grub, caterpillar mites | shoot rot, powdery mildew, bird's eye spot, leaf and pink, rots |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Tea | Frost/ High Temp. | Drought / Dry spell | Low humidity | | High | mites, thrips, jassid, caterpillar, borers | blister blight, rust, wood, red, brown, black roots, |

**Table-2: Spices crops – Important Abiotic & Biotic Risks**

| Name of Crops | Major Abiotic risks | | | | | Major Biotic risks | |
|---|---|---|---|---|---|---|---|
| | Temp | Rainfall | Humidity | Wind /Hail | Sunshine | Pests | Diseases |
| Black pepper | Excessive heat and dryness | Long dry spells before flowering | Low humidity | High wind / cyclone | High | pollu beetle top shoot borer | phytophthora foot rot. Slow decline, wilt |
| Cardamom | - | Heavy Rainfall and cloudy weather | Low humidity | cyclone | Too much or too less | stem borer, capsule borer, thrips aphids ,root grubs | katte disease vein clearing disease, capsule rot |
| Cinnamon | - | - | - | cyclone | - | - | wilt |
| Clove | High temp | Water stress | - | High wind /cyclone | - | stem borer | Seedling wilt ,leaf rot, bud shedding |
| Coriander | High temp | Frost-during flowering | High humidity | | High | aphids | Wilt, powdery mildew |
| Cumin | - | Frost | High humidity | - | - | aphids | Wilt, powdery mildew, blight |
| Fenugreek | - | Cloudy weather | High RH | High Wind | Low | aphids | powdery mildew, root rot |
| Fennel | - | High Rainfall, frost, heavy dew | - | High Wind | Low | aphids, midge | collar rot, blight |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ginger | High temp | High rainfall-at harvest | - | - | - | shoot borer, rhizome scale | rhizome rot, yellow disease, bacterial wilt |
| Nutmeg | High Temp | Dry climate | Low RH | cyclone | - | - | Die back, blight |
| Turmeric | Low atmospheric temp | High rainfall at harvest | Too High/low humidity | - | - | shoot borer, rhizome scale | rhizome rot |
| Chilli | High temp | Excess rainfall, cloudy days | High humidity | High wind | - | white fly , thrips, mites, fruit borer, powdery mildew | leaf curl, bacterial wilt ,virus, mosaic |
| Garlic | | Heavy rainfall | | | Low | thrips, mite, rhizome fly | soft rot, leaf spot |

## Table-3:Plantation & Spices Crops - Insurance Proposal: 80% -85% Coverage Le

| S. No. | Important Plantation Crops | Area (Hectare) | Area (%) eligible for insurance estimated | Area (hectares) eligible for insurance | Sum Insured (Rs. per hectare) | Premium rate (at losses exceeding 15% - 20%) | Premium per Hecatre (Rs.) | Total Premium (Rs. Lakhs) | Premium subsidy @ 50% subject to cap) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Rubber | 597410 | 85% | 507799 | 110,000 | 3.0% | 3300 | 16757.35 | 1650.00 |
| 2 | Tea | 521000 | 25% | 130250 | 40,000 | 6.0% | 2400 | 3126.00 | 1200.00 |
| 3 | Coffee | 354840 | 75% | 266130 | 30,000 | 10.0% | 3000 | 7983.90 | 1500.00 |
| 4 | Tobacco | 191200 | 80% | 152960 | 40,000 | 6.0% | 2400 | 3671.04 | 1200.00 |
| | **Important Spice Crops** | | | | | | | | |
| 1 | Chilly | 834310 | 80% | 667448 | 40,000 | 8.0% | 3200 | 21358.34 | 1600.00 |
| 2 | Ginger | 85068 | 80% | 68054 | 40,000 | 6.0% | 2400 | 1633.31 | 1200.00 |
| 3 | Turmeric | 149430 | 80% | 119544 | 40,000 | 6.0% | 2400 | 2869.06 | 1200.00 |
| 4 | Pepper | 223086 | 80% | 178469 | 20,000 | 6.0% | 1200 | 2141.63 | 600.00 |
| 5 | Cardamom (small) | 73125 | 80% | 58500 | 50000 | 6.0% | 3000 | 1755.00 | 1500.00 |
| 6 | Cardamom (large) | 30008 | 80% | 24006 | 50,000 | 5.0% | 2500 | 600.16 | 1250.00 |
| | **Floriculture** | | | | | | | | |
| 1 | Flowers-Loose | 115000 | 60% | 69000 | 50000 | 8.0% | 4000 | 2760.00 | 2000.00 |
| 2 | Flowers-cut | 10000 | 80% | 8000 | 200000 | 6.0% | 12000 | 960.00 | 6000.00 |
| 3 | Flowers-cut (export) | 400 | 90% | 360 | 2000000 | 5.0% | 100000 | 360.00 | 50000.00 |
| | **Total** | | | | | | | **65615.77** | |

**Note:**

1. Area eligible for insurance has been estimated by reducing area of commercial establishments / large farms and insura
2. Subsidy allowed is 50% subject to a cap of Rs. 6000 per hect for cut flowers; 50000 per hect for cur (export) flowers and Rs. 2500 per hect for Others
3. Subsidy is available for holding size upto 10 hectares for rubber, tea, & coffee and 4 hectares for other crops

**Government's Liability for XI year Plan**

| S.No | Year | Penetration Levels | GoI Liability (Rs. Lakhs) |
|---|---|---|---|
| 1 | 2007-08 | 25% | 8201.97 |
| 2 | 2008-09 | 35% | 11482.76 |
| 3 | 2009-10 | 50% | 16403.94 |
| 4 | 2010-11 | 65% | 21325.13 |
| 5 | 2011-12 | 80% | 26246.31 |
| | **Total XI Plan** | | **83660.11** |

## Table-4:Plantation & Spices Crops - Insurance Proposal: 70% Coverage Le

| S. No. | Important Plantation Crops | Area (Hectare) | Area (%) eligible for insurance estimated | Area (hectares) eligible for insurance | Sum Insured (Rs. per hectare) | Premium rate (at losses exceeding 30%) | Premium per Hecatre (Rs.) | Total Premium (Rs. Lakhs) | Premiu subsidy 50% sub to cap |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Rubber** | 597410 | 85% | 507799 | 110,000 | 2.0% | 2200 | 11171.57 | 1100. |
| 2 | **Tea** | 521000 | 25% | 130250 | 40,000 | 4.0% | 1600 | 2084.00 | 800.0 |
| 3 | **Coffee** | 354840 | 75% | 266130 | 30,000 | 8.0% | 2400 | 6387.12 | 1200. |
| 4 | **Tobacco** | 191200 | 80% | 152960 | 40,000 | 4.0% | 1600 | 2447.36 | 800.0 |
| | **Important Spice Crops** | | | | | | | | |
| 1 | **Chilly** | 834310 | 80% | 667448 | 40,000 | 5.0% | 2000 | 13348.96 | 1000. |
| 2 | **Ginger** | 85068 | 80% | 68054 | 40,000 | 3.0% | 1200 | 816.65 | 600.0 |
| 3 | **Turmeric** | 149430 | 80% | 119544 | 40,000 | 5.0% | 2000 | 2390.88 | 1000. |
| 4 | **Pepper** | 223086 | 80% | 178469 | 20,000 | 3.0% | 600 | 1070.81 | 300.0 |
| 5 | **Cardamom (small)** | 73125 | 80% | 58500 | 50000 | 5.0% | 2500 | 1462.50 | 1250. |
| 6 | **Cardamom (large)** | 30008 | 80% | 24006 | 50,000 | 4.0% | 2000 | 480.13 | 1000. |
| | **Floriculture** | | | | | | | | |
| 1 | **Flowers-Loose** | 115000 | 60% | 69000 | 50000 | 6.0% | 3000 | 2070.00 | 1500. |
| 2 | **Flowers-cut** | 10000 | 80% | 8000 | 200000 | 4.0% | 8000 | 640.00 | 4000. |
| 3 | **Flowers-cut (export)** | 400 | 90% | 360 | 2000000 | 4.0% | 80000 | 288.00 | 40000 |
| | **Total** | | | | | | | **44369.98** | |

**Note:**

**1. Area eligible for insurance has been estimated by reducing area of commercial establishments / large farms and ins**

**2. Subsidy allowed is 50% subject to a cap of Rs. 5000 per hect for cut flowers; 40000 per hect for cur (export) flowers and Rs. 2000 per hect for Others**

**3. Subsidy is available for holding size upto 10 hectares for rubber, tea, & coffee and 4 hectares for other crops**

**Government's Liability for XI year Plan**

| S.No | Year | Penetration Levels | GoI Liability (Rs. Lakhs) |
|---|---|---|---|
| 1 | 2007-08 | 25% | 5546.25 |
| 2 | 2008-09 | 35% | 7764.75 |
| 3 | 2009-10 | 50% | 11092.50 |
| 4 | 2010-11 | 65% | 14420.24 |
| 5 | 2011-12 | 80% | 17747.99 |
| | **Total XI Plan** | | **56571.73** |

**Table-5: Plantation & Spices Crops - Insurance Proposal: 60% Coverage Leve**

| S. No. | Important Plantation Crops | Area (Hectare) | Area (%) eligible for insurance estimated | Area (hectares) eligible for insurance | Sum Insured (Rs. per hectare) | Premium rate (at losses exceeding 40%) | Premium per Hecatre (Rs.) | Total Premium (Rs. Lakhs) | Premium subsidy @ 50% subjec to cap |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Rubber | 597410 | 85% | 507799 | 110,000 | 1.5% | 1650 | 8378.68 | 825.00 |
| 2 | Tea | 521000 | 25% | 130250 | 40,000 | 3.0% | 1200 | 1563.00 | 600.00 |
| 3 | Coffee | 354840 | 75% | 266130 | 30,000 | 6.0% | 1800 | 4790.34 | 900.00 |
| 4 | Tobacco | 191200 | 80% | 152960 | 40,000 | 3.0% | 1200 | 1835.52 | 600.00 |
| | **Important Spice Crops** | | | | | | | | |
| 1 | Chilly | 834310 | 80% | 667448 | 40,000 | 4.0% | 1600 | 10679.17 | 800.00 |
| 2 | Ginger | 85068 | 80% | 68054 | 40,000 | 2.0% | 800 | 544.44 | 400.00 |
| 3 | Turmeric | 149430 | 80% | 119544 | 40,000 | 3.5% | 1400 | 1673.62 | 700.00 |
| 4 | Pepper | 223086 | 80% | 178469 | 20,000 | 2.0% | 400 | 713.88 | 200.00 |
| 5 | Cardamom (small) | 73125 | 80% | 58500 | 50000 | 3.5% | 1750 | 1023.75 | 875.00 |
| 6 | Cardamom (large) | 30008 | 80% | 24006 | 50,000 | 3.0% | 1500 | 360.10 | 750.00 |
| | **Floriculture** | | | | | | | | |
| 1 | Flowers-Loose | 115000 | 60% | 69000 | 50000 | 4.0% | 2000 | 1380.00 | 1000.00 |
| 2 | Flowers-cut | 10000 | 80% | 8000 | 200000 | 3.0% | 6000 | 480.00 | 3000.00 |
| 3 | Flowers-cut (export) | 400 | 90% | 360 | 2000000 | 3.0% | 60000 | 216.00 | 30000.00 |
| | **Total** | | | | | | | **33422.48** | |

**Note:**

1. Area eligible for insurance has been estimated by reducing area of commercial establishments / large farms and insura
2. Subsidy allowed is 50% subject to a cap of Rs. 4000 per hect for cut flowers; 30000 per hect for cur (export) flowers and Rs. 1500 per hect for Others
3. Subsidy is available for holding size upto 10 hectares for rubber, tea, & coffee and 4 hectares for other crops

**Government's Liability for XI year Plan**

| S.No | Year | Penetration Levels | GoI Liability (Rs. Lakhs) |
|---|---|---|---|
| 1 | 2007-08 | 25% | 4177.81 |
| 2 | 2008-09 | 35% | 5848.93 |
| 3 | 2009-10 | 50% | 8355.62 |
| 4 | 2010-11 | 65% | 10862.30 |
| 5 | 2011-12 | 80% | 13368.99 |
| | **Total XI Plan** | | **42613.66** |

Important Notes:

1. Crops like turmeric, chilly, ginger, etc. are to be insured under National Agricultural Insurance Scheme (NAIS)

2. Crops like coffee, tea etc. are to be insured under Weather Based Insurance Model

3. Plantation Insurance of General Insurance PSU would be adequately strengthened to provide insurance for crops / losses covering natural and non-preventable perils under 'individual' assessment basis (E.g. Rubber)

4. Insurance program to be administered with participation of all insurers in the form of 'Co-insurance Pool'. AIC shall lead the initiatives and the pool.

5. Insurance for some of the above crops would be taken up in a phased program spread over next five years (first three years of XI Five Year Plan Period)

## An Alternative to Crop Insurance

**7.47** A major obstacle to the commercialization of the small farmer is the increased uncertainty of the market place, compared to subsistence farming. The problem is exacerbated by the fact that he has very little ability to absorb the risk of loss. Buying insurance does not seem to be a workable solution, as the premium rates to cover these risks appear to be too high. Consequently, government, policy makers and insurance companies are involved in finding a mix of subsidies (for reducing premiums) and different types of insurance products to solve this problem.

**7.48** There is an alternative solution (Gangopadhyay, 2006), where each farmer commits to pay a certain amount if conditions are good, in return for receiving something when conditions are bad. Unlike in insurance, where the farmer pays the premium up-front, here the farmer pays only when the conditions are good. This is effected by the farmer selling pieces of paper of given face value to any one who wants to buy them. Each of these papers promises to pay the face value when the conditions are good. It is like a lottery ticket, which is sold by the farmer and bought by others. If the conditions are good, the holder of the ticket wins the lottery and gets the face value on the ticket; if the conditions are bad, the holder of the ticket loses the lottery, gets nothing and the farmer gets to keep the price which the buyer paid. As Gangopadhyay (2006) shows, this is equivalent to an insurance setup in outcomes, but does not have the standard problems highlighted in the report that crop insurance has.

**7.49** The fact that in the alternative solution the farmer makes no upfront payment, and hence faces no liquidity issues, has already been mentioned. Observe that, in the insurance mechanism, the farmer pays the premium *before* it has received any revenue. In the alternative being proposed here, the farmer is called upon to make a payment only *after* it has been verified that the crop is good and the farmer has the ability to pay.

**7.50** Perhaps an even bigger advantage is the "credibility" of the proposed arrangement. The Indian regulations make it mandatory for providers of general insurance to have a paid-up capital of Rs. 1 billion. This is quite a large amount of money and makes it impossible for the NGOs to enter into this business. This prevents them from entering into an activity for which they are best suited. Insurance contracts of the type being discussed here are affected by both adverse selection and moral hazard. The only way out of this is to have insurance providers who have knowledge about individual insurance buyers (avoiding adverse selection) as well as being in a position to monitor them (preventing moral hazard).

**Implementing the Alternative**

**7.51** The biggest problem with implementing this solution is the credibility of the system. In principle, the lottery ticket being sold by an Andhra farmer can be bought by any one sitting in Delhi. However, the person in Delhi will be unwilling to buy it because she is not convinced that a particular Andhra farmer will pay up when the going is good.

**7.52** One can think of the following steps in the implementation process.

(a) A growers' collective can act as the integrator for the tickets of different farmers.

(b) The PSFT can put together the tickets from various grower collectives and sell them to an institution that securitizes the tickets from various farmers producing different crops.

(c) The institution can sell it as a financial paper to the person in Delhi.

**7.53** The PSFT deals with the grower collectives and the financial institutions and, thereby, acts as the credible institution that enables the process. First, the PSFT has a sufficiently large capital base to underwrite the ticket purchases should the farmers not pay up when the conditions are good. Second, the PSFT by its exposure to grower collectives can exercise sufficient leverage to keep the farmers honest.

**7.54** One important issue is the price of the ticket. That is not a problem here since this lottery ticket is nothing but an all-or-nothing option and, therefore, has a closed form price formula.

**7.55** The Task Force was apprised of the Personal Accident Insurance Scheme for the plantation growers which was launched by the Price Stabilization Fund Trust (PSFT) providing for an insurance cover of Rs.25,000/-. The premium for this insurance is being paid by the PSFT from the interest earned on the corpus of the Fund available with it. The premium is Rs.9/- per person per annum. It was also informed that the Government is contemplating expanding this scheme so as to cover the permanent plantation workers along with the growers and the insured amount is being increased from Rs.25,000/- to Rs.one lac. The scheme is available to the plantation upto 10ha. However, in the proposed revised scheme, the premium is to be paid on 50:50 basis by the beneficiary and the PSFT. This has been proposed to inculcate a sense of involvement of the beneficiaries in this scheme. The Task Force feels that this scheme is very much needed given the economic status of small growers and the farm labour and recommends that the scheme may be expanded to other sectors such as Spices and Floriculture.

**Crop Loans at Reduced Rate of Interest**

**7.56** The Task Force noted that there have been failures of plantation activity and as a result thereof the bank loans could not be repaid and the farms became sick. Large loan amounts are lying outstanding against various growers. The Government in the past had announced a number of policies for various sectors whereby interest was waived or the interest burden was reduced by giving subsidy etc. It was a common demand of the growers as also the Commodity Boards that the bank loan should be made available at a cheaper rate of interest which can be afforded by the growers. Recently, the Govt. of India has announced Special Purpose Tea Fund (SPTF) for replantation and rejuvenation of tea plantations. In that, the rate of interest has been reduced by allowing the banks to lend funds to the SPTF at government securities rate plus 1% and SPTF will on-lend these funds to the growers at a margin of 0.5%. This would reduce the interest burden on the growers. There was a demand from the growers that the crop loan should be made available to them at the interest rate at which NABARD refinances the banks. The Task Force feels that lending to the plantation sector/Spices/Floriculture units should be made at the refinance rate of NABARD plus 0.5%, as has been devised for SPTF. Since the plantation sector is export oriented and a large portion of its produce goes to the international market where intense competition is to be faced, it is absolutely necessary that the cost of money to this sector is reduced to the maximum extent possible.

**Inadequate Infrastructure**

**7.57** The inadequacy of infrastructure and locations of these plantations have already been discussed in the preceding chapters. Recognizing the disadvantages, the

Government has been giving subsidy to various plantation products particularly for export purposes like transport subsidy. The subsidy to offset locational and infrastructural disadvantages needs extension. Government may examine these issues separately and provide subsidy for exports wherever it is considered necessary. This however, is not a replacement to creating adequate infrastructure. For creation of infrastructure, the Task Force has recommended "plantation bonds" to raise funds including from carbon trading and eco tourism which may be ploughed into infrastructure projects.

## RECOMMENDATIONS

On the basis of the discussions as contained in the preceding paragraphs of this Chapter, the main recommendations are listed below:

1. Introduction of a crop insurance scheme – weather insurance and yield insurance in respect of certain crops in preference to a price risk cover.

2. An enlarged personal accident cover and a cover for individual assets of the growers as well as the permanent workers deployed on small plantations can also be thought of.

3. The provision of modern market mechanisms by way of futures and options. For this, the Task Force, *inter alia*, suggests the collectivization of small growers.

4. The availability of IOUs to enable the small growers to ensure ready liquidity at the time of stresses.

5. The creation of infrastructure facilities in plantation areas to give better market accessibility to the growers. The introduction of Plantation Development Bonds, in this connection, is recommended.

6. Interest rates on crop loans to be reduced at refinance rates of NABARD plus 50 basis points.

7. The lending institutions to be encouraged to share the insurance premium liability of the small growers so as to ensure easy recoverability of their advances.

8. The strengthening of PSFT organization to enable it to play a pivotal role in the scheme of things.

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## CHAPTER – VIII

### FUNDING OF THE PROPOSALS:

**8.0** Before the mode of funding of the proposed projects is discussed, it would be useful to do a funds-flow analysis regarding the present and future availability of funds with the PSF Trust. The PSF Trust was initially projected to have a corpus of Rs.500 Cr. As against this, the amount made available stands at Rs.432.88 Cr. This excludes growers' contribution of Rs.2.24 Cr, for which, the Government will have to take a view regarding retention and usage. Thus, the total corpus available as on 31/12/2006 is Rs.435.12 Cr. While the Corpus was proposed to be maintained at this level, the organization funds was to be in the form of interest accrual at the rate of 8% of the Corpus (Table-I). It would be seen from Table II that the interest accrued till 2005-06 is Rs. 67.16 Cr and with the capitalization of this component, a further Rs.39.89 Cr is estimated to accrue by the end of 2006-07. The details of accrued interest and funds released may also be seen from Table-II.

**8.1** As regards utilization of funds, the details are indicated at Table-III. It is understood that the utilization rate has been low on account of low membership of growers due to disinclination to join the Scheme for unattractive compensation and also the fact that member-growers have defaulted in depositing their share of contribution in normal years.

**8.2.** It emerges that the funds available with the PSF Trust are as follows:-

- **Corpus of Rs.435.12 Cr**
- **Interest currently available Rs. 63.55 Cr**
- **Interest estimated to accrue during 2006-07, Rs. 39.89 Cr**

Thus, the total amount of organization funds by April, 2007 would be Rs.103.44 Cr.

**8.3.** Let us now indicate the likely availability of fund in the next five years on the basis of two scenarios

(i) **On the basis of the present corpus of Rs.435.12 crs**

(ii) **On the basis of a corpus of Rs.500 crs, which would require an injection of Rs.64.88 crs by the Government**.

**With a Corpus of Rs.435.12 crs** :

**<u>Rs. In Crores</u>**

| **Year** | **Interest available for disburseme nt @ 8% accrual** | **Administrative expenses** | **Surplus available** | **Cumulative surplus available** | **Interest bearing corpus & capitalized interest** |
|---|---|---|---|---|---|
| **1** | **2** | **3** | **4 (col.3 – 4)** | **5** | **6** |
| 2005-06 | 63.55 | **-** | 63.55 | 63.55 | |
| 2006-07 | 39.89 | 0.5 | 39.39 | 102.94 | 538.06 |
| 2007-08 | 43.04 | 0.5 | 42.54 | 145.48 | 580.60 |
| 2008-09 | 46.44 | 0.5 | 45.94 | 191.42 | 626.54 |
| 2009-10 | 50.12 | 0.5 | 53.59 | 245.01 | 676.16 |
| 2010-11 | 54.09 | 0.5 | 53.59 | 298.60 | 729.75 |
| 2011-12 | 58.38 | 0.5 | 57.88 | 356.48 | |
| **Total** | | | **356.48** | | |

**8.4** Therefore, organization funds to the extent of Rs.356.48 Cr would be available during the 11th Plan period under the present Scheme of things. This is on the basis of assumption of nil outgo. However, the amount available would be less, depending on the quantum of outgo.

**8.5** However, in case the Government makes an injection of Rs. 64.88 Cr into the Corpus, the disbursable funds available would be as follows:

**With Corpus of Rs.500 crores**

| Year | Interest available for disbursement @ 8% accrual | Administrative expenses | Surplus available | Cumulative surplus available | Interest bearing corpus and capitalized interest |
|---|---|---|---|---|---|
| **1** | **2** | **3** | **4 (col.3 – 4)** | **5** | **6** |
| 2005-06 | 63.55 | - | 63.55 | 63.55 | 498.67 |
| 2006-07 | 39.89 | 0.5 | 39.39 | 102.94 | 538.06 |
| 2007-08 | 48.23 | 0.5 | 47.73 | 150.67 | 650.67* |
| 2008-09 | 52.05 | 0.5 | 51.55 | 202.22 | 702.22 |
| 2009-10 | 56.17 | 0.5 | 55.67 | 257.89 | 757.89 |
| 2010-11 | 60.63 | 0.5 | 60.13 | 318.02 | 818.02 |
| 2011-12 | 65.44 | 0.5 | 64.94 | 382.96 | |
| **Total** | | | **382.96** | | |

* Injection of capital into Corpus by GOI at this stage.

**Funds Required**

**8.6** Against the above backdrop, let us now consider the funding requirements of the proposed projects:

**8.7** **Personal Accident Insurance Scheme**: It is recommended that this Scheme be extended also to permanent plantation workers who are deployed on the small plantations and also that the cover be increased to Rs.1.00 lakh depending upon the severity of the accident. The premium requirement for this Scheme for four commodities, Tea, Coffee Rubber and Tobacco would be Rs.178.78 lakhs (with the target of 12.77 lakh and Rs.14 premium per annum for growers) and (Rs.715.12 lakhs for the workers @ 4 workers per plantation.) Thus, the total requirement would be Rs.893.9 lakhs or Rs.8.93 Cr per annum. Therefore, PSFT's share will be Rs. 4.46 Cr per annum [@ 50% liability]. This scheme should be funded from PSFT's earnings.

**8.8 Comprehensive Insurance Scheme :** As already explained in Chapter VII, the insurance scheme has been projected to cover 12 commodities, which constitute a major share of the Plantation sector, and for which production is driven not only by considerations of domestic demand but also export potential. These commodities are exposed not only to volatility of international and domestic prices but also to vagaries of domestic demand. It is important to give, within the limits of feasibility, a comprehensive crop insurance cover, particularly to the small farmers.

**8.9** The coverage has been proposed at three levels, namely, 80 – 85%, 70% and 60%. The highest level i.e. 80-85% entails Government's annual financial liability to the extent of Rs.328.08 cr followed by Rs.221.85 cr at 70% and 167.11 cr at 60%. It does not require any reiteration that the goal should be to adopt 80 – 85% cover level, so as to make the scheme attractive to small farmers. However, in terms of details calculated for both 80 – 85% and 70% coverage, the requirement of funds during the first five years would be Rs.836.60 cr and Rs.565.72 cr respectively.

**8.10** The Task Force has done an exercise on funding requirements of this project. Views of the various members have been ascertained and after deliberations, the opinion is that the funding could be in one of the following ways:-

**(i) The project be funded fully through PSF Trust – This would require injection of funds to increase the size of the Corpus of the Trust so as to meet the requirements of the project.**

**(ii) The project be funded partly by PSF Trust and the uncovered gap be met through budgetary support of the Government.**

**(iii) The project be funded fully through GOI budgetary sources and implemented by the PSF Trust.**

**The above three scenarios have been detailed in the form of Tables IV & V. It would be seen that at 80 – 85% coverage, the following Scenarios emerge:**

## 8.11 Scenario A: **Full Funding through PSF Trust Corpus:**

- The PSF Trust would be able to meet the requirements in the 1st year i.e. 2007-08

- From the second year onwards funding gap would arise. It would be Rs. 9.99 cr in 2008-09, Rs. 118.53 cr in 2009-10 and would go on to Rs. 49.20 cr in 2011-12.

- Additional Corpus funds required to be injected on this basis would be Rs. 124.87 cr in 2008-09, Rs.1481.62 in 2009-10, Rs. 615.12 cr in 2010-11 and Rs.615.00 cr in 2011-12.

- It is important to note here that the injection of additional Corpus would have to be made at the beginning of the preceding year in which the gap arises, so that the accumulation of interest of the value indicated year-wise in the Table is available in the year of requirement. This means that Rs.124.87 cr would have to be injected on 1.04.2007 so that the gap of Rs.9.99 cr can be met in 2008-09 and so forth.

- The total amount of Corpus injection requirement is Rs. 2836.61 cr during the 11th Plan period and by the end of this Plan period, the PSFT corpus would be Rs.3336.61 cr. This means at the beginning of 12th Plan period, the PSFT would able to generate an annual interest of Rs.266.93 cr and it would be able to sustain itself and implement this project in the future years from its own resources.

**8.12 Scenario B: Project Funded from Corpus of PSFT (Rs.500 cr) & balance from GOI's support:**

- Government's budgetary support would commence from 2008-09 with Rs. 9.99 cr in that year and increasing to Rs. 226.93 cr in 2011-12.

- Total estimated budgetary during the 11$^{th}$ Plan period would be Rs. 543.15 cr.

- While the funds requirement here is of a much lower order as compared to Scenario A, it could be reasoned that in future years, beyond the 11$^{th}$ Plan period, similar financial support would have to be extended to PSF Trust and would constitute a permanent charge on the Budget.

**8.13 Scenario C: Project Fully Funded by GOI Budgetary Support** :

- Funds required from the Government budget would be Rs.836.60 cr at the 80 – 85% coverage level and Rs. 565.72 at the 70% coverage level.

## RECOMMENDATIONS

So the question which emerges is, which of the above options would be the most favoured option? The Task Force is of the opinion that keeping in view the parameters, it would be advisable to adopt Scenario A. This could be adopted as a part of the PSF Trust's restructuring process and also with the resultant benefits of making this project a self-financing one from the Corpus 12$^{th}$ Plan onwards. However, keeping in view the budgetary constraints of the Government, the Task Force recommends that **"Project be posed for international multilateral funding from World Bank, IDA & IFC sources".**

**Table 1. - PSF Corpus Fund:**

Deposits in the PSF Corpus Fund as on 31st December 2006, is as under:

**(Rs. In Crs)**

| | **As proposed under the Original PSF Scheme** | **Actual Position as on 31.12.2006** |
|---|---|---|
| GOI Contribution | 482.88 | 432.88* |
| Growers' contribution | 17.12 | 2.24 |
| Total | 500.00 | 435.12 |

*GOI is yet to provide Rs.50.00 crore towards PSF Corpus.

**Table 2. – Status of Interest accrued position as on 31.3.2006:**

**(Rs. In Crs)**

| **Year** | **Interest accrued** | **Interest released to PSF Trust** | **Surplus available** |
|---|---|---|---|
| 2003-04 | 2.68 | 0 | 2.68 |
| 2004-05 | 27.58 | 1.75 | 25.83 |
| 2005-06 | 36.90 | 1.86 | 35.04 |
| | **67.16** | **3.61** | **63.55** |
| 2006-07 (Estimated) | **39.89** | | |

**Table 3. – Release of Funds to PSF Trust and its actual utilization thereof:**

**(Rs. In lakh)**

| Year | Interest released by DOC | Expenditure | | | |
|---|---|---|---|---|---|
| | | Scheme Payout | Insurance | Admn. Expenses | Total |
| 2003-04 | 0 | 0 | 0 | 18.91 | **18.91** |
| 2004-05 | 175.00 | 91.56 | 3.03 | 37.39 | **131.98** |
| 2005-06 | 186.00 | 13.95 | 2.51 | 23.98 | **40.44** |
| 2006-07 | 0 | 6.03 | 4.02 | 21.83 | **31.88** |
| | **361.00** | 111.54 | 9.56 | 102.11 | **223.21** |

- For 2006-07, account status for April to December 2006 reported.
- Since August 2003 (i.e. for 8 months in 2003-04)

**Table 4**

**LEVEL I : 80-85% coverage**

**Scenario – A : Project fully funded through PSF Trust Corpus**

**Rs. In Crore**

| S. No. | Year | Penetration level | GOI liability | PAIS Premium for 12.77 lakh growers and 4 workers @ Rs.7/- | Funds available with PSFT | Total Liability | Gap | Additional Corpus needed to generate the gap |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6* | 7(4+5) | 8 (6-7) | 9 [{Mod(gap)*100{/8] |
| 1 | 2007-08 | 25% | 82.02 | 4.47 | 150.67 | 86.49 | 64.18 | 0 |
| 2 | 2008-09 | 35% | 114.83 | 4.47 | 109.31 | 119.30 | -9.99 | 124.87 |
| 3 | 2009-10 | 50% | 164.04 | 4.47 | 49.98 | 168.51 | -118.53 | 1481.62 |
| 4 | 2010-11 | 65% | 213.25 | 4.47 | 168.51 | 217.72 | -49.21 | 615.12 |
| 5 | 2011-12 | 80% | 262.46 | 4.47 | 217.73 | 266.93 | -49.20 | 615.00 |
| | **TOTAL** | | **836.60** | **22.35** | **696.20** | **858.95** | | **2836.61** |

**Scenario B : Project funded from PSFT's existing Corpus of Rs.500 crore and balance from GOI's Budget**

**Rs. In Crore**

| S. No. | Year | Penetration level | GOI liability | PAIS Premium for 12.77 lakh growers and 4 workers @ Rs.7/- | Funds available with PSFT | Total Liability | Gap | Govt's budgetary support |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6* | 7(4+5) | 8 (6-7) | 9 |
| 1 | 2007-08 | 25% | 82.02 | 4.47 | 150.67 | 86.49 | 64.18 | 0 |
| 2 | 2008-09 | 35% | 114.83 | 4.47 | 109.31 | 119.30 | -9.99 | 9.99 |
| 3 | 2009-10 | 50% | 164.04 | 4.47 | 40.00 | 168.51 | -128.51 | 128.51 |
| 4 | 2010-11 | 65% | 213.25 | 4.47 | 40.00 | 217.72 | -177.72 | 177.72 |
| 5 | 2011-12 | 80% | 262.46 | 4.47 | 40.00 | 266.93 | -226.93 | 226.93 |
| | **TOTAL** | | **836.60** | **22.35** | **379.98** | **858.95** | | **543.15** |

| **Scenario C : Project fully Funded through GOI Budgetary support** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | **Rs. In crore** |
| | | | | | | | | |
| | S. No. | Year | Penetration level | GOI liability | | | | |
| | 1 | 2 | 3 | 4 | | | | |
| | 1 | 2007-08 | 25% | 82.02 | | | | |
| | 2 | 2008-09 | 35% | 114.83 | | | | |
| | 3 | 2009-10 | 50% | 164.04 | | | | |
| | 4 | 2010-11 | 65% | 213.25 | | | | |
| | 5 | 2011-12 | 80% | 262.46 | | | | |
| | | **TOTAL** | | **836.60** | | | | |

*** Calculated on the basis of interest accrual plus balance carried forward from last year**

**TABLE – 5**

**Scenario – A : Project fully funded through PSF Trust Corpus**

**Level : 70% coverage**

| | | | | | | | | **Rs in Crore** |
|---|---|---|---|---|---|---|---|---|
| S. No. | Year | Penetration level | GOI liability | PAIS Premium for 12.77 lakh growers and 4 workers @ Rs.7/- | Funds available with PSFT | Total Liability | Gap | Additional corpus required to generate the gap |

| 1 | 2 | 3 | 4 | 5 | 6* | 7(4+5) | 8 (6-7) | 9 [{Mod(gap)*100{/8] |
|---|---|---|---|---|---|---|---|---|
| 1 | 2007-08 | 25% | 55.46 | 4.47 | 150.67 | 59.93 | 90.74 | 0 |
| 2 | 2008-09 | 35% | 77.65 | 4.47 | 137.99 | 82.12 | 55.87 | 0 |
| 3 | 2009-10 | 50% | 110.93 | 4.47 | 100.33 | 115.40 | -15.07 | 188.37 |
| 4 | 2010-11 | 65% | 144.20 | 4.47 | 55.06 | 148.67 | -93.61 | 1170.13 |
| 5 | 2011-12 | 80% | 177.48 | 4.47 | 148.68 | 181.95 | -33.27 | 415.87 |
| | | | **565.72** | **22.35** | **592.73** | **588.07** | | **1774.37** |

**Scenario B : Project funded from PSFT's existing Corpus of Rs.500 crore and balance from GOI's Budget**

| | | | | | | | | **Rs. In Crore** |
|---|---|---|---|---|---|---|---|---|
| S. No. | Year | Penetration level | GOI liability | PAIS Premium for 12.77 lakh growers and 4 workers @ Rs.7/- | Funds available with PSFT | Total Liability | Gap | Govt's budgetary support |
| 1 | 2 | 3 | 4 | 5 | 6* | 7(4+5) | 8 (6-7) | 9 |
| 1 | 2007-08 | 25% | 55.46 | 4.47 | 150.67 | 59.93 | 90.74 | 0 |
| 2 | 2008-09 | 35% | 77.65 | 4.47 | 138.06 | 82.12 | 55.94 | 0 |
| 3 | 2009-10 | 50% | 110.93 | 4.47 | 100.51 | 115.40 | -14.89 | 14.89 |
| 4 | 2010-11 | 65% | 144.2 | 4.47 | 40.00 | 148.67 | -108.67 | 108.67 |
| 5 | 2011-12 | 80% | 177.48 | 4.47 | 40.00 | 181.95 | -141.95 | 141.95 |
| | | | **565.72** | **22.35** | **469.24** | **588.07** | | **265.51** |

| **Scenario C : Project fully Funded through GOI Budgetary support** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | **Rs. In crore** | | | |
| | S. No. | Year | Penetration level | GOI liability | | | | |
| | 1 | 2007-08 | 25% | 55.46 | | | | |
| | 2 | 2008-09 | 35% | 77.65 | | | | |
| | 3 | 2009-10 | 50% | 110.93 | | | | |
| | 4 | 2010-11 | 65% | 144.2 | | | | |
| | 5 | 2011-12 | 80% | 177.48 | | | | |
| | | | | **565.72** | | | | |
| *** Calculated on the basis of interest accrual plus balance carried forward from last year** | | | | | | | | |

# CHAPTER - IX

## Role of Price Stabilisation Fund Trust

### Background

**9.0** Department of Commerce launched the "Price Stabilisation Fund Scheme" in April 2003. Under this Scheme, it was envisaged that a Corpus fund of Rs.500 crore would be kept in public account of Government of India and the interest @8% per annum thereon would be released to the Trust Fund. The PSF Trust was registered as a public trust on 11th September 2003 jointly by NABARD and Department of Commerce with NABARD as "Settlor".

**9.1** The objective of the PSF Trust, its constitution and functions are given in the **Annexure – II.**

### 9.2 PROPOSED ROLE AND STRUCTURE OF PSF TRUST:

- In the light of the recommendations of the Task Force, the role of PSF Trust may encompass the following additional responsibilities:
    - Coverage of Spices (cardamom, chillies & pepper) and Floriculture exports,
    - Operationalisation of a Comprehensive insurance package for the Plantation Sector,
    - Issuance of Bonds and similar nature of financial instruments by way of financial assistance to growers,

- Coordination with Commodity Boards relating to various developmental schemes being implemented for the plantation sector.

➢ The administrative structure of the PSFT will need to be strengthened in view of the additional roles.

## CHAPTER – X

## IMPLEMENTATION

**10.0** In the chapters appearing before this, we had considered the possibility of putting in place an insurance scheme for the small growers of plantation crops. The first of the schemes dealt with the risks on yield affected by weather etc. and the second dealt with price volatility and how by introduction of futures trading, the floatation of a plantation bond etc., the woes of the small growers of plantation crops to a large extent be ameliorated.

**10.1** The Task Force had spent considerable time in deciding whether the measures recommended by it should be made mandatory or optional. In case the optional route is adopted, there is a distinct possibility of small growers not joining any scheme during the years of plenty when they have no worries about the realization of their investment. Their complaints would surface and Government would be forced to dole out assistance etc., when adversities happen and only in those years the growers would look to being bailed out of their difficulties. This adverse selection is one of the relevant considerations which compel the members of the Task Force to lay down that the measures suggested in this Report may be made mandatory. In other words, the persons who would like to get benefits out of the social insurance schemes regarding protection of yield and realization as also the personal accident scheme must become members of an organization which would enable the schemes to be implemented properly. The mandatory nature of the schemes would enable the platform to be broadened and with more active participation of small growers, it will work out better schemes for their mutual benefit. This will also result in insurance premia coming down substantially with the result that the pressure both on the growers and the Government in meeting the periodical premium would be reduced.

**10.2** We have noted that the Government has set up a Price Stabilization Trust Fund under the Ministry of Commerce. This was conceived as a mechanism to provide financial relief to the plantation growers when the prices of the commodities fell below a specified level and did not resort to the Government undertaking any procurement operations in situations where the market price fell below the cost of production. The basic principle was to set up a pool of resources to support growers over a long period of time and to reduce their burden in case of a sudden and unexpected fall in market prices. The scheme was made available to the plantation growers in the areas of coffee, tea, rubber and tobacco and where the operational holding of growers was up to 4 hectares. Because of the prevalent market conditions, the tobacco growers opted out of the scheme and the scheme as of today is applicable only to the rubber, coffee and tea growers. The scheme is optional in nature and as against 12,77,000 eligible growers, today the participation is only of 45247. Even here, complaints have been raised by small growers that the deposit to be made at Rs.1,000 per hectare in the years of plenty does not yield any great benefit to them and therefore according to them, the benefits are rather vague.

**10.3** Internationally also, whenever schemes have been made optional in nature, the participation of beneficiaries has been very minimum. It has been noticed by the United States in the operation of their medicare programme that this adverse selection process has resulted in a huge out-flow of resources bankrupting the schemes. In fact, some of the big States in USA, like California are now contemplating an introduction of a compulsory system of insurance where every citizen of the State is required to contribute a minimum to the scheme which will enable a basic level of health care to be rendered to these people. The health care may also include of maintenance of health in the periods before a person actually falls sick.

**10.4** We have, therefore, to decide a scheme which would take note of these basic ingredients and since the Task Force has suggested a plan which would enable a large part of the initial losses to be absorbed by the Government, the scheme should be notified as mandatory and applicable to all small growers having plantation crops in land of 10 hectares or below. This scheme could be administered through the Price Stabilization Trust Fund, which has already been established by the Government. Its operational division and the objectives of the Trust could be suitably modified to reflect the current requirements of the administration of the two schemes which the Task Force has suggested. The Trust could be made into a statutory body, with the hope that gradually it would assume greater powers of coordination between the Commodity Boards and the growers to ensure not only a financial stability, but a commercially healthy growth in the plantation industry.

**10.5** The Task Force would not have made recommendations regarding the establishment of a social insurance scheme, if it had not been convinced that the continuance of the plantation sector is in the economic interest of the Nation. The social needs of a large number of people employed in the industry should be taken care of and the earnings in foreign exchange continued. The industry must be placed on a sound footing to enable the Indian producers to compete with the foreign growers on an equal level.

**10.6** Elsewhere in the report, the Task force has projected the requirements of premium over a five year period; Projections of the government's share of the premium have also been indicated. The task force is conscious of the fact that the extension of the scheme that it has suggested, even on a mandatory basis, cannot be achieved over-night and that there will be the provision of a risk cover gradually over a period.

**10.7** On this basis, a projection of Rs.679.55 crores over the 11th Five Year Plan has been made as government's financial support for the scheme – split into Rs.64.18, Rs.99.99 Rs.128.51, Rs.177.72 and Rs.226.93 crores over the different years. The Task Force that this commitment should be organized by the Government as part of its obligation to the small growers in the plantation industry – coffee, tea, rubber, tobacco, chilly, ginger, turmeric, pepper and cardamom. While budgeting provisions are in order to meet this commitment, attention is drawn to the fact that a Price Stabilization Fund Trust has already been established by the government with a corpus of Rs.500 crores. Due to lack of interest on the part of the growers to come under the scheme put through by the Trust, the fund is lying idle. An annual interest accretion of around Rs. 40 crores will be available to fund at least partly the commitment in the early years of the implementation of the scheme – to be topped up by release of funds by the government from time to time. The task force, therefore, recommends the schemes to government for implementation.

**10.8** The Task Force was given to understand that the Weather Link (Rainfall) Insurance is being considered for coffee where the crops are being insured against untimely and scarce rainfall. The premium is proposed to be shared between the beneficiary and the Government. On 50-50 basis. The scheme is applicable to the plantation upto 10 ha.

**10.9** The crop insurance, that is being proposed here, will be in line with that for coffee, however, considering the peculiarity of each plantation/crop, the parameters of each insurance will be different and determined by the concerned insurance agencies. However, the financial burden of payment of premium for each plantation crop and spices, tobacco and floriculture will have to be shared by the Government to the extent of 50% at least for the first 5 years. After 5 years, the alternative proposal that the Task Force has recommended like the IOU option would have become fully functional and at that stage instead of crop insurance, the farmers may be motivated to accept the IOU option.

**10.10** A personal accident insurance scheme was experimentally launched by the PSFT in 2005 under which premium is being paid out of interest earnings of PSFT fund for personal accident cover of Rs.25,000/- for the growers. It is believed that the Government is considering increase in the insurance cover from Rs.25,000/- to Rs.1 lac and also inclusion of permanent farm labour along with the small growers. The Task Force feels that personal accident insurance scheme will be beneficial to the small growers and the workers. In any case, this scheme is available only upto 10 ha holdings. The scheme needs to be expanded so as to cover other crops such as spices and floriculture. However, the persons availing of this insurance will have to pay 50% of premium and 50% of the premium should be subsidized by the Government through PSFT's earning.

**10.11** The Task Force has also considered various other options to secure reasonable price to the growers like futures markets, Put option, Plantation Bonds and IOU mechanism. The IOU mechanism appears to be workable and if it succeeds, crop insurance may not be necessary instead the growers would prefer this option. The detailed mechanism of this option may be worked out with proper instrumentalities put in place.

**10.12** The Task Force has also considered an alternative scheme to insurance – floatation of options which do not require any investment of cash by farmers upfront. In making the recommendations, the task force has been aware of the fact that any system of subsidy (where a major part of the benefit is funded by Government) tends to get self-perpetuating; It will also lead to a demand from other sectors of the industry not covered now for an extension and very soon not economic but political and social reasons will tend to decide such issues. In the circumstances, the task force has examined the issues a little more in depth and comes to the following conclusions :

(i) in the existing situation, where relief to the small growers is found as an "after event" measure leading to calamitous situations amongst the growers and to panic, it will be ideal to find a solution which will act upfront ;

(ii) in such a situation, taking note of the information availability among the growers, the introduction of the crop insurance scheme as suggested by the task force should be implemented as an immediate source of care and relief. The period during which this scheme could be implemented can be fixed at four to five years ;

(iii) simultaneously, the PFST should be recognized as the focal institution for relief to growers and the issue of plantation funding should be entrusted to this organisation to aid and finance infrastructure development ;

(iv) the alternative to insurance – the subscription to options etc. suggested in the report should be put into effect. This obviously requires educating the small growers on the benefits of the procedure and its technical features. The Task Force feels that such an objective should be an on-going one for the next five years or so.

With the running of the schemes at (ii) and (iv) on parallel lines, there should be a sun-set clause presented for the crop insurance scheme and the entire benefit package being run by scheme at (iv). We felt that some good progress on these lines should be possible by the end of five years from now and before withdrawing fully the crop insurance scheme, a quick pilot study can be made at that time to decide as to whether it was ripe for a complete switch-over.

# Annexure – I

F.NO.3/2/2006-Plant C

Government of India

Ministry of Commerce & Industry

Department of Commerce

Dated the 24th July, 2006

## ORDER

The Department of Commerce hereby constitutes a Task Force for undertaking a study to evolve a mechanism to protect the growers of tea, coffee, rubber and spices from the adverse effects of price volatility in the Plantation Sector comprising the following:-

1. Shri N. Rangachari, former Chairman, CBDT and IRDA - Chairman, Task Force
2. Dr. Vijay Kelkar, Former Finance Secretary - Member
3. Dr. Subhashish Gangopadhyay, Professor, India Development Foundation, New Delhi - Adviser
4. Dr. Bharat Ramaswami,Professor, Indian Statistical Institute, New Delhi - Adviser

2. The Terms of Reference for the Task Force for the Plantation Sector will be as following:

### I. Scope of the study

(i) Identification and assessment of the problem and extent of 'price volatility' faced by growers of tea, coffee, rubber and spices ( only chilli, pepper & cardamom ).

(ii) The feasibility of making direct compensation to the growers for the losses suffered by them based on a new scheme which may be either a supplement or alternative to the existing Price Stabilisation Fund Scheme. Any compensation scheme could examine the feasibility of disbursing claims to offset the difference between a weighted average cost of production and weighted average international price of each commodity. Any cost of production would factor in a minimum return on investments made by growers.

(iii) The feasibility of introducing an instrument which enables the growers to park surplus funds during good crop years and offers market related interest rate. The instrument may also enable the growers to have maturity proceeds which would be exempt from income tax subject to the condition that the same would be ploughed back for development/upgradation of plantation operations. These could include renovation of old field assets, promotion of water augmentation/harvesting investments, promotion of group processing activities to improve quality, combating environmental pollution etc. An amendment to Section 33AB of the Income Tax Act could be also considered for this purpose.

(iv) The feasibility of a risk management support mechanism to small growers to mitigate the effects of adverse weather and pest related risks.

(v) The feasibility of introducing a social sector insurance scheme to compensate small growers for expenses on account of education, illness/critical illness, drinking water, sanitation etc.

**II. Fees & Travel**

For carrying out the study, Shri N. Rangachari & Dr. Vijay Kelkar will be sanctioned a professional fee of Rs. 2.00 lakh each which would include their travel and other incidental expenses. Dr. Subhashish Gangopadhyay and Dr. Bharat Ramaswami will be sanctioned a professional fee of Rs. 1.00 lakh each for the same purpose. The expenditure in this regard would be met from the head "Professional Expenses".

**III. Duration of the study**

The study may be completed within a period of 3 months commencing from the date of issue of the sanction for this study. The study report may be submitted to Department of Commerce within this time frame.

This issues with the approval Finance Division vide their Dy.No. 2139/FD/06 dated 21.7.2006.

Yours faithfully,

(Aditi Das Rout)
Director (Plantations)
*Tel.No.2306 2530*
e.mail: adrout@nic.in

F.NO.3/2/2006-Plant C

Government of India

Ministry of Commerce & Industry

Department of Commerce

Dated the 8th August, 2006

ADDENDUM

In continuation of this Department's Order of even number dated 24/25th July, 2006 regarding constitution of a Task Force for undertaking a study to evolve a mechanism to protect the growers of tea, coffee, rubber and spices from the adverse effects of price volatility in the Plantation Sector under the Chairmanship of Shri N. Rangachari, former Chairman, CBDT and IRDA, it has been decided to entrust the study to assess the long-term international competitiveness of the plantation industries, namely, tea, coffee, rubber and spices (pepper, cardamom and chilli) to the Task Force in addition to the above mentioned study.

2. The scope of the study by the Task Force would take into account the possibility of new producers entering the market, establishment of new plantations in virgin lands of Africa, the age-profile of India's plantations, wage rates etc.

3. The other terms and conditions of the order dated 24/25th July, 2006 would remain the same.

This issues with the approval of Minister of State for Commerce & Industry.

(Aditi Das Rout)
Director (Plantations)
**Tel.No.2306 2530**
e.mail: adrout@nic.in

**<u>Annexure – II</u>**

## PRICE STABILISATION FUND TRUST

The Objective of the PSF Trust is to provide support to needy farmers/growers of coffee, tea, rubber and tobacco in problems related to production, pricing and marketing of these commodities through scheme(s) drawn by the High Powered Committee from time to time and improve their financial position.

Price Stabilisation Fund (PSF) Trust will be the Nodal Agency for operationalising the Price Stabilisation Fund (PSF) Scheme.

A Board of Trustees consisting of not less than 3 and not more than 7 Trustees shall manage the Trust. The Trustees shall be appointed by NABARD with the approval of the Central Government after obtaining their consent to act as trustee. Additional Secretary (Plantation) will be the Chairman of the Board of Trustees. A Chief Executive Officer will look after the day-to-day affairs of the PSF Trust.

Members of the Board of Trustees are:

(i) Additional Secretary (Plantation), Department of Commerce, Govt. of India, New Delhi.

(ii) Additional Secretary & Financial Adviser, Department of Commerce, Govt. of India, New Delhi.

(iii) Executive Director, NABARD, Head Office, Mumbai.

(iv) Chief General Manager, NABARD, Head Office, Mumbai.

(v) Chief Executive Officer, PSF Trust, New Delhi.

The Fund shall be operated by the Board of Trustees to realise and fulfill the objectives of the Trust in the exclusive interest of the beneficiaries. All the expenses of the Trust shall be borne out of income of the Corpus, consisting of annual payments made by the Central Government under the Scheme and other resources available to it.

The Board of Trustees shall cause the accounts of the Trust to be audited by a Chartered Accountant for every financial year and in such manner as directed by the Central Government.

After 10 years from the date of coming into force of this Trust Deed or earlier, the Trust shall be revocable at the instance of NABARD and in concurrence with the Central Government and the surplus Fund, assets and other properties of the Trust shall be transferred to another Trust having similar objects or shall vest in the Central Government.

**Salient features and Status of the Scheme:**

- The growers of Coffee, tea, rubber and tea having an operational holding of up to 4 hectares are eligible to participate in the scheme. Out of 12.77 lakh eligible growers, it was decided to cover the most needy 3.42 lakh growers in the initial phase.
- A Corpus of Rs.500 crore would be deposited in the Public Account with Government of India, out of which Rs.482.88 crore would be contributed by GOI and Rs.17.12 crore by growers by way of non refundable entry fee at the time of joining the Scheme.
- Interest earnings on PSF Corpus @ 8 per cent per annum i.e. Rs.40 crore would be given to the PSF Trust for implementation of the Scheme.
- Corpus of the Fund would remain undisturbed and interest earnings alone would be utilized for operationalising the PSF Scheme.
- As on 30.11.2006, Corpus fund comprises of Rs.435.12 crore out of which Rs.432.88 crore is contributed by GOI and Rs.2.24 crore by growers.
- A High Powered Committee (HPC) comprising Officials of Department of Commerce, Ministry of Finance, NABARD, and Experts from Commodity Boards has been constituted to give policy guidelines and to monitor the Scheme. The PSF Scheme will be implemented by the Trust in co-ordination with the Department of Commerce, Commodity Boards and NABARD.
- The members of the High Powered Committee are:

| | | |
|---|---|---|
| **1.** | **Additional Secretary (Plantations) Department of Commerce** | ***CHAIRMAN*** |
| **2.** | **Additional Secretary and Financial Advisor, Department of Commerce** | **Member** |
| **3.** | **Joint Secretary (EP-Agri Division), Department of Commerce** | **Member** |
| **4.** | **Joint Secretary (Banking Division – NABARD Affairs), Ministry of Finance** | **Member** |
| **5.** | **Director / Deputy Secretary, (Plantations), Department of Commerce** | **Member** |
| **6.** | **Chairman, NABARD** | **Member** |
| **7.** | **Chairperson, Coffee Board** | **Member** |
| **8.** | **Chairperson, Rubber Board** | **Member** |
| **9.** | **Chairperson, Tea Board** | **Member** |

| | | |
|---|---|---|
| **10.** | **Chairperson, Tobacco Board** | **Member** |
| **11.** | **Shri Y.C. Nanda, ex-Chairman, NABARD** | **Member** |
| **12.** | **Shri Anil Sharma, Senior Principal Economist, NCAER, New Delhi** | **Member** |
| **13.** | **Economist (vacant)** | **Member** |
| **14.** | **Chief Executive Officer, PSF Trust** | **Member Secretary** |

- The PSF Scheme will be implemented over a period of 10 years i.e. 1.4.2003 – 31.3.2013.
- Every year a Price Spectrum Band (PSB) would be announced within the range of +/- 20 % of the Seven Years' Moving Average of the International Prices and categorization of years would be based on average domestic price of the commodity vis-à-vis price spectrum band:

  - If the domestic price falls within the band, the year would be declared as "Normal Year" and the PSF Trust and the grower would deposit Rs.500 each in the PSF SB account opened in the name of the grower.
  - If the domestic price falls below the lower band, the year would be declared as "Distress Year" and the PSF Trust would deposit Rs.1000 in the SB account of the grower.
  - If the domestic price rules above the upper band, the year would be declared as "Boom Year" and in that case, the grower alone would have to contribute Rs.1000 in his PSF SB account.
  - By this mechanism, every year Rs.1000 would be credited in the account of the grower.
  - A grower is allowed to withdraw only Rs.1000/- during a distress year.
  - At the end of ten-year period, the balance amount in the account can be withdrawn by the grower including the Government's contribution and the interest earnings.

- A Personal Accident Insurance Scheme has been started since 2005 for the grower members of PSF Scheme with a cover of Rs.25,000/- each. The premium of Rs.9/- per annum per grower is borne by PSF Trust. 44704 growers have been covered under PAIS till 30.11.2006.

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