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THE TEA INDUSTRY IN INDIA : A SURVEY

DR. K.G. KARMAKAR
Executive Director, NABARD, Mumbai
DR. G.D. BANERJEE
DGM/OIC, Nagaland RO, NABARD

आर्थिक विश्लेषण और अनुसंधान विभाग
Department of Economic Analysis and Research
राष्ट्रीय कृषि और ग्रामीण विकास बैंक
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Authors
Dr. K.G. Karmakar
Executive Director, NABARD, Mumbai

Dr. G.D. Banerjee
DGM/OIC, Nagaland RO, NABARD

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FOREWORD

It has been a long journey for the Tea industry in India since the 18th Century. Tea has had a longer history in China where it was reserved for the royal family and wealthy nobles. The growth of the industry has been a fascinating one, with innovations and tremendous growth with some problem years. As a plantation crop with enormous profits, tea has been a favoured crop. From the kings to the lowly peasant, all have been partial to tea, in different flavours and concoctions!.

As a 'healthy' and stimulating drink tea has its share of admirers. Also, NABARD has had considerable interaction with the tea industry which has had access to bank credit since long. A better understanding of the cyclical nature of the tea industry is required from the bankers while tea growers and tea manufacturers need to concentrate on innovations in product development and more so, on improvement in quality. India has the potential to be the market leader in innovations for the tea industry. The needs of the small tea growers are to be given greater fillip as also better appreciation of their requirements, especially as regards production credit. A closer look is required if the Indian Tea industry is to be revived so that it regains its pre-eminent position. And hence this in-depth survey of the tea industry.

10th September 2005
Mumbai

Ranjana Kumar
Chairperson
NABARD

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For all the risks of omission and commission, the authors alone are responsible. We are grateful to Smt. Ranjana Kumar, Chairperson, NABARD for having agreed to write the Foreword to this compilation of exhaustive data on the Tea industry in India.

10th September 2005

Dr. K.G. Karmakar
Executive Director
NABARD
&
Dr. G.D. Banerjee
DGM & OIC
Nagaland RO
NABARD

Part One : Evolution of Tea Industry, Tea in India and the World, Features of the Indian Tea Industry, Development of Tea Industry during 1850-2002, Outlook upto 2007

1. Evolution of the Tea Industry

i. ***History of Tea Leaf —*** The origin of the tea bush has been contested by scholars. It is native to certain areas ranging from the interior of Southern China to the border of Assam. Tea has only one species which is called "Camellia Sinosis [(L).O.Kuntze]. It came to the light in Fourth century and by about 650 A.D. during the TS'ang dynasty the growing popularity of tea induced farmers in most provinces in China to cultivate Tea and subsequently became an article of commerce. In the early years of 780 A.D., LuYu commissioned the first book on tea entitled "Chaching" a tea classic. The first printed reference by a European writer about the mysterious Chinese drink was dated to 1559 A.D. The knowledge of tea travelled slowly from East to West. The Dutch Merchants established a trading base at Benton by 1596. The first consignment of tea from China was transported to Benton in 1606 and from there it was shipped to-non-tea-conscious Europe. By the mid-1650s, a quick brisk trade in tea was made with Holland. In France, the future of tea was linked with the Sterling Company.

ii. ***Beginning of Tea in India —*** The discovery of indigenous tea in Assam in 1823 led to the origins of the tea industry in India. However, the Calcutta Agricultural Society differs from the above opinion. It has consistently held that in the early 1700's, the ships of the East India Company frequently brought the tea plants in the country by way of curiosity. Col. Kyd, a resident of Calcutta and a famous botanist, saw tea plants growing in his garden in 1780. This information was sent to Sir Joseph Bank and in 1782 his garden was handed over to Botanical Garden of Calcutta. In 1788, Sir Joseph Bank recorded the existence of indigenous tea growing wild in Coochbehar and Rangpur districts of Bengal and suggested the cultivation of this plant. The wild teas of Coochbehar confirmed the first discovery of indigenous tea in India.

iii. ***Birth of Indian Tea Industry —*** The birth of Indian tea industry was marked by the discovery of indigenous teas plant in Assam in 1823 by Robert Bush. This received momentum when the East India Company in 1833 lost the tea trading monopoly in China. In 1835, a scientific deputation was sent to Assam to report on prospects of the tea industry and the team saw tea plants in many parts in the hills between Assam and Burma. In 1836, C.A. Bruce was made the Superintendent of Tea Forests. Among others, he formed the Bengal Tea Company at Calcutta with the objective of purchasing the produce from the East India Company's tea plantations in India. A similar Company was also established in the same year in London with the same objectives.

In 1839 the first consignment of tea from India (eight chests) was shipped to London and it was auctioned at a price ranging from six to thirty four shillings per pound. In 1840, two thirds of experimental teas were handed over to new company. In 1852, the first tea company in India paid its final dividends. The second limited company in 1859 was formed in Assam called Jorhat Company. During 1862-67, tea cultivation started in Chittagong and Chotta Nagpur. Ultimately tea cultivation was commissioned in many districts in India wherever there was some hope of a success.Within a few months, India along with Sri Lanka dominated the world tea trade/market.

iv. ***Tea Trade —*** In 1874 the land located in the East of Teesta river was explored with the foreign liability of growing tea plants. By 1876 as many as 13 gardens had started cultivating tea. In 1878 the first two indian tea gardens by name Megalkat Tea Estate and Indian Tea Company Ltd. were established though the Company actually received a grant of 741 acres on 19 March 1981. The first tea auction started on May 26, 1841 in London under the pioneering leadership of Lyal & Co., Mincing Lane, London was the centre of World Tea activities prior to World War II. The first tea auction in Calcutta in December 27, 1861 and the second in Cochin in 1947 for South Indian teas were held. Subsequently, many tea auction centres were opened in Coonoor, Guwahati, Amritsar, Siliguri etc.

v. ***Formation of Tea Association —*** The Tea planters formed an association named Indian Tea Association (ITA) in 18 May

1881, with its headquarters at Calcutta for promoting their common interest and objectives. Subsequently many associations were formed in various tea regions of North and South India.

vi. ***Tea Research —*** For greater interest of the industry, the Tea Research Association was established in 1964 at Tocklai, Assam and was funded jointly by Council of Scientific and Industrial Research [CSIR] and Tea Board of India. Subscriptions of member tea estates and other associate members were called for to carry out the research work. United Planters Association of South India [UPASI] Tea Research Institute had its origin in the year 1926 at Coimbatore District, Tamil Nadu.

vii. ***International Tea Regulation Scheme —*** During the second half of the 19th century and first half of the 20th century, four major slumps [1866, 1879, 1896-1904, and 1920] took place. To counteract the situation India, Sri Lanka, Netherlands and East Indies reached an agreement on voluntary basis to curtail tea production. The world economic depression resulted in decline in tea consumption and stocks continued to pile up till 1932

viii. ***International Tea Agreement —*** Producing countries like India, Indonesia and Sri Lanka entered into an agreement on April 01, 1933 for a period of five years to bring about balance between supply and demand for tea in the world market. A second agreement was signed and came into force for a further period of five years i.e. 01st April, 1938 to 31st March, 1943. The agreement was extended upto 31st March, 1948. Further an interim agreement was signed in April, 1948 and continued till 31st March, 1950.

ix. ***Tea Control Act and its Amendment —*** The Indian Tea Control Act 1933 was amended in 1938 and 1943, and subsequently in 1950. The administration of the Act in 1938 was vested in a Committee called "Tea Licensing Committee" which consisted of a Chairman appointed by the Central Govt. and 14 other members of which 10 were nominated by the Industry and 04 elected from the constituencies embodied in the Act. The Committee continued upto 31st December 1949.

x. ***Tea Board —*** Both the Central Tea Board Act 1949 and Indian Tea Control Act 1938 were replaced by the Tea Act

1953 which came into effect from 01st April 1954. The functioning of the Central Tea Board and Indian Tea licensing committee were entrusted with the Tea Board which was responsible for promoting development of tea industry under the control of Central Government.

2. Tea in India and World

i. Introduction — The 'Plantation Industry', which was developed over 150 years, has a colonial origin. It is now a valuable asset to the nation. Plantation industry is a branch of agriculture in the broader sense. The organization of modern plantation relates more to the factory than to the farm. Generally, there is a specialization in one crop, which is produced on a large scale for export and for maintenance work. The output is continuous through out the year. The major plantation crops like tea, coffee, rubber and cardamom have now developed to a large extent.

ii. Plantation Industry — In India, plantations account for 0.8 per cent of the total cultivable land. They also contribute 5 per cent to the national income in agriculture. Besides they provide more employment per rupee of investment in the country than either agriculture or in industry. Plantation industry employs a large amount of labour force especially women workers which are highest compared to any industry. Moreover, this industry helps in the development of other industries.

Among the different plantation crops, tea is considered to be the most important crop in our country. It is the second biggest foreign exchange earner and is exported to about 80 countries. It also contributes a sizeable amount to the national income. Moreover, it provides direct gainful employment to a large number of people and helps in providing indirect employment in various sectors like road construction, transportation, building of warehouses, manufacture of plywood tea chest, aluminium foil, tinplate, metal fittings, paper, card board, fertilizers, insecticides, pesticides, coal, iron, steel, etc. Apart from its contribution to the economy of India, tea today provides to the common man a pleasant and stimulating non-alcoholic beverage.

iii. Tea : Agriculture as well as Industry — Tea can be placed both under agriculture and industry. It is industry in the

sense that tea is a processed and manufactured commodity, which is subject to excise duty and cess. It is also an agricultural crop because it is grown on land and thus agricultural income tax is also levied on it. Moreover, tea plantation is governed by both agricultural and industrial rules and regulations. The tea crop involves both agricultural and industrial operations. Agricultural operations like cultivation, plucking, manuring, irrigation, weed control, disease control, pest control, transportation of green leaf and uprooting are undertaken for growing tea. The final product of tea comes through various processing and manufacturing stages like withering, rolling, fermenting, drying, weighing, sorting, cutting that place it under industry. Thus the tea plantation, though a big agricultural enterprise, has also some characteristics of industry. The establish-ments and operations of such industry require massive investment of capital. Modern technical equipment is also necessary for processing the product. An outstanding feature of the plantation economy is that a large portion of tea has been sold in the internal markets from the very inception of this industry. This has, therefore, made it necessary to have well-organised marketing services. The requirement of capital, technical know-how and organized marketing services explain why, the unit of production of tea has taken the shape of a large industrial establishment.

iv. India's Place in the World of Tea

a. Area under Tea : India and the World — The number of tea producing countries in the world has been increasing since 1950 and at present there are more than 80 such countries. Among the principal tea producing countries in the world, India occupies the first place in terms of area. India's area under tea presents appreciable increase during the period from 1961 to 2002 and the world's tea area exhibited a significant rise. While the world tea area increased by 186 per cent, India's rose by just 54 per cent. India's tea area as percentage to world tea area has declined over the years from 34.33 per cent to 18.54 per cent. In absolute terms, India's total area in 1961 was 331 thousand ha., which increased to 511 thousand ha. in 2002. Similarly, the world's area under tea was 964 thousand ha. in 1961 and 2756 thousand ha. in 2002. Comparative picture is shown in Table 1.

Table 1 : India's share in World Tea Area during 1961-2002 (Area in thousand hectare)

Year	World Area	Absolute increase/decrease	India Area	Absolute increase/decrease	India's share as percentage world area
1961	964	—	331		34.33
1971	1386	(+)422	357	(+)26	25.75
1981	2358	(+)972	384	(+)27	16.28
1991	2569	(+)211	420	(+)36	16.35
1997	2572	(+) 3	434	(+)14	16.87
1998	2597	(+) 25	474	(+)40	18.25
1999	2692	(+) 95	490	(+)16	18.20
2000	2668	(-) 24	507	(+)17	19.00
2001	2735	(+) 67	510	(+) 3	18.65
2002	2756	(+) 21	511	(+) 1	18.54

Source : Tea Statistics, Tea Board, Kolkata, various issues.
Note : (+) indicates increase and (-) indicates decrease in absolute amount.

b. ***Production of Tea : India and World*** **—** World production increased by 264 per cent during the period, while India's production enhanced by 133 per cent. India's production to world production has substantially reduced from 41.60 per cent to 26.65 per cent. Average annual rate of growth of tea production in India stood at 3.70 per cent while it was 7.34 per cent for the World. India's share in the world tea production is given in Table 2.

Table 2 : India's Share in World Tea Production

(Production in million kg.)

Year	World	Icrease/ decrease	India	Absolute increase/ decrease	India's share as percentage of world production
1961	851	—	354	—	41.60
1971	1348	(+) 497	435	(+) 81	32.27
1981	1884	(+) 536	560	(+) 125	29.72
1991	2639	(+) 755	754	(+) 194	28.57
1997	2799	(+) 160	810	(+) 56	28.94
1998	3058	(+) 250	874	(+) 64	28.58
1999	2971	(-) 87	826	(-) 48	27.80
2000	2989	(-) 18	846	(+) 20	28.30
2001	3091	(+) 102	854	(+) 9	27.62
2002	3099	(+) 8	826	(-) 28	26.65

Source : Tea Statistics, Tea Board, Kolkata, various issues.
Note : (+) indicates increase and (-) indicates decrease in absolute amount.

c. Export of Tea : India and the World — India is the largest exporter of tea in the world. However, Sri Lanka has been closely following India's footsteps. India's share in world export expressed in terms of percentage has declined between 1961 and 2002, but there is only marginal decline in absolute quantum of exports. Tea has remained, on an average, at 200 million kgs. during the period. The main reason for fall of India's share for the last 40 years is that a large quantum of tea has been retained for domestic consumption. World exports increased by 158 per cent and India's exports reduced by 2.43 per cent during the period from 1961 to 2002. India's share in the world exports declined from 37.18 to 14.04 per cent during the same period (Table - 3).

Table 3 : India's share in World Tea Exports

(Exports in million kg.)

Year	World	Absolute increase/ decrease	India	Absolute increase/ decrease	India's share as percentage of world export
1961	554	—	206	—	37.18
1971	667	(+)113	202	(-4)	30.28
1981	818	(+)115	241	(+)39	29.46
1991	1079	(+)261	212	(-29)	19.65
1997	1207	(+)128	203	(-) 9	16.82
1998	1308	(+)101	210	(+) 7	16.06
1999	1265	(-) 43	192	(-)18	15.18
2000	1334	(+) 69	207	(+)15	15.52
2001	1394	(+) 60	183	(-)24	13.13
2002	1432	(+) 38	201	(+)18	14.04

Source : Tea Statistics, Tea Board, Kolkata, various issues.
Note : (+) indicates increase and (-) indicates decrease in absolute amount.

v. Tea Industry : Earner of Foreign Exchange — A considerable volume of tea is being exported from India and this has given the tea industry a place of importance in the national economy of India as an earner of foreign exchange. Table – 4 shows the value of exports of tea as compared to total value of exports of all commodities.

Table 4 : Value of Exports of Tea to Total Value of Exports of All Commodities

(Rs. in crore)

Year	Value of exports of all commo-dities*	Absolute change	Value of exports of tea@	Absolute change	Share of tea to value of exports of all com-modities
1961-62	661	—	122	—	18.46
1971-72	1608	(+) 947	184	(+) 62	11.44
1981-82	7808	(+) 6200	406	(+)222	5.20
1991-92	33452	(+)25644	1194	(+)788	3.57
1997-98	38752	(+) 5300	1945	(+)751	5.01
1998-99	39892	(+) 1140	2129	(+)184	5.33
1999-2000	41285	(+) 1393	1867	(+)262	4.52
2000-01	41875	(+) 590	1967	(+)100	4.70
2001-02	42453	(+) 578	2157	(+)190	5.08

***vi. Tea Industry as a Source of Employment* —** Tea plantation industry not only occupies a very important role in the national economy as an earner of foreign exchange but it also provides gainful employment to a large number of people. This industry, which is largely labour intensive provides employment to a large number of female workers. The industry accounted for 20 per cent and 10 per cent of the total labour force employed in the private sector in 1961 and in 2002 respectively. The ratio of tea labour to total labour employed in the private sector has registered a declining trend in recent years.

Table 5 : Ratio of Tea Labour to Total Labour Employed

(Number in lakhs)

Year	Total number of labour employed in private sector	Number of labour employed in tea@@	Share
1961	50	10	19.8
1971	67	8	11.3
1981	73	8	11.0
1991	76	8	10.5
1997	79	8	10.1
1998	80	8	10.0
1999	79	8	10.1
2000	80	8	10.0
2001	81	8	10.0
2002	82	8	10.0

Source : @ Economic Survey, GoI, @@ Tea Statistics, Tea Board, Kolkata

vii. Contribution of Tea industry to Total Revenue — Tea is a commodity which is subject to direct taxation in the form of excise duty, export duty, and cess. under Tea Act 1951. In addition to these, various state levies are also imposed on the tea industry and these varied from State to State. Revenue earned by way of export duty, excise duty and cess is presented in Table-6 below :

Table 6 : Share of Tea Revenue by Total Revenue

(Rs. in crore)

Year	Total revenue*	Revenue earned through tea@				Tea revenue in percentage to total revenue
		Export duty	Central excise duty	Cess	Total	
1961-62	1037	9.83	10.78	—	20.61	1.98
1971-72	4027	—	34.35	—	34.35	0.85
1981-82	11573	—	63.51	4.45	67.96	0.50
1991-92	35960	—	70.56	10.88	81.44	0.19
1997-98	40857	—	—	—	—	0.06
1998-99	42015	—	115.98	26.07	142.04	0.33
1999-2000	43765	—	128.84	25.17	154.01	0.35
2000-01S	44978	—	141.27	25.06	166.33	0.36
2001-02	46123	—	162.52	25.34	187.86	0.40

* *Source : Director General of Commercial Intelligence and Statistics. Tea Statistics, Various issues, Tea Board, Kolkata.*

viii. Tea as a Supporter of Allied Activities — Tea is the mainstay of plywood industry in our country. Tea produced in different regions is mostly packed in plywood chests for sale at the auctions and for exports. However, recently various other alternatives have been evolved in place of plywood chests. Tea helped the coal industry. Huge amount of coal is required for running the factories. Of course, in recent times, instead of coal, gas is being used. Further, tea industry facilitates the fertilizer industry and forest industry. It supports the industries engaged in the manufacture of pesticides, insecticides and weedicides. It also adds to the development of various industries like iron, steel, cement, aluminium foils, tin plates, metal fittings, paper, card boards, transport and warehousing.

3. Features of Tea Industry

The essential features of the tea industry include (i) Farming and Manufacturing, (ii) Geographical Locations, (iii) Marketing, (iv) Exports, (v) Internal Consumption, (vi) Imposts, (vii) Labour and (viii) Development Measures.

i. Farming and Manufacturing

It starts from preparation of "seedbed" and goes on to the packing of tea. Seedlings are grown in the nursery generally for one or two years and are transplanted in the fields. The transplanted young tea plants require levelling and deep hoeing under shade trees. Proper growth of tea plants demand planting of shade trees, timely application of manure and fertilizers, maintenance of good drainage, control of pest attacks and plant diseases. Besides, pruning and plucking are essential operations for inducing vegetative growth and ensuring continuous supply of green flushes as well as improving quality of manufactured tea.

a. Withering — The plucked green leaves are spread out in racks made of wiremesh or hessian cloth arranged in withered shades. They are kept for a period of 18 hours for a good wither. During this period they loose a good deal of moisture and become placid for rolling which breaks down the leaf cells and release the juice, and engymes contained in them. The withered leaf is fed in to the rolling machine which twists the leaf and breaks the leaf cells. The leaf juice oozes out and becomes exposed to the atmosphere. A process of oxidation [called fermentation] begins with change in colour and release of its characteristic aroma.

b. Rolling and Fermenting — The rolled leaf leaves the roller in the shape of twisted balls and are placed under roll brakers. The leaf is taken to the fermenting room, the atmosphere of which is kept cool or humid. Sometimes this is done with the help of wet screens or suitable water spheres. The time taken for fermentation which depends on various factors, may vary from 20 minutes to 60 minutes. Having received desired degree of fermentation, the fermented leaves are removed to driers which consist of large enclosed chambers having trays inside where

fermented leaves are put. The nature of drying and intensity of heat affects the quality of tea.

c. ***Grading and Packing —*** The manufactured tea which comes out of the dryers is then sorted and graded with the help of sorting machinery which consists of mechanically vibrated sieves or tables. The larger particles are often cut into smaller bits with the help of cutting machine before grading. The grading of tea only refers to size of process leaf not to quality or flavour. The two main classifications in the main grade are leaf grade and broken grade. Broken grades include small particles resulting from the shifting and sorting of tea and leaf grades consist of large particles left after broken grades are removed.

ii. Geographical Locations, etc.

In India, tea growing regions are located in the monsoon belt comprising Assam, West Bengal and the foot hills of the Himalayas in the North and moist slopes and the plateaus of the Western Ghats in the South. The climate and the soil of these widely separated locations exhibit wide variations, the impact of which is naturally noticed in wide difference in productivity and cultural practices.

a. ***Area, Production and Yield of Tea —*** Tea is mainly produced in Assam, West Bengal, Tamil Nadu and Kerala and also produced to a small extent in Tripura, Karnataka, Himachal Pradesh and Uttar Pradesh. Total area under tea stood at 331 thousand hectares of which North East and Eastern India contribute 77.6 per cent and South India 22.4 per cent in 2002. Besides, tea is also cultivated in Mizoram, Manipur, Orissa, Arunachal Pradesh, Meghalaya, Uttaranchal etc. Number of tea estates, area, production and yield of tea according to states/districts are given in ***Annexure - I.***

b. ***Zonewise Classification of Tea etc. —*** Tea units and tea growing regions are classified into revenue units and zones. At present there are two zones. Zone I includes Dibrugarh, Lakhimpur, Shibsagar, and Darrang [exluding Barsola circle in North India] while Zone II includes all other North Indian districts excluding Barsola circle of Darrang and also South Indian districts.

c. Area-wise Distribution — Tea estates are distributed according to the various size groups. Ninety eight per cent of the total tea estates belong to the size group of upto 10.12 hectares and the remaining 2 per cent falls in the size group of above 10.12 hectares. Out of this size group, as many as 200 tea estates have average size holdings between 50 to 100 hectares while about 300 tea estates have holding between 100 to 200 hectares and 400 tea estates are in the size group of above 200 to 400 hectares. Moreover, a little less than 400 tea estates have size holding above 400 hectares.

d. Agewise Classification of States — Bushes are the assets of the tea estate-owners as they provide green leaves which are the basic raw material for made/green tea. The composition of assets i.e. bushes are classified into three age groups viz. tender [below 5 years], economic [5-50 years] and old [above 50 years]. On an average, 30 per cent of the total area under tea contain bushes which have attained the economic age group while 65 per cent are old age bushes and only 5 per cent are tender bushes. As about two-thirds of the total area is covered by overage bushes, there is a need for rehabilitation programmes in the form of new planting [extension/ replanting] etc.

iii. Primary Marketing

Tea being a perishable commodity should be disposed off quickly and the economic viability of the tea industry depends crucially on profitable disposal of products. There are various modes of disposal of tea viz. i.e.auction, exfactory, and forward contract. About 76 per cent of total tea is disposed off through auctions while forward contract and exgarden sales constitute 6 per cent and 18 per cent respectively. Details of Primary Marketing of Indian Tea is given in Table-7.

Table 7 Primary Marketing of Indian Tea

	1999		2000		2001	
YEAR	**Qty. in Th.kgs**	**% to Total Sales**	**Qty. in Th.kgs**	**% to Total Sales**	**Qty. in Th.kgs**	**% to Total Sales**
NORTH INDIA						
Calcutta Auction	87801	14.09	95926	14.97	94482	14.52
Guwahati Auction	145072	23.28	159427	24.88	137794	21.18
Siliguri Auction	86789	13.93	79145	12.36	71791	11.03
Amritsar Auction	556	0.09	388	0.06	319	0.05
Teaauction,com	—	—	80	0.01	340	0.05
Sub total North India	320218	51.39	334966	52.28	304726	46.83
London Auction	—	—	—	—	—	—
Total Auction	320218	51.38	334966	52.28	304726	46.83
Export under FC	32886	5.28	36032	5.62	34145	5.25
Ex-Garden Sale	270155	43.34	269758	42.1	311936	47.92
Total Sale	623259	100	640756	100	650807	100.00
SOUTH INDIA						
Cochin Auction	59632	29.42	66132	32.08	58995	29.04
Coonoor Auction	79285	39.12	70967	34.42	74555	36.71
Coimbatore Auction	20262	10	33274	16.14	25118	12.37
Calcutta Auction	1371	0.68	2188	1.06	294	0.14
Sub total South India	160550	79.22	172561	83.7	158962	78.26
London Auction	—	—	—	—	—	—
Total Auction	160550	79.22	172561	83.7	158962	78.26
Export under FC	5543	2.73	6995	3.39	4850	2.39
Ex-Garden Sale	36583	18.05	26610	12.91	39304	19.35
Total Sale	202676	100	206166	100	203116	100.00
ALL INDIA						
Indian Auction	480768	58.32	507527	59.93	463688	54.30
London Auction	—	—	—	—	—	—
Total Auction	480768	58.21	507527	59.93	463688	54.30
Export under FC	38429	4.65	43027	5.08	38995	4.57
Ex-Garden Sale	306738	37.14	296368	34.99	351240	4113.00
Total Sale	**825935**	**100**	**846922**	**100**	**853923**	**100.00**

Source : Tea Statistics 2000-2001 issued by Tea Board of India, Kolkata

iv. Exports — India's exports of tea during the last 5 decades have shown a fluctuating trend. It is interesting to note that India's exports of tea has been hovering around 200 m kg. and is exported to about 35 countries in the World. The quantity exported from India was reduced to 180 million kg in 2001 as against 204 million kg in 2000 but value realisation has not been reduced to that extent because of equal unit price [Rs. 89.40 per kg].

Details of quantity and value of tea exports from India during 1954-55 to 2001-02 is given below;-

Table 8 : Quantity and Value of Tea Exports from India

[Excluding Instant Tea]

Year	Quantity Th. Kgs	Value Th.Rs	Unit Price Rs./Kg	Year	Quantity Th.Kgs	Value Th.Rs	Unit Price Rs./Kg
1954-55	208462	1482316	7.11	1954	203195	1307523	6.43
1955-56	183769	1096448	5.97	1955	166708	1136132	6.82
1956-57	233088	1451344	6.23	1956	237484	1428249	6.01
1957-58	191755	1436435	7.49	1957	200786	1233859	6.15
1958-59	217322	1296953	5.97	1958	229503	1365859	5.95
1959-60	215459	1290846	5.99	1959	213680	1260135	5.9
1960-61	196473	1222549	6.22	1960	193063	1199883	6.21
1961-62	205329	1221680	5.95	1961	206292	1242513	6.02
1962-63	220800	1296000	5.87	1962	211826	1235339	5.83
1963-64	209328	1231885	5.88	1963	223542	1323710	5.92
1964-65	212325	1246657	5.87	1964	210523	1249012	5.93
1965-66	197385	1148374	5.82	1965	199365	1149747	5.77
1966-67	190383	1562189	8.21	1966	179205	1565921	8.74
1967-68	203333	1801974	8.86	1967	213676	1890384	8.85
1968-69	200824	1565092	7.79	1968	208440	1664825	7.99
1969-70	174112	1245029	7.15	1969	168709	1205371	7.14
1970-71	199139	1842470	9.25	1970	202016	1487533	7.36
1971-72	214317	1609204	7.51	1971	202052	1536678	7.61
1972-73	193228	1472935	7.62	1972	198195	1511439	7.63
1973-74	190268	1448490	7.61	1973	188192	1427072	7.58
1974-75	225057	2235355	9.93	1974	210583	1927972	9.16
1975-76	211409	2382948	11.27	1975	218128	2446592	11.22
1976-77	242418	2954777	12.19	1976	233611	2731364	11.69
1977-78	221522	5637117	25.45	1977	229637	5416157	23.59
1978-79	177327	3591193	20.25	1978	176051	3628916	20.61
1979-80	208448	3768961	18.08	1979	199639	3618401	18.12
1980-81	231736	4352730	18.78	1980	224026	4290277	19.15
1981-82	224200	4068252	18.15	1981	241246	4342541	18
1982-83	194090	3694482	19.03	1982	189933	3555525	18.72
1983-84	202312	5575549	27.56	1983	208476	5168145	24.79
1984-85	217401	7713889	35.48	1984	217040	7404551	34.12
1985-86	214234	6479796	30.25	1985	214021	6952966	32.49
1986-87	196232	5794783	29.53	1986	203149	5808510	28.59
1987-88	201830	6277688	31.1	1987	201891	6392466	31.66
1988-89	204075	6352799	31.13	1988	200956	6126937	30.49
1989-90	210615	9047231	42.96	1989	211622	8400923	39.7
1990-91	198240	10620939	53.58	1990	209085	11041507	52.81
1991-92	215166	11964625	55.61	1991	201720	11203136	55.54
1992-93	178950	10316425	57.65	1992	173358	9717402	56.05
1993-94	153427	10398935	67.78	1993	173726	11325271	65.19
1994-95	150836	9635458	63.88	1994	149317	9652334	64.64
1995-96	166239	12184298	73.3	1995	167143	11908077	71.24
1996-97	167172	12568167	75.18	1996	160004	12070978	75.44
1997-98	208773	19453207	93.18	1997	200713	17218472	85.79
1998-99	203431	21288720	104.65	1998	207640	22383087	107.8
1999-2000	189837	18672822	98.36	1999	189092	19024369	100.61
2000-2001	200770	18066853	89.99	2000	204353	18270324	89.41
2001-2002	187407	16215897	86.53	2001	179857	16022060	89.08

Source: Tea Statistics 2000-2001 issued by Tea Board of India, Kolkata

v. Internal Consumption — Internal consumption of tea grew appreciably. It was 31 per cent of total production in 1947 which went up to 78 per cent of the total production in 2004. Thus the task before the government is to fix up trade priorities. If the priority is to make available tea in the domestic market, the export front is neglected. On the other hand, if the priority is to ensure maximization of export earnings, the tea may not be available in the internal market at reasonable prices.

There are various demographic, economic, social and psychological factors that determine demand for a commodity like tea in a developing economy like India. Income, prices of tea and its substitutes and complements, change in consumer taste, preferences, population, social satisfaction, and health aspects are some of the important factors in this regard. Another factor is urbanization, the pace of which in the developing countries is very rapid. The details of internal consumption are given below.

Table 9 : Estimates of Internal Consumption of Tea in India

Year	Internal Consumption {in million kg}	Actual increase or decrease {in million kg}	Percentage [increase or decrease]
1971	221	—	—
1980	340	125	56.56
1981	360	14	4.04
1982	372	12	3.33
1983	386	14	3.76
1984	400	14	3.62
1985	415	15	3.75
1986	431	16	3.85
1987	446	15	3.85
1988	462	16	3.42
1989	480	18	3.58
1990	500	20	5.65
1991	511	11	4.1
1992	524	13	2.54
1993	537	13	2.48
1994	550	13	2.42
1995	562	12	2.18
1996	580	18	3.2
1997	597	17	2.93
1998	615	18	3.01
1999	633	18	2.92
2000	653	20	3.14
2001	673	20	3.06
2002	693	20	2.97

Source : Various issues of tea Statistics, Tea Board, Kolkata

vi. Major Taxes — Tea is a major source of revenue to the National Exchequer. The major imposts are excise duty, cess on tea as well as various Central and State taxes like sales tax, entry tax, agriculture income tax etc. Present taxes and duties [Central Levy and State Levy] on Tea in India are given below.

Central Levy

1. **Tea Cess**

   (a) 30 paise per kg on tea produced except in Darjeeling Plantation Dist.

   (b) 12 paise per kg on tea produced in Darjeeling Plantation district.

2. **Excise Duty**

   (a) Re. 1 per kg on tea imposed on 01.03.2002 has been abolished w.e.f 01.03.2003. However, an additional excise duty of Re.1/-per kg has been introduced w.e.f.01.03.2003 for development purposes.

   (b) 16% ad valorem on Instant Tea falling under heading 2101.20

3. **Export Duty** — N I L —

4. **Import Duty**

   (a) 100% ad valorem on teas falling under heading 09.02

   (b) 35% on Instant Tea falling under heading 2101.20F

   (c) 7.5% on teas imported under Indo Sri Lanka FTA

   (d) NIL - when imported for re-export under Duty Exemption Scheme and/or by EOU/EPZ/SEZ units

5. **Corporation Tax** 35% plus 2% surcharge

6. **Central Sales Tax**

   (a) 2% on teas sold at Kolkata/Siliguri/Coonoor and Coimbatore Auctions.

   (b) NIL on teas sold at Guwahati Auction.

   (c) 4% on ex-garden sale against Form - C

   (d) 8% on teas sold to unregistered dealers.

State Levy

(A) Assam :

1. **Assam Sales Tax**

   (a) 2% on all teas sold through Guwahati Auction, Orthodox teas are exempted.

   (b) 8% on sales outside auction but within Assam.

2. **Assam Taxation on Specified Land (Amendment) Act, 1994**

   (a) 20 paisa per Kg on green leaf produced by producers having tea area of 40 hectares.

   (b) 32 paisa per Kg on green leaf produced by producers having tea area above 40 hectares in Upper Assam.

   (c) 29 paisa per Kg on green leaf produced by producers having tea area above 40 hectares in Cachar/Barak valley.

   (d) Producers having tea area upto 4 hectares exempted.

3. **Agricultural Income Tax**

   Upto Rs. 1 lakh - 40% and above Rs. 1 lakh - 45%

(B) West Bengal

1) Sales Tax (w.e.f. 01.01.2000)

a) Tea sold in Kolkata or Siliguri Auction

i)	Tea sold to registered dealer for exports :	Nil
ii)	Tea sold to registered dealer for re-sale in original form :	1%
iii)	Tea sold to an unregistered dealer :	8%

b) Tea sold other than in Kolkata or Siliguri Auction

i)	Tea sold to registered dealer for exports :	Nil
ii)	Tea sold to registered dealer for re-sale in original form (Form 13 required) :	1%
iii)	Tea sold to an unregistered dealer :	8%

2) Inter-State Sale

i) Tea Purchased in Kolkata or Siliguri auctions in course of Inter-State trade : 2% CST

ii) Tea sold ex-garden in the course of Inter-State trade 4% CST

3) Purchase Tax

Tea purchased for blending/packing but disposed of otherwise than by way of sale in West Bengal : 1%

4) West Bengal Rural Employment and Production Cess. (w.e.f. 01.04.1981)	12 paise per kg of green leaf produced for estates producing over 2.5 lakh kgs of green leaf.
5) West Bengal Primary Education Cess. (w.e.f. 01.04.1981)	4 paise per kg of green leaf produced for estates producing over 2.5 lakh kgs of green leaf.
6) Agriculture Income Tax	45% brought down to 30% w.e.f 01.04.2003.

C) Tamil Nadu

1. **Sales Tax**

(a) 4% on sale through Auction

(b) 8% on sale through other than Auction
Infrastructure Surcharge 5% on Sales Tax

2. **Inter-State Sale —** 2% on teas sold in Auction for inter-state sale

3. **Agricultural Income Tax**

(a) Upto Rs. 25,000 — 45%

(b) Above Rs. 25,000 to Rs. 1 Lakh — 50%

(c) Above Rs. 1 Lakh to Rs. 3 Lakhs — 55%

(d) Above Rs. 3 Lakhs to Rs. 10 Lakhs — 60%

(e) Above Rs. 10 Lakhs — 65%

D) Kerala

1. **Sales Tax** (i) Unbranded 8%

   (ii) Branded 8%

   Additional Sales Tax 15%

2. **Inter-State Sale** ..... 2% on teas sold in Auction for inter-state sale

3. **Agricultural Income Tax**

   (a) Upto Rs. 25,000 — 45%

   (b) Above Rs. 25,000 to Rs. 1 Lakh — 50%

   (c) Above Rs. 1 Lakh to Rs. 3 Lakhs — 55%

   (d) Above Rs. 3 Lakhs to Rs. 10 Lakhs - 60%

   (e) Above Rs. 10 Lakhs - 65%

4. **Plantation Tax** [w.e.f. 01.04.2000]

   i) First 5 hectares — Nil

   ii) Next 3 hectares — Rs. 350 per hectare

   iii) Next 3 hectares — Rs. 500 per hectare

   iv) Next 3 hectares — Rs. 900 per hectare

   v) Upto 500 hectares — Rs. 1500 per hectare.

E) Karnataka

1. **Sales Tax** — (i) Unbranded ..... 8% - 12%

   (ii) Branded 15%

2. **Turn Over Tax**

   (a) Above Rs. 5 lakhs but less than Rs. 5 crores - 1%

   (b) Above Rs. 5 crores but less than Rs. 10 crores - 2%

   (c) Above Rs. 10 crores - 3%

3. **Infrastructure Development Tax** — 5% on Tax payable

4. **Agricultural Income Tax**

(a) Upto Rs. 1 lakh — 30%

(b) Above Rs. 1 lakh to Rs. 5 lakh — Rs. 30,000 plus 40% of the amount by which total income exceeds Rs. 1 lakh

(c) Where the total income exceeds Rs 5 lakh — Rs 190,00 plus 40% of the amount by which total income exceeds Rs. 5 lakhs.

Source - Various issues of Tea Statistics

Taxes levied in other producing States, non-tea producing States/Union Territories

State	Central Sales Tax	State Sales Tax	Other Taxes
Andhra Pradesh	4%	10%	CST without Form 'C' 10%
Bihar	N.A.	10%	Additional tax 1%. CST without Form 'C' 10%
Delhi	2%	5.5%	—
Goa, Daman, Diu	N.A.	4% (w.e.f.30.5.95)	—
Gujarat	4%	8%	12% packages below 20 kgs, 8% for packages above 20 kgs + Surcharge 10%, Octroi 1%
Haryana	4%	8%	CST without Form 'C 10%
Himachal Pradesh	4%	7%	—
Madhya Pradesh	N.A.	8%	On loose tea and 10% on tea in Packets
Maharashtra	4%	8%	Surcharge 10%
Meghalaya	4%	7%	Surcharge 1%
Mizoram	NIL	NIL	—
Nagaland	4%	6%	—
Orissa	4%	12%	Entry tax 1%, CST without Form 'C' 12%
Pondichery	3%	3%	—
Punjab	2%	4%	—
Rajasthan	4%	4%	—
Tripura	4%	8%	—
Uttar Pradesh	4%	6%	Single point and additional tax 2%
Sikkim	4%	8%	

Source : Various issues of tea Statistics, Tea Board, Kolkata

vii. Labour — Tea plantation in the country provides employment opportunities to the rural poor living in the remotest areas. It is a highly labour intensive industry and engages maximum employment per household. Labourers are employed in the tea industry both in fields and factory operations. They are mainly resident and also outside workers. Resident workers are the permanent labourers of the estate whereas outside workers are temporary and casual labourers. Both resident and outside workers are again divided into male, female, children and adolescent depending upon the nature of the work involved. Productivity and labour per hectare is given below.

Table 10 Productivity and Labour per Hectare during 2000

(a) North India

State	District	No. of Estates	Area in ha.	Prod. in Th,Kg	Est.Avg. Daily Labour	Lab. per ha.	Prodn. per ha.	Prodn. per lab. (kg)
Assam	Darrang	829	41037	77030	114629	2.79	1877	672
	Goalpara	249	3460	6297	9508	2.75	1820	662
	Kamrup	54	3442	4302	8918	2.59	1250	482
	Dibrugarh	21388	93076	163426	197145	2.12	1756	829
	Lakhimpur	326	4815	9068	14056	2.92	1883	645
	Nowgong	213	7994	11788	18910	2.37	1475	623
	Sibsagar (a)	15735	74807	119978	156825	2.1	1604	765
	Karbi Anglong	143	1869	1945	4512	2.41	1041	431
	N. Cachar	8	4004	6179	10320	2.58	1543	599
	Cachar	206	32008	49206	67708	2.12	1537	727
	Total Assam	**39151**	**26652**	**449219**	**602531**	**2.26**	**1686**	**746**
West Bengal	Darjeeling	85	17228	9281	51515	2.99	539	180
	Terai (b)	910	20548	43291	38420	1.87	2107	1127
	Dooars (c)	545	69703	128964	163524	2.35	1850	789
	Total W.Bengal	**1540**	**107479**	**181536**	**253459**	**2.36**	**1689**	**716**
Others	Tripura	292	6623	6431	12105	1.83	971	531
	Bihar	244	1350	538	50	0.04	399	10760
	Uttar Pradesh	11	1068	264	387	0.36	247	682
	Manipur	39	907	96	504	0.56	106	190
	Sikkim	74	296	105	392	1.32	355	268
	Arunachal Pradesh	50	2176	993	2086	0.96	456	476
	Nagaland	94	1214	43	228	0.19	35	189

State	District	No. of Estates	Area in ha.	Prod. in Th,Kg	Est.Avg. Daily Labour	Lab. per ha.	Prodn. per ha.	Prodn. per lab. (kg)
	Orissa	1	214	105	279	1.3	491	376
	Himachal Pradesh	3679	2325	1247	1033	0.44	536	1207
	Meghalaya	15	351	140	239	0.68	399	586
	Mizoram	12	391	39	107	0.27	100	364
	Others Total	**4511**	**16915**	**10001**	**17410**	**1.03**	**591**	**574**
North India Total		**45202**	**390906**	**640756**	**873400**	**2.23**	**1639**	**734**

(b) South India

Tamil Nadu	Coimbatore	52	11764	32831	25281	2.15	2791	1299
	Kanyakumari	7	434	137	167	0.38	316	820
	Madurai	6	973	2660	3078	3.16	2734	864
	Nilgiris	60549	60427	95194	225440	3.73	1575	422
	Tirunelveli	4	800	990	1814	2.27	1238	546
	Tamil Nadu	**60618**	**74398**	**131812**	**255780**	**3.44**	**1772**	**515**
Kerala	Wynaad	86	5657	12307	12706	2.25	2176	969
	Idukki(d)	4969	26750	51406	58399	2.18	1922	880
	Kottaym	954	840	308	1109	1.32	367	278
	Palghat	33	850	2267	1958	2.3	2667	1158
	Quilon	104	1348	364	546	0.41	270	667
	Trichur	1	530	1896	1539	2.9	3577	1232
	Trivandrum	6	965	399	829	0.86	413	481
	Kerala	**6153**	**36940**	**68947**	**77086**	**2.09**	**1866**	**894**
Karnataka	Coorg	7	299	687	647	2.16	2298	1062
	Chickmangalur	29	1428	3521	2531	1.77	2466	1391
	Hassan	1	395	1199	611	1.55	3035	1962
	Karnataka	**37**	**2122**	**5407**	**3789**	**1.79**	**2548**	**1427**
South India		66808	113460	206166	336655	2.97	1817	612
Total All India		112010	504366	846922	1210055	2.4	1679	700

Source : Various issues of Tea Statistics, Tea Board, Kolkata
(a) Including Mikir Hills & North Cachar upto 1989 (b) Including West Dinajpur (c) Including Cooch Behar, (d) Including Ernakulam

viii. Development Measures — To increase production and improve quality of tea, there is a need to adopt various short term and medium term measures. Further, tea cultivation has to be extended on a wider scale to non-traditional areas keeping in view the climate suitability. The existing manufacturing capacity has to be augmented for scientific processing in large estates. Additional provisions may be made for innovation and modernization of tea factories and for

construction of new labour houses and ancillary buildings.

Though the major part of the increase in output of tea comes from the largest estates, socio-economic considerations necessitate special efforts to improve productivity and income of the existing large number of small garden units which are commonly called family gardens. The entrepreneurs of the family gardens are required to be provided with further technical and financial supports on a cluster approach basis. Besides, construction of modern tea factories in the cooperative sectors, establishment of clonal multiplication centre, for supply of improved planting materials, setting up demonstration plots, are some of the activities which require to be strengthened in the interests of small tea planters.

For effective application of findings of tea research, it would be necessary to organise additional suitable course in technical training very frequently for persons employed in the tea industry as well as for those who opt for a career in tea particularly in non-traditional areas.

4. Development of Tea Industry During 1850-2002

Development of tea industry in India can be grouped under two major periods. 1. pre-Five Year Plan period [1850-1950] and 2. Five Year plans [1952-2007].

I. **Pre-Five Year Plan Period [1850-1950] —** The pre-Five Year Plan period may again be sub-divided into four periods like (a) period of rapid growth 1850-1890, (b) period of stability 1890-1918 (c) inter war period 1918-1939 and (d) period of prosperity 1939-1950.

   a. ***The Period of Rapid Growth [1850 to 1890] —*** The growth of the industry was remarkable during this period. Area under tea was only 750 hectares in 1852 while it was 1,52,000 hectares in 1890 showing an annual average growth rate of 504 per cent Similarly, production was 97,000 kg in 1850 and 57 million kg in 1890 accounting for an average annual growth rate of 1466 per cent. Yield was 138 kg per hectare which increased to 373 kg per hectare. The details are given below:

Items	Year		Avg. annual growth rate
	1850	1890	
Area under cultivation [in Th. ha.]	0.75	152	504
Production [in million kgs]	0.1	57	1466
Average yield [kg/ha.]	130	373	5

Source - Various issues of Tea Statistics, Tea Board, Kolkata

The various factors responsible for such progress were Govt.. grants on easy terms and conditions to the planters, leasing of land to the planters at a nominal rent, low investment cost per acre of land varying between Rs.40 and Rs.70, emergence of private entrepreneurs in cultivation of tea, availability of labour in the early years, formation of Indian Tea Association on May 18, 1881, spread of tea cultivation in Govt.. plantation, introduction of improved method of manufacture in 1870 [Mechanical Roller in 1870, Dryer in 1877 and mechanical packaging] formation of Calcutta Tea Brokers Associatioin in 1879, operation of a daily paddle steamer service between Calcutta and Guwahati in 1883, opening of the first railway line in Assam [Jorhat Provincial and Dibursadia] in 1885 and establishment of the Calcutta Tea Traders Association.

b. The Period of Stability [1890 to 1918] — The tea industry witnessed all round development between 1890 and 1918. Area increased from 152 thousand hectares to 275 thousand hectares [average annual growth rate 2.9 per cent] while production enhanced from 57 m kg to 173 m kg [average annual growth rate 7.3 per cent] and yields was enhanced from 373 kg per hectare to 692 kg per hectare showing average annual growth rate of 2.5 per cent.

Details of area, production, yield during periods of (i) rapid growth and (ii) instability are shown below;

Items	Year		% increase over 1890	Avg. annual growth rate
	1890	1918		
Area under cultivation [in Th.ha.]	152	275	80.90	2.90
Production [in million kgs]	57	173	203.50	7.30
Average yield [kg/ha.]	373	692	68.61	2.50

Source : Various issues of Tea Statistics, Tea Board, Kolkata

The factors which accelerated the growth of the industry during the period were mainly development of tea into an industry in South India towards the end of 1895, formation of United Planters Associations of South India [UPASI] at Coonnoor in 1894 and other Associations in Assam and Bengal; appointment of Dr. Mann as the Scientific Officer in the laboratory of the Indian Museum in Calcutta to carry out Scientific Research enactment of Tea Cess Act in 1903 by the Govt.. of India to raise funds for tea propaganda abroad, imposition of a levy of 28 paise per 100 kg of tea construction of Assam-Bengal metre gauge railway line in 1910, setting up of Scientific Department in 1909 by UPASI undertaking tea research exclusively in 1924, shifting of research station from Assam to Tocklai in 1911 importance of developing domestic market for tea in 1918, direction of making provision in the India Tea Cess Act for propaganda in India and formation of Indian Tea Planters Association in Jalpaiguri in 1918.

c. ***Inter War Period [1918 to 1939]*** — The tea industry during the inter war period experienced many ups and down in its growth. Area increased from 275 th.ha. to 337 th.ha.and production from 173 m kg to 205 m kg during the period. Increase in production was mainly due to expansion of area. Average annual rate of growth of area was 1.1 per cent and production was 0.9 per cent. There was a decline in yield rate by 0.1 per cent. The average annual rate of growth of tea exports was 0.5 per cent, while it was 2.9 per cent for internal consumption and 1.2 per cent per head annual consumption.

Items	**Year**		**% increase over 1918**	**Avg. annual growth rate**
	1818	**1939**		
Area under cultivation [in Th.ha.]	275	337	22.50	1.10
Production [in million kgs]	173	205	18.10	0.90
Average yield [kg/ha.]	629	610	-3.00	-0.10
Export (in million kg)	148	165	11.50	0.50
Internal Consumption (in.million Kg)	25	40	60.00	2.90
Per head consumption (in million kg)	0.1	0.13	25.00	1.20

Source : Various issues of Tea Statistics, Tea Board, Kolkata

The worldwide depression of 1929 had its impact on tea. Tea market was so depressed that it was unremunerative to go in for tea cultivation. To sort out the problems the first International Tea Agreement [ITA] was signed in 1933 and the Tea Control Act 1933 was introduced. The International Tea Committee [ITC], Tea Cess Committee 1937, India Tea Market Expansion Board were also constituted

d. Period of Prosperity [1939 to 1950] — The outbreak of the Second World war, introduction of bulk purchase scheme, end of British Rule in India, further extension of Tea Agreement, creation of Central Tea Board and establishment of new auction centre at Cochin were the major events that led to the prosperity of the tea industry. Although there was a decline in area by 6.2 per cent, production increased by 3.6 per cent and yield by 44 per cent. Similarly, Internal consumption increased by 92 per cent, exports by 22 per cent and per head consumption by 64 per cent. The position of inter war period and period of prosperity is given below:

Items	**Year**		**percentage increase/ decrease over 1939**	**Avg. annual growth rate**
	1939	**1950**		
Area under cultivation [in Th.ha.]	337	316	-6.20	-0.58
Production [in million kgs]	205	278	36.00	3.20
Average yield [kg/ha.]	610	881	44.00	4.00
Export of tea (in million kg)	165	201	22.00	2.00
Internal Consumption (in.million Kg)	40	77	92.00	8.30
Per head consumption (in million kg)	0.13	0.2	64.00	5.80

Source : Various issues of Tea Statistics, Tea Board, Kolkata

II Post Five Year Plan

a. First Five Year Plan [1951-52 to 1955-56] — During the First Plan period, the industry developed mainly due to participation of private entrepreneurs. Average annual rate of growth of area was 0.3 per cent, production by 1.7 per cent and yield by 1.4 per cent.The average annual growth of export was 3.9 per cent, unit value by 5.5 per cent and revenue from central excise by 14.3 per cent and internal tea consumption by 1.6 per cent.

Items/particulars	Position as at the		Percentage increase over 1951	Avg. annual growth rate
	commence-ment of plan on 1.4.1951	end of Plan on 31.3.1956		
Area under cultivation [in Th.ha.]	317	321	1.30	0.30
Production [in million kgs]	285	309	8.40	1.70
Average yield [kg/ha.]	901	963	6.90	1.40
Export of tea (in million kg)	195	233	19.50	3.90
Value of export of tea (in. crore Rs]	91	141	54.90	11.00
Unit value [Rs. per kg]	4.7	6	27.70	5.50
Internal consumption [in million kg]	73	97	8.20	1.60
Revenue from central excise [in crore Rs]	1.4	2.4	71.40	14.30

Source - Various issues of Tea Statistics, Tea Board, Kolkata

b. Second Five Year Plan [1956-57 to 1960-61] — Although average annual rate of growth of area declined by 1.7 per cent, production and yield were enhanced by 2.9 per cent and 2.2 per cent respectively, export of tea declined by 2.4 per cent and revenue from central excise by 4.8 per cent but internal tea consumption increased by 8.9 per cent.

Items/particulars	Position as at the		Percentage increase over 1956	Avg. annual growth rate
	commence-ment of plan on 1.4.1956	end of Plan on 31.3.1961		
Area under cultivation [in Th.ha.]	361	331	-8.30	-1.70
Production [in million kgs]	309	355	14.90	2.90
Average yield [kg/ha.]	963	1070	11.11	2.20
Export of tea (in million kg)	233	205	-12.00	-2.40
Value of export of tea (in crore Rs]	143	124	-5.30	-3.10
Unit value [Rs. per kg]	6	6	1.50	0.30
Percentage of foreign exchange earnings	24.5	18.5	-23.80	-4.80
Internal consumption [in million kg]	97	140	44.30	8.90
Central excise revenue from tea [in crore Rs]	3.2	10.8	237.50	47.50

Source: various issues of Tea Statistics, Tea Board India Calcutta

The major factors affected the growth of tea industry during the period were [1] prevalence of long lasting Suez Canal crisis in 1956 [2] submission of Report on Plantation Inquiry Commission [PIC] to the Govt.. of India [3] Issuance of Tea Distribution and Export Control order [TDECR], 1957 [4] Tea Waste Control Order [TWCR], 1959 and [5] Formation of Tea Association of India in 1956. The long pending Suez Canal crisis had an adverse effect on tea industry causing hardship in transporting tea to U K i.e. the highest buyer of Indian tea and this resulted in considerable suffering to the interest of the tea manufacturers.

The submission of the Plantation Inquiry Commission report had a positive impact on the tea industry. The Commission made valuable recommendations like [a] reduction in the cost of production [b] breaking up of concentration of tea trade [c] grant of financial assistance to tea industry [d] emphasizing the need for extension, replacement and replanting in a phased manner [e] improvement in transportation [f] promotion of tea exports.

The issuance of TDECR had a positive impact on tea industry. It sought to regulate the activities of exporters and distributors of tea through a system of licencing. It also imposed some restrictions on the quality of tea to be observed, by exporters and distributors. The purpose of introduction of TWCR was to control and regulate Buying, Selling, Stocking etc. of tea waste so that it may not reach the hands of adulterators to be used by them for adulterating tea for human consumption.

The Tea Association of India which was set up in 1956 aimed at protecting the interest of Indian tea growers in North East India.

c. ***Third Five Year Plan [1961-62 to 1965-66]*** — Average annual rate of growth of area stood at 1.2 per cent while it was 0.8 per cent for production and 0.4 per cent for yield. Exports of tea declined by 0.8 per cent and foreign exchange earnings by 1.1 per cent. However, internal tea consumption increased by 6.3 per cent and central excise by 8.9 per cent.

Items/particulars	Position as at the commencement of plan on 1.4.1961	End of plan in March 31.3.1966	Percentage increase over 1961	Avg. annual growth rate
Area under cultivation [in Th.ha.]	331	345	4.20	0.80
Production [in million kgs]	355	376	5.90	1.20
Average yield [kg/ha.]	1070	1089	1.80	0.40
Export of tea (in million kg)	205	197	-3.90	-0.80
Value of export of tea (in crore Rs]	124	157	26.60	5.30
Unit value [Rs.per kg]	6	8.7	45.00	9.00
Percentage of foreign exchange earnings from tea	18.5	13.5	-5.50	-1.10
Internal consumption [in million kg]	140	184	31.40	6.30
Central excise revenue from tea [in crpre Rs]	10.8	15.6	44.40	8.90

Source - Various issues of Tea Statistics, Tea Board, Kolkata

The aggression of China in October 1962 and subsequent aggression of Pakistan in 1965 on India created problems for the tea industry. The Chinese aggression delayed the export of tea due to heavy war supplies to North East Regions to repel Chinese aggression. The war created major problems one relating to the transportation of tea from Assam valley and Cachar to Calcutta and the other regarding supply of essential raw materials to tea gardens of these regions. The second noteworthy event which had a positive effect on the tea industry was the establishment of auction centres at Coonoor in 1963 for South Indian tea and Amritsar in Punjab for North Indian tea in 1964. The persistent decline in tea prices has been a matter of serious concern for the tea exporting countries. During 1964 and thereafter, Food and Agricultural Organisation [FAO] introduced certain informal regulatory schemes for tea exports.

d. Annual Plans [1966-67 to 1968-69] — Average annual growth rate was 2.3 per cent in area, 4.8 per cent in production, 2.9 per cent in yield and 10 per cent in internal consumption. In June 1966, the Govt.. of India devalued the Indian Rupee for the second time since Independence and imposed a heavy duty of Rs. 2/- per kg on export of tea. As the impact of devaluation on the tea industry was not encouraging, the Govt.. had to reduce the rate of export duty in November 1966.

e. Fourth Five Year Plan 1969-70 to 1973-74] — The average annual rates of growth of area, production, yield, export, internal consumption, central excise, were 0.5 per cent, 4.8 per cent, 4.2 per cent, 4.2 per cent, 5.6 per cent, 40.6 per cent respectively.

Items/particulars	Position as at the commencement of plan on 1.4.1969	End of plan in March 31.3.1974	Percentage increase over 1969	Avg. annual growth rate
Area under cultivation [in Th.ha.]	353	362	2.70	0.50
Production [in million kgs]	394	489	24.00	4.80
Average yield [kg/ha.]	1114	1353	21.80	4.20
Export of tea (in million kg)	174	211	21.80	4.20
Value of export of tea (in crore Rs]	121	193	59.50	11.90
Unit value [Rs. per kg]	7.1	9.2	26.00	5.60
Percentage of foreign exchange earnings from tea	8.8	6.7	-5.00	-0.50
Internal consumption [in million kg]	203	260	26.00	5.60
Central excise revenue from tea [in crore Rs]	13.2	40	203.00	40.60

Source : Various issues of Tea Statistics, Tea Board, Kolkata

In 1973 the Govt.. of India passed the Foreign Exchange Regulation Act (FERA) which provided for diluting the foreign equity capital and quickening the process of Indianisation of tea industry.

f. Fifth Five Year Plan [1974-75 to 1978-79] — Except for revenue from central excise and export, [decline of 0.5 per cent and 1.8 per cent], there was appreciable increase by 0.6 per cent for area, 2.2 per cent for production, 1.5 per cent for yield, 5.7 per cent for internal consumption and 9.4 per cent for central excise revenue.

Items/particulars	Position as at the commencement of plan on 1.4.1974	End of plan in March 31.3.1979	Percentage increase over 1974	Avg. annual growth rate
Area under cultivation [in Th.ha.]	362	374	3.30	0.60
Production [in million kgs]	489	544	11.00	2.20
Average yield [kg/ha.]	1353	1455	2.00	1.50
Export of tea (in million kg)	211	200	5.00	-1.80
Value of export of tea (in. crore Rs]	193	362	87.00	17.40
Unit value [Rs.per kg]	9.16	18.12	97.00	19.40
Percentage of foreign exchange earnings from tea	6.7	5.9	-0.86	-0.20
Central excise revenue from tea [in crore Rs]	40	58.9	47.80	9.40

Source : Various issues of Tea Statistics, Tea Board, Kolkata

The overall development of the tea industry was the combined effect of various strategies adopted by Govt.. of India during the Plan period. These are as follows :

1. Setting up of Indian Tea Industry Development Association in 1974 with a seed capital of Rs. 25/- lac acquired by way of voluntary subscription

2. Opening of new tea auction centre at Siliguri in 1976 helped the producers in the locality in reducing the cost of marketing and also saving time and avoiding risks.

3. The Committee on Tea Marketing under the chairmanship of Mr. Prakash Tandon the then Director General of National Council of Applied Economic Research, Govt.. of India in its report had made numerous valuable suggestions for marketing of tea in India and abroad. The Committee for the first time cautioned that India should not go for export only but also make efforts for import of tea to keep India's position in the world market.

4. A meeting was held on 18 February 1980 with the officials of Tea Board, State Trading Corporation, Tea Trading Corporation of India, Mr Pranab Mukherjee, the then

Commerce Minister, Govt. of India stressed the need for increasing country's export of traditional and non traditional goods. Mr Pranab Mukherjee requested the Tea Board to take steps to increase production of tea so that there was a considerable surplus after meeting internal consumption needs.

5. Decision was taken for revival of the Darjeeling tea industry as it was potentially viable to produce 22 m kg of tea annually.

6. Amendment of Import policy of tea bagging machine. However Govt. of India amended the import policy governing import of tea bagging machine from February 1980. Import of tea bagging machine is allowed under 'Open General Licence'.

g. Sixth Five Year Plan [1980-81 to 1984-85] — There was overall increase in area [1.8 per cent], production [2.8 per cent], productivity [0.9 per cent], exports [1.7 per cent], foreign exchange earnings [2.4 per cent] and internal consumption [5.6 per cent] except for decline in central excise revenue from tea by -0.8 per cent.

Items/particulars	**Position as at the commencement of plan on 1.4.1980**	**End of plan in March 31.3.1985**	**Percentage increase over 1980**	**Avg. annual growth rate**
Area under cultivation [in Th.ha.]	374	408	9.1	1.8
Production [in million kgs]	544	620	14	2.8
Average yield [kg/ha.]	1,455	1,523	407	0.9
Export of tea (in million kg)	200	217	8.5	1.7
Value of export of tea (in. crore Rs]	36.2	771	113	22.6
Unit value [Rs.per kg]	18.1	35.5	96.1	19.2
Average percentage of foreign exchange earnings from tea	5.9	6.6	11.9	2.4
Internal consumption [in million kgs]	337	431	27.9	5.6
Central excise revenue from tea [in crore Rs]	58.9	56.7	-3.9	-0.8

Source : Various issues of Tea Statistics, Tea Board, Kolkata

During the Sixth Plan period, there was overall growth of the Tea Industry, which was the cumulative effect on various policies or strategies implemented by the Govt.. some of which are as follows:

1. A National Level meet was held on 3rd August 1981 under the chairmanship of Mr P K Kaul, the then Secretary, Ministry of Commerce, Govt. of India, and was also attended by the representatives of Govt. of Assam, West Bengal, Tripura, Kerala, TamilNadu, Karnataka, Himachal Pradesh and the Association of Tea Producers including small tea growers. Discussions were held on the present and future prospects of the Tea Industry and recommendations made for substantial reduction in excise duty rates on both bulk and packet tea, reduction in agricultural income tax rates, exemption from rural employment cess, suspension of sales tax on auctions, full credit requirements at concessional rates of interest to the Govt. of India, State Govt.. and tea producers.

2. The RBI had constituted a Committee under the chairmanship of Mr K B Chore, Chief Officer, RBI in October 1980 to examine the problems relating to the financing of tea industry. The Committee had given a recommended that the tea industry would provide from its own funds and long term resources, fund equal to atleast 25% amount of peak deficit. Besides, the cash credit limit is to be fixed on the detailed monthly cash budget for the entire season. The Committee had also recommended for prompt liquidation of accumulated deficit from the past, within 2 to 3 years. Further, the Chore Committee recommendations had dealt a serious blow to the working of tea industry. In a meeting with Dr Manmohan Singh, the then Governor of RBI, the tea industry representatives had pointed out the adverse effect of Chore Committee recommendations. The Governor assured that nothing would be done to harm the industry.

3. Three main tea producing countries i.e. India, Srilanka and Kenya hold informal consultations at Geneva in an effort to sort out their differences on international tea agreement. Mr V P Singh, the then Union Commerce Minister, GoI, directed the Tea Board to gear up its export promotion efforts so that it can contribute a lion's share to the country's foreign exchange earnings. He also advised the Tea Board to derive maximum possible benefit from participation in any generic promotion by the existing Tea Council by suitable modifications in the pattern of contribution and unilateral promotion of Indian Tea through the role of Tea Board.

4. R & D areas for Tea were identified by the producers and exporters of tea all over the world including India. The main thrust areas for carrying out R&D work to boost output and sustain production increase, are :

   ✓ creation of central infomation services for tea industries for the world

   ✓ analysis of bio-chemistry of tea during and after its manufacture

   ✓ Evolving packaging technology.

5. The Tea Marketing Control Act, 1984 stipulated that producers were to sell a minimum of 70 per cent of tea through public auction.

   The Crash Programme for 1987 formulated by the Consultative Committee of the Plantation Association envisaged the utilisation of internal resources for augmenting tea production in the short term.

6. In the 25th Annual General Meeting of Indian Tea Association held on November 1982, it was urged upon by the Govt. to include tea under priority sector to enable it to obtain financial facilities as extended to other agricultural commodities.

h. Seventh Five Year Plan [1985-86 to 1989-90] — Except for decline in export of tea by -0.5 per cent and foreign exchange by-10.0 per cent there was improvement in area by 0.5 per cent, production by 3.1 per cent, yield by 2.5 per cent, internal consum-ption by 4.1. per cent and central excise by 7.8 per cent.

Items/particulars	**Position as at the commen-cement of plan on 1.4.1985**	**End of plan in March 31.3.1990**	**Percentage increase over 1985**	**Avg. annual growth rate**
Area under cultivation [in Th.ha.]	408	417	2.20	0.50
Production [in million kgs]	620	720	16.30	3.10
Average yield [kg/ha.]	1523	1729	13.50	2.50
Export of tea (in million kg)	217	209	-3.60	-0.50
Value of export of tea (in crore Rs]	771	1104	43.20	3.50
Unit value [Rs. per kg]	35.5	52.8	48.70	4.20
Average percentage of foreign exchange earnings from tea	6.6	3.4	-50.00	-10.00
Internal consumption [in million kgs]	431	500	16.00	4.10
Central excise revenue from tea [in crore Rs]	56.7	78.9	38.80	7.80

Source : Various issues of Tea Statistics, Tea Board, Kolkata

The industry made progress during the Plan period except quantum of tea exports and percentage of foreign exchange earnings. The progress was the cumulative effects of various strategies, policies, programmes, etc., adopted during the Plan period. These are as follows:

i. identification of new areas to be brought under planting of tea/coffee rubber and cardamom of about 1.7 lac hectare besides the planting of 85000 hect. and rejuvenation and infilling of 1.3 lac hect. by UPASI.

ii. initiation of join efforts of West Bengal and Assam to bring more areas under Tea.

iii. appointment of Venkatachalam Committee of Tea Auction, suggesting modification of stipulation of selling 70% of total production through auction.

iv. announcement of new marketing policy by Union Govt.. regarding adequate supply of tea at reasonable prices for domestic market and maximization of export earnings from tea.

v. launching of modernization plan for West Bengal Tea Development Corporation.

vi. implementation of major development programme for Assam Tea Corporation

vii. convening of Tea Scientists Meet from all over the World at Coonoor under the aegis of UPASI to study the impact of plant density & manuring of soil groups in tea gardens.

viii. familiarization of tea planting method which includes chopping of the old bushes at the ground level and applying chemicals to kill them.

ix. holding of Tea Finance Meet.

x. launching of export campaign for Darjeeling tea.

xi. formulation of a comprehensive credit plan to revitalise the ailing tea industry in Kangra valley by State Bank of India, Kangra.

xii. setting up of new projects worth Rs. 7.55 crore covering an area of 8000 hectares in Western Ghats in joint sector by Govt. of Karnataka.

xiii. establishment of a permanent centre for development of plantation in Kerala.

xiv. constitution of a Ramakrishnayya Committee to review the working of Tea Board.

xv. organising National Conference on Tea Productivity.

xvi. reconstitution of Tea Board.

xvii. launching of Darjeeling logo.

xviii. opening of mini auction centres by Tata.

xix. setting up of a committee on a long term strategy and plan for development of tea industry. The viability of cheaper packing material and bringing Orissa, Meghalaya, Arunachal Pradesh etc. in the tea map.

During the Plan period, the tea industry had undertaken various development activities which enabled step up of production. The strategy of raising tea production includes, short, medium and long term measures. Short term measures included cultural and cultivation practices, medium measures incorporated new planting, rejuvenation, pruning, replanting, infilling etc., while long term measures includes attainment of 1100 m kg of tea in 2000 and extension of planted area by another 53600 hectares, carrying out infilling of about 38,500 hectare and 44600 hectares.

i. ***Eighth Five Year Plan [1991-92 to 1995-96]*** — Average annual rate of growth of production was 1.1 per cent due to increase in area by 0.6 per cent and yield by 0.5 per cent. Export was marginally increased by 0.5 per cent and internal consumption by 2.3 per cent and central revenue by 1.0 per cent.

Items/particulars	Position as at the commencement of plan on 1.4.1991	End of plan in March 31.3.1996	Percentage increase over 1991	Avg. annual growth rate
Area under cultivation [in Th.ha.]	420	433	3.00	0.60
Production [in million kgs]	754	795	5.50	1.10
Average yield [kg/ha.]	1794	1839	2.50	0.50
Export of tea (in million kg)	201	205	2.40	0.50
Value of export of tea (in. crore Rs]	1120	1165	0.40	1.80
Unit value [Rs.per kg]	55.15	58.7	6.50	1.30
Average percentage of foreign exchange earnings from tea	3.8	3.6	-5.30	-1.00
Internal consumption [in million kgs]	520	560	11.50	2.30
Central excise revenue from tea [in crore Rs]	75.5	79.4	5.20	1.00

Source : Various issues of Tea Statistics, Tea Board, Kolkata

j. Ninth Five Year Plan [1997-98 to 2001-2002] - Although are increased over the years by 178 percent, but production improved marginal (less than 0.4 per cent) mainly on account of fall in productivity. Export was more or less equal over the years but value of exports went up because of improvement in unit value (Rs 85.79 to Rs 87.13 per kg). Internal consumption was hiked @ 3.24 per cent annually. Details are given below;

Items/particulars	Position as at the commencement of plan on 1.4.1997	End of plan in March 31.3.2002	Percentage increase over 1987	Avg. annual growth rate
Area under cultivation [in Th.ha.]	434	512	17.97	3.59
Production [in million kgs]	810	826	1.97	0.40
Average yield [kg/ha.]	1865	1620	-13.14	-2.62
Export of tea (in million kg)	203	201	-0.98	-0.19
Value of export of tea (in. crore Rs]	1721	1753	1.86	0.37
Unit value [Rs. per kg]	86	87	1.56	0.31
Average percentage of foreign exchange earnings from tea	4	3	-2.85	-0.57
Internal consumption [in million kgs]	597	693	16.20	3.24
Central excise revenue from tea [in crore Rs]	—	N.A	—	—

Source : various issues of Tea Statistics, Tea Board, Kolkata

k. Tenth Five Year Plans [2002-03 to 2006-2007] — Annual production in 2003 was estimated at 846 million Kg compared to 826 million kg. in the previous year. Export had declined to184 million Kgs.

l. Area, Production,Yield, Export, Value of Export, Quantity Sold, etc., during the period from 1950 to 2002 — It is observed from the data Table-11 that production had increased over the years expect 1999 and 2002. This was mainly on account of improvement in yield rate. Of course, there was marginal increase in area. Yield was improved by 197 per cent over the year whereas area by 61 per cent. The average annual rate of growth of yield was 4.10 per cent while it was 1.28 per cent in case of area.

Table 11 : Area, Production, Yield, Exports and Prices of Tea during the past 5 decades

Year	Area	Produc-tion	Yield	Export		Unit price	Auction		Labour No.
				Qty.	Value		Qty.	Sale price	
1950	316	278.21	881	200.70	80.42	4.10	113.64	4.23	0.94859
1960	331	312.07	971	193.00	119.99	6.21	173.79	5.28	0.84516
1970	354	418.51	1182	202.00	148.75	7.36	241.31	6.47	0.75964
1980	381	589.17	1494	224.00	429.03	19.15	306.95	13.60	0.84665
1990	416	720.33	1731	209.10	1104.15	52.81	482.25	43.23	0.98678
1991	420	754.19	1794	201.70	1120.31	55.54	501.58	40.31	0.99673
1995	427	756.01	1770	167.10	1190.87	71.24	428.36	47.99	1.02878
1997	434	810.03	1865	202.90	1721.84	85.79	459.02	66.89	1.03226
1998	474	870.40	1844	210.30	2238.31	107.80	442.35	76.43	1.03500
1999	490	826.00	1685	191.70	1902.44	100.61	480.71	72.80	1.03600
2000	504	847.00	1679	206.90	1898.62	91.80	507.53	84.50	1.03700
2001	510	854.00	1675	182.60	1682.11	92.13	463.69	86.70	1.03900
2002	511	826.00	1620	201.00	1753.39	87.13	456.54	88.15	1.03956

Area in th.kg., Production in m.Kg., Yield kg per ha, Sale Qty in m.kg, , Sale price Rs per kg,, labour in million number

Source : Tea Statistics, Tea Board, Kolkata

Part Two : Nomenclature and Classification, Flora Biology and Embryology, Pollination, Artificial Pollination, Genetics, Development in Plant Improvement, Climatic Conditions for Tea Growing Districts in India

5. Nomenclature, Classification and Botany of Tea

i. Nomenclature and Classification

Tea (camellia sinesis (L). O. Kuntze) is a highly heterozygous and outbreeding crop, exhibiting great diversity with form and shape. The scientific description as well as nomenclature dates back to the early part of the eighteenth century. Tea plant is broadly classified as Assam, China and Cambodia types. The scientific nomenclature is as follows:

A. The China Plant : Camellia Sinesis (L),
B. The Assam Plant : Camellia Assamica (Maston)
C. The Cambodia plant : Camellia Assamica sul sp. lasiocalyx (Planch. M.S.)

ii. Flora Biology and Embryology

The morphological vegetative organs of tea plant are affected by the parent plants and environmental conditions but flora characteristics are relatively stable and provide reliable basis for specific identification. There is significant difference in flora characteristics between Chinese and Assam tea varieties. For example, in length of style and style arm; the number and length of outer stamens; size of inter petals etc.

a. Pollination Tea plants showed an appreciable degree of self sterility and invariably set a better crop of seeds with pollen from another bush nearly four times that of self-fed seeds. With efficient cross transfer of pollen, more than 3 percent of total seeds formed will be self fertilized

b. Artificial Pollination / Hand Cross Pollination Healthy flowering branches are chosen for artificial pollination. To avoid contamination, open flowers and immature fruits are removed.

iii. Genetics

a. Cytology Chromosome number is the basic criterion for differentiation between species. Cytological investigation on tea

studies the somatic chromosome of different species and varieties which shows a constant number (2n = 30).

b. Inbreeding Continuous inbreeding of a cross pollinated crop species increases homozygosity. Homozygous diploids are of immense importance in plant improvement particularly in crops like tea where genetic study is scanty.

c. Compatibility A study conducted by TRA, Tocklai revealed that the degree of self-incompatability was generally prominent in China and Assam varieties than in Combodia. The inbred progenies in all the varieties also showed segregation of characters with loss of vigour which was maximum for China plants.

d. Inheritance Because of non-availability of homogenous lines, most of the characteristics of tea are polygenic in nature. The pattern of inheritance is quantitative. Observations on the inheri-tance of yield in biclonal crosses showed that positive correlation existed between mean yield of parents and progenies in crosses involving widely different clones. But the relationship broke down when morphologically similar clones are used.

6. Development in Plant Improvement

i. Mass Selection Seeds were the only source of propagating tea during the early years of tea cultivation. The first scientific attempt to select inputs in North East India was made in 1860 by establishing standard sources of tea seeds. The seeds from the particular seed garden were known by the name of that garden or locality and was called JAT.

ii. Selection Criteria for Yield Initial selection was done based on visual characteristics of a plant like leaf and branching pattern. The size of leaf is directly proportional to its weight. The yield of a tea bush is the product of the number of shoots multiplied by weight of individual shoots. Further, area of plucking surface, density of plucking points and weight of prunings are responsible for yield.

iii. Selection Criteria for Quality The following morphological characters related to quality are used for selections :

a. Pubescence - It is the amount of hair on the under surface of a young leaf. It has been found to have a significant relation with quality of black orthodox tea in various parts of the world. However, no correlation could be observed between pubescence and CTC.

b. Colour of Leaf - A better tea quality was produced by light green leaved type. For liquor, colour and strength, over quality and flavour, light leaved sections were better than dark leave ones.

c. Anatomical Character - Three factors which have an influence on quality and strength are pubescence, phloem index and vascular index. In general, only high values of vascular index are associated with the desirable combinations of big bushes with high yield per unit of bush surface and better response to fertilizers.

iv. Clonal Vs. Seed Propagation The seed grown plants are not uniform as their characteristics were governed by genotypes of their parents and soil conditions. In some cases, yield and quality were unpredictable. But, as the planters want a uniform plantation both for morphological features and quality, tea plants were propagated vegetatively. These were propagated by means of layering, budding or grafting on root stocks to obtain seed gardens on selected bushes. The standardization of the technique of single leaf internode cuttings, practiced today, took a long time to be successful.

v. Selection Procedures/Criteria In view of the commercialization of tea, planting materials have been developed and selected from the desired plant material. In recent years the extent of improvement has been slowed down due to lack of reliable selection criteria. Various morphophysiological markets have already marginally improved for desired agronomic trades as they are greatly influenced by environmental factors. Selection may be improved to a large extent using cytological, biochemical and/or molecular markets linked to various desirable agronomic characters. The factors which contribute to the quality are improved controllable practices like field, cultural and factory operations, the genetic input, non-controllable environmental factors and their interactions with genetic factors.

7. Agroclimatic Conditions of Tea Growing Regions

In India tea is concentrated in two widely separated regions in the North East and South India. In addition, tea is grown in a limited area in Kangra (Himachal Pradesh) Tripura and Dehradun Valleys (Utttaranchal). In recent years tea has also been introduced in some non traditional areas like Arunachal Pradesh, Meghalaya, Nagaland, Mizoram, Manipur, Sikkim, Orissa and Undivided Bihar.

North East

Tea growing areas in this region lie between 24 degree and 27 degree latitude and 88 degree and 95 degree longitude. Tea growing areas can be divided among several distinct regions viz. Brahmaputra and Barak Valley in Assam, North Bengal Plains of Dooars and Terai as well as Darjeeling Hills. In the Brahmaputra valley, tea is grown on both the banks of the river on flat land between 50 and 120 m (160 - 400 ft) above Mean Sea Level (MSL). In South India, tea area lies between 8ºC and 13ºC on the slopes of Western Ghat mountains and adjoining plateaus at elevations ranging from 800 to 2000 MSL. Some tea areas are, however, situated above or below this. Climatic conditions of different tea districts are given below :

Table 12 : Climatic Conditions of Tea Growing Districts of India

Tea districts	Location of Meteoro-logical Stations	Average Rainfall (mm)	*Wet Months (Nos.)	Range of mean monthly temp.	
				Max (^{0}C)	(^{0}C)
NORTH EAST INDIA					
Including					
NORTH OF WEST BENGAL					
Assam Valley	Jorhat	2642.10	8	32.60	8.30
Cachar	Silcoorie	2994.60	8	32.20	10.60
Dooaras	Nagarkata	3956.70	7	31.00	10.40
Terai	Gunagaram	3178.00	7	32.20	8.90
Darjeeling	Nagri Farm	2371.70	7	24.90	7.70
Kangra (Himachal)	Palampur	2667.40	8	29.40	4.90
SOUTH INDIA					
Annamalai	Cinchona	3686.30	8	29.30	11.50
C. Travancore	Vandiperiyar	1145.00	5	31.60	13.40
High Ranges	Munnar	3843.00	7	25.00	5.90
Karnataka	Durgabetta	2914.00	6	33.90	11.10
Nilgiris	Coonoor	1452.00	6	25.40	9.50
Nilgiri Wyanaad	Gudalur	1782.00	6	40.00	7.00
Wyanaad	Meppadi	22.30.7	5	32.90	148.00

Source : Global advances of Tea Science - 96,
** wet months : rainfall > 90mm per month.*

Part Three : Planting and Processing Technology, Manuring, Research & Development, Thrust Area of Tea

8. Field and Processing Technology - The Changing Trends Over The Years

i. Field Technology From the beginning, improvements in field cultivation practices and processing technology have been a direct result of research activities of the Tocklai Experimental Station, Jorhat, Assam and United Planters' Association of South India (UPASI), Tea Research Institute, Tamil Nadu. Subsequently, the Council of Scientific and Industrial Research (CSIR) Institute of Himalayan Bioresource Technology in Palampur, Kangra, Himachal Krishi Vishwa Vidyalay, Assam Agriculture University, Jorhat, Tea Board's Darjeeling Research Centre at Kurseong and Tea Husbandry Department at North Bengal University played important roles in this regard. Further, Research Centres were also started by Tata, Goodricke Tea Company etc.

Various important agro-techniques developed in plucking, pruning, shade, soil management with emphasis on drainage and conservation have indeed made a tremendous impact on increase in tea crop production and yield.

ii. Manuring To begin with, nitrogen alone was used as fertilizer in tea in the form of ammonium sulphate which turns soil highly acidic in due course. Urea was later introduced. The importance of potassium as a key element was recognized when widespread potassium deficiency caused defoliation on a large scale. Liberal application of NPK fertilizer has increased the uptake of other essential micro-nutrients from the soil. The concept of balanced nutrients to counteract deficiency of micro nutrients was introduced in tea cultivation. Foliar application of micro nutrients such as zinc, manganese is presently done on a regular basis under specific conditions. The prolonged application of urea is likely to exacerbate 'sulphur deficiency' in tea plants. Sulphur is likely to become a major nutrient in fertilizer schedule. The application of SOA for long term has turned the soil over acidic and this is being rectified by the application of lime or dolomitic lime.

9. Research and Development

Research on tea has contributed very significantly towards the scientific development of the tea industry. Major R&D breakthroughs provided by Tocklai Experimental Station during different periods are summarized below :

i. 1950's : Shade, N-fertilizers, McTear's Rotorvane;

ii. 1960's : Longer pruning cycles, chemical weed control, use of organophosphates, Continuous Tray Drier, Barbora's Fifties. Continuous Leaf Conditioner, catchment planning;

iii. 1970's : Drainage, K-manuring, herbicides, infilling and consolidation, plant population, Barua Continuous Roller, high-yielding clones and hybrid biclonal seeds;

iv. 1980's : Balanced NPK manuring, synthetic pyrethroids, high-yielding clones and new hybrid seeds, optimum plant population, young tea management package, Tea Breaker cum Separator, Green Leaf Storage System.

v. Tocklai Experiment Station on R & D

In recent times, Tocklai Experimental Station has been concentrating on the following research areas :-

a. Breeding & selection : Development of superior clones and seed stocks;

b. Tissue culture : Micropropagation and genetic engineering;

c. Pruning : Rejuvenation and consolidation, bush architecture;

d. Plucking : Mechanical aids;

e. Tea physiology : Photosynthesis, respiratory loss, growth promoters and biogenetic pathways;

f. Microbiology : Identification of microbes and role of nutrient metabolism, bio-fertilisers;

g. Nutrition : Need-based study of macro and micro-nutrients;

h. Pests and diseases	: Bio-control and integrated pest management systems;
i. Tea chemistry	: Quality parameters, increased cuppage and pharmacokinetics; and
j. Tea manufacture	: Microprocessor based electronic monitoring and process control system.
k. Health aspects of tea	: Helps in arresting cardio attack, skin diseases etc.

Development of South Indian Tea has been possible due to R&D breakthroughs and adoption of new technologies at UPASI Tea Research Institute. Nutrition of potassium and zinc, control of blister blight by specific fungicide, control of short-hole-borer, rejuvenation pruning and no tillage replantation etc. are some of the time tested practices developed by the Institute. Amongst the more important recommendations of recent origin are routine hormone formulations and nursery grafting of fresh cuttings, biclonal seed stock, partial mechanization of harvesting, leaf expansion concept in programming, plucking intervals, organic systematic fungicides etc. The use of ultra violet rays to improve processing quality is a major break through.

10. Thrust Area in Tea Research

The tea industry in India needs an integrated research strategy. The thrust of future research should be on specific technical needs which include, (i) Plant improvement, (ii) Plant nutrients, (iii) Water management, (iv) Applied physiology, (v) Improvement of Tea quality and flavour, (vi) Biological control of pest diseases, (vii) Modernization and automation of tea factories and (viii) Alternative uses of tea.

Part Four : Marketing systems, Aspects of Tea Markets, Domestic Market, Export Markets, Promotion

11. Tea Marketing — Signs of Maturity

Signs of maturity were observed in the tea- marketing scene, which was, perhaps, partly due to the effects of disintegration of the former USSR and partly to the economic liberalization move stoutly pursued by the then Finance Minister, Dr. Manmohan Sing. Early glorious period of Indian tea marketing was restricted to production of teas on Indian soil to suit the needs of British Blenders. Indian tea-sahibs were happy to satisfy the visiting agents, pack the produce in plywood chests and put them on to the holds of vessels sailing for London Port. The estates were largely owned by the Britishers (at least the rich ones) and the accountants in London determined prices. It was happy time. But, frankly, no marketing was involved. It merely served as commodity suppliers for big business. This situation continued for a long time through independence. First shock came from Foreign Exchange Regulation Act (FERA), which was renamed as Foreign Exchange Management Act (FEMA). A great deal of hesitation regarding permissible share of foreign holdings, lack of decisions usually with Govt. of India, led to shifting of ownership of gardens. British planters were losing interest and started developing an alternative source of supply for which Kenya was found to be suitable location. That is, however, another story.

12. Loss of London Market

With the loss of London market, former USSR and East European countries appeared on the scene, strengthened by a long- term friendship treaty involving rupee trade agreement. Tea became an important item in this pact. Within a short time, the share of former USSR and East European countries surpassed 50 per cent of Indian export quantum. So the need for exporting more than what India could conveniently do was not strong. However, an ambitious projection of 370 m. kg export by the turn of century, kept the tea industry busy all the while. The slogan of need for exporting more value added products like packet tea; tea bag and instant tea was heard from all corners. It was all for increasing the foreign exchange earnings. Some meek attempts were made to popularize Indian tea in foreign markets by way of subsiding advertising expenditure on India exporters for their packs with the mention of Indian tea on it. Foreign packers would also receive subsidy if they used a certain

percentage of Indian tea in their blends and advertised that point. Funds for such activity were small and mechanism of payment was complicated. As a result, real big tea marketers hardly cared for such schemes. But year after year some money, which appeared large in Indian context, but chicken feed in the context of global operations, used to be dissipated. After the loss of USSR market when exports fell sharply, there was hardly any scope for toying with such experiments. Collaboration with global operators, attempts to establish brand image, realizing need for consumer research, production of Bio-tea and specialties etc. gave Indian tea industry a smart appearance Convertibility of rupee as a part of liberalization plan provided necessary support for taking right steps. Devalued rupees had positively encouraged larger interest from general currency areas. Indian tea was found more competitive in the world markets. Breakdown of the buying system in CIS countries created such an impact in the international trade that the normal rules of demand and supply did not work. Export projection called for substantial efforts in the field of marketing.

This part deals with marketing system of tea, modes of disposal of tea, seven marketing modes, primary marketing, development of auction centers, tea auction facilities, tea auction systems, advantage of auction sale, Tandon Committee on Tea Marketing, ex-garden sales, mini-auction, auction for blended and packet teas. Besides, efforts have been made to devote critical analysis on new auction rules-Ahuja committee 1981, marketing of Indian tea —domestic v/s exports, unrestricted import of tea to allow or not etc. Tea is the most popular of all the beverages in the world. As the largest organized sector, tea is one of the oldest industries in India and holds a considerable potential for the economic development of the country. India has the largest area under tea and is also the largest producer, consumer and exporter of tea in the world. In 2000 India's production was estimated at 950 m kg accounting for 29 percent of world production. Tea export from India was about 210 m kg, which represents 18 percent of world exports. In addition to contributing substantially to national and state ex-chequers directly and indirectly, it is the largest single export commodity earning foreign exchange.

13. Marketing System of Tea

Tea being a perishable product should be disposed of as quickly as possible. The economic viability of tea industry depends crucially on profitable disposal of its products. The marketing system of India tea

deals with marketing channels and Govt. regulations on tea disposal. It refers to the complex system of institutions and operations, which intervene between the producer of tea on one hand and ultimate consumer who drinks his cup of tea, on the other hand. Among the alternative means of disposal, the producer chooses the channel, which brings the best price to him within the purview of Govt. regulations. The marketing channel in tea is the pathway of movement of teas through intermediaries from production in the garden to the hands of the ultimate consumers within or outside the country. Das committee in its study early in 1974 found that marketing of Indian tea was done by a two stage process in which the first stage was the passage of Indian tea as a primary product via the various channels to (i) Indian blender packers (ii) Indian loose tea wholesalers (iii) U.K. importers, (iv) rupee country importers, and (v) non-rupee-non-U.K. importers overseas. In the domestic market, the second stage of tea marketing was two compartment affairs, one of which was the marketing of packets in India by Indian blender packers and the other was the loose tea marketing system.

14. Modes of Disposal

Tea is marketed and made available to the consumers in two different forms viz. loose and packaged. Loose tea is not subjected to any further major processing after it is purchased at auction. It is sold to the consumer rather in the same condition or in blended form. It is generally not packed in convenient sizes before it is sold. In packet tea trade, on the other hand, tea undergoes further processing and different types of tea are blended and sold to the consumers in packets of conventional sizes. There are mainly three modes of disposal of tea viz. auction, ex-factory or ex-garden and forward contract. Among these the public auction system plays the most important role as Tea (marketing) Control Order (1984) specifies that 75 percent of the total output of tea estates should be sold through it. The interlinked modes of disposal of Indian tea are as follows (a) Direct consignment to London auction, (b) Direct sale by forward contract to overseas buyers, (c) Consignment to Indian auctions, (d) Direct ex-factory sale to Indian buyers, (e) Direct sale by forward contract to Indian buyers, (e) Direct Marketing (loose tea) in wholesale markets and. (g) Self-packeting and exports of packets overseas. Over and above, there are some sales of Indian packaged tea abroad and small scale attempts to sell packaged tea in home market by Indian producers.

15. Marketing Models of Tea

The seven marketing modes are discussed below:

i. Direct Consignment to London Auction:

London auction is the oldest and pioneer of institutional marketing of tea in the world. Though over the years, the quantity of Indian tea sent directly for auction to London is coming down, still a good quantity of quality Indian tea is shipped directly to London for sale.

ii. Direct Sale by Forward Contract to Overseas Buyers

This practice was very common in the first quarter of the present century. Large buyers in the United Kingdom or the East negotiated forward for the purchase of the whole output of an estate, or for a part there of, over a period of one year or more. The eventual disposal might take many forms. It might be shipped direct to the buyers for general trade distribution; it might be transported in varying quantities to different parts of the world, some of it might find its way to London auction; it might be retained at the port of shipment to be blended and possible packeted there and reshipped to various consuming countries.

iii. Consignment to Indian Auctions

Most of the tea produced in India is sold through the seven auction centers situated in different parts of the country. Here tea is sold to the buyers through brokers, a middleman, who sells tea on behalf of the growers. The tea is sold to highest bidder under the usual rules of sale governing such auction. The seven auction centers of the country are Guwahati, Kolkata, Siliguri, Cochin, Coonoor, Coimbatore, and Amritsar.

iv. Direct Ex-factory Sale to Indian Buyer

By this system tea is sold in the garden itself. This applies to sales from bought leaf factory. Tea produced in such factories is more regularly sold ex-factory to local collectors or dealers through whom it passes to merchants, from whom it may be sold in auction or by private treaty or be shipped. Some estates located on the main road sell tea rather loose or in packets to retail buyers at the factory door, although the amount is less. This gives a quick return to the garden.

v. Direct Sale by Forward Contract to Indian Buyers

Buyers and sellers make a contract even before tea is produced to sell it at a fixed price later. This producer has to sell the teas to the buyers at the agreed price, irrespective of the price of tea later.

vi. Direct Marketing (loose tea) in Wholesale Markets

Growers are selling tea directly in wholesale outlet in the market.

vii. Self-packeting and Export of Packets Overseas

Tea is exported in packet forms from the garden to different countries of the world in company's name.

16. Primary Marketing

A detail of primary marketing of tea during 1980 to 1999 is given below:

Table 1 : Primary Marketing of Indian Tea During 1980-2004

Particulars	1980		1990		1995		2004	
	Qty (1)	Pc (2)	Qty.(1)	Pc (2)	Qty.(1)	Pc (2)	Qty.(1)	Pc (2)
Indian Auction	306.96	53.89	482.25	66.95	428.36	56.66	503.41	52.79
London Auction	31.73	5.57	8.13	1.13	3.31	0.44	3.42	0.36
Singapore Auction	—	—	—	—	—	—	—	—
Total Auction	338.69	59.46	490.38	68.08	431.66	57.10	506.83	53.13
Export under forward contract	22.29	3.92	25.61	3.55	30.02	3.97	45.31	4.77
Ex-garden sale	208.56	36.62	204.35	28.37	294.33	38.93	397.86	42.10
Total Production	**569.54**	**100.00**	**702.34**	**100.00**	**756.01**	**100.00**	**950.00**	**100.00**

Source : Various issues of Tea Statistics, Tea Board, India
Note –Quantity in million kgs. (1), Percentage to total sale (2).

The buyers at the other end of each of these channels are not distinct groups. There is considerable overlap and inter mixture among them. To describe this inter linkage the buyers are categorized into several main types viz. (i) Indian packeters (ii) Indian (loose tea) whole sellers, (iii) rupee country buyers (iv) U.K. importers/buyers and (v) non-rupee overseas importers. Out of India's total production of 950.00 m kg in 2004, quantity sold through auction was 506.83 m kg (53.13 per cent), export under forward contract 45.31 m kg

(4.77 percent), and ex-garden sale 397.86 m kg representing 42.10 per cent.

17. Development of Auction Market in the World

The first organized sale of tea through auction took place at Mincing Lane in London. The East India Company sold its tea in India House, privately till 1838 but after it lost its monopoly of the Indian trade, all tea was sold in the commercial sale- room at Mincing Lane. For the first five years after 1834 tea sold at Mincing Lane was exclusively from China. On 10th January 1839 the first commercial consignment of Indian Tea was sold in the commercial sale–room by the east India Company, which was an event of great importance in the history of Indian tea. As Sir Percival Griffiths in The History of the Indian Tea Industry said, "The first importance of tea from the British territories in Assam, consisting of eight chests, containing about 350 pounds, was put up by the East Indian Company in public sale in the commercial sale rooms, Mincing Lane, on the 10th January, 1839 and excited much curiosity". This was the first auction of Indian Tea. The first Indian Tea Auction Center was established in Kolkata on 27th December 1861. Kolkata Tea Broker's association at first conducted the auction. Since 1947, auctions have been held in Kolkata under the auspices at the Calcutta Tea Traders Association (CTTA). There are 13 auction centers in the world at present out of which seven are in India. Table - 2 shows the dates of establishment of the tea auction centers of India

Table 2 : Tea Auction Centers of India

Sl. No.	Name of the auction center	Date of establishment
1	Amritsar	30th April, 1964
2	Calcutta	27th December, 1861
3	Cochin	4th July, 1947
4	Coimbatore	22nd November, 1980
5	Coonoor	23rd March, 1963
6	Guwahati	25th September, 1970
7	Siliguri	26th October, 1976

18. Auction Centres of Abroad

Auction market in Colombo started on 30th July 1883 for Sri Lanka tea. Chittagong auction center was established on 16 July 1949 to

deal in teas of then East Pakistan, now Bangladesh. Nairobi auction market began sale on 7 November 1956 for the sale of African teas. Nairobi auction market has since moved to Mombassa on 14 July 1959. Before the War, Amsterdam was an important auction center for Indonesian tea. Sale ceased in that auction center in April 1940 but was resumed in January 1949 and then again suspended in July 1958. Auction sale was inaugurated in Antwerp in 1959 and later suspended in 1966. In 1960 auction started in Hamburg and suspended in 1965. These two auction centers handled Indonesian tea. Limbo auction market started operation in February 1970 and Djakarta auction on 11 December 1972. Thus while London auction market is “cosmopolitan“ in nature, other markets handle tea of the local producers.

19. Tea Auction Facilities

The auction facilitates distribution of the largest quantities of the product in the shortest possible time, increases competition among buyers and sellers because of the concentration of the factors of supply and demand under one roof, improves grading and packing, offers advantages to the buyers in finding quickly the type and quantity he wants and extension of credit to buyers by financial institutions. The auction serves, the buyers by enabling them to purchase tea of a much broader variety than they would otherwise be able to, moving from garden to garden individually. The consumer demands certain standardization in tea blends. This is an extremely delicate operation as the quality of tea manufactured day to day of different tea estates very greatly. To achieve this standardization the auctions allow the blenders to match teas from all over India with their blends. Buyers are afforded the widest choice to fulfill their particular requirements, be they for exports, wholesale, retail or blending, while the sellers are provided a platform for attracting the widest range of market through numerous buyers, both internal and export. No other commodity of such a varied quality can be disposed of in so short a time.

20. Tea Auction System

It has often been claimed that the tea auction system has withstood the test of time. The auctions have been found acceptable by both sellers and buyers and have the approval of the government as well. The auctions provide the producers a ready and reliable means of selling their produce. A new entrant, thanks to the auction system, does not have to necessarily worry about marketing his production.

This is not the case with other products where marketing is an essential input. The tea industry has attracted many investors because it is in business straight away, without searching for markets. The producers receive the sale proceeds timely, 14 days after the sale, through a well established, system of 'prompts'. The buyers have found the auctions beneficial as they cannot only buy at a central point but can watch the operation of their competitors. They do not have to go from door to door for their requirements. Even for private transactions auctions are the barometer. The brokers have been able to evolve an effective system whereby services are efficiently provided to both buyers and sellers. They have been providing market intelligence, manufacturing and agricultural advice to the producers and have regularly compiled useful data for the tea industry, including statistical information. However, as the countdown to the 21st century begins, there appear to be some cracks in the system. More and more producers are going in for direct marketing, by passing the auction system. This trend is likely to continue, as producers would like to exercise personal control over their production. The major buyers have supported the auction system in past. The former USSR bought the bulk of its quantity through the auctions but the disintegration of the former Russia has meant a change in their buying policies and purchases for the Russian Federation and CIS countries today are being done substantially through private sales. Similarly other buyers, to secure quantities, are buying teas privately. In fact, the main supporters of Darjeeling tea have shown a clear preference for private sales during quality periods. The Tea Marketing Control Order of 1984 prescribes that the producers must sell 75 per cent of their production through seven recognized auction centers of India-Guwahati, Siliguri, Cochin, Coonoor, Coimbatore and Amritsar. This order, however, has no teeth and, in any case, it is withdrawn as India moved towards a free economy.

21. Advantage of Auction Sale

Tea auction center collects supplies of teas from a large number of go-downs and canalizes them into many areas of the highest demand spread all over the world. As a mechanism of sale, the outstanding virtue of the auction is integrity-the selling and buying are done publicly. The auction is economic gaps of money to the seller. As Goradia observes, the auction center is a meeting place, where up to 1000 gardens meet some 1000 buyers to trade 3000 to 5000 lots of tea every week, in the course of only 20 hours. The present system of selling tea in auctions through brokers, are selling

samples to buyers and printing information catalogue originated in London. The same system, therefore, have been adopted in other tea auction centers also. The auction mechanism has some definite advantages: (i) the producers is assured of the fair price on the prevailing market, (ii) assurance of continual flow of sale to the producers without fear of a buildup in unsold stocks which may happen in case of other selling modes in times of recession (iii) no problem of bid collection as payment is automatically collected on the 14th day (iv) the pushing nature of bidding in tea auction improves price and helps in maintaining a similar price level for comparable lots of tea (v) free sampling, which costs less than 2 percent, is a vehicle of sales promotion ideal for a commodity of such variety (vi) as the auction takes place publicity, the integrity of sale in implicit to a producer regardless of his situation from the auction center or unfamiliarity with mechanics of trading.

22. Tandon Committee on Marketing

Thus the system of tea auctions, which is more than a century old. Inspite of views occasionally expressed to the contrary, all committees and commissions set up in India and abroad have recommended the continuation of the auction system as the most efficient method of disposal of bulk commodity like tea. The last committee to examine the auction system in India was the Tandon committee, which submitted its report in November 1978. After very careful examination of all aspects of the matter the committee confirmed the need to allow auctions to progress freely. The committee also recommended that efforts should be made to introduce in different auction centers useful practices followed in other auction centers and to achieve uniformity in rules in different auction centers as far as possible.

23. Ex-garden Sale

The Tea Board constituted a committee to examine the role of mini auction and recommended that experiments to be watched and modus-oparandi and their impact on tea trade should be carefully examined to decide the advantages and disadvantages. The committee clearly envisaged the possibility of Mini Auction assuming bigger role in coming years. What is more remarkable is the committee did not decry ex-garden sale and took a certain portion of teas produced being sold at ex-garden as a fait accompli and indispensable from the point of view of products, particularly the weaker section. The need for ex-garden sale arose from the common wisdom of not putting all the eggs in the same basket, which

inevitably reduce price. Moreover, having some volume of ex-garden sale is also important for maintaining a satisfactory cash flow position since the sale through auctions it takes 3 to 6 months for the sellers to receive the sale proceeds. In this back-ground the stipulation under the Tea Marketing Control order 1984 that 70 per cent of crop in 1984 and 75 per cent of crop in 1985 onwards should be sold through public auctions in India has been causing serious financial problems for the products apart from reducing the prices realized at auctions. Stipulation of minimum of crop for sale through auctions in India was held good for two years i.e, 1985 and 1986 but form 1987 on wards, the proportion started declining. This was due to considerable delay in sale through auctions on the one hand and reduction in prices as a result of too much tea being available at auctions, on the other. The existing auctions will also find it extremely difficult to handle the largely increased volume of tea smoothly and promptly unless their facilities are augmented. It is, therefore, proved that other method of disposal of tea should be allowed to play a growing role.

24. Mini Auction

Tata, which organized mini auction, filled the gap to some extent. It should be encouraged. Simultaneously ex-garden sale, which in 1995 and 2004 accounted for 38.93 per cent and 42.04 per cent to total production, should be allowed to continue and if necessary to increase depending on circumstances so that producers may receive the best possible prices for their produce and sale proceeds may also be received as early as possible which is essential in view of their tight cash-flow position. The quantity sold through auction in 2004 constituted 53.13 per cent of total crop. Over the years, the sale through public auction in percentage terms started fluctuating and it could be able to handle 45 per cent of the crop in immediate future and still lower proportion in the following years. As a result, a bigger role will be played by mini-auctions, London auctions, ex-garden sales as well as C and F Export. Any dogmatic insistence on increasing sales through public auctions in India without considering the capacity of the auction centers on the one hand and effects of such a policy on tea prices and financial position of tea producers, on the other hand, will only create utter confusion in the tea industry and trade and an inevitable slump in tea prices. Mini auctions in particular have a big role to play as a method, which lies in between public auction and ex-garden sale. Tea Board had drawn up a set of model rules to govern, these mini-auction so as to remove the scope for under invoicing and evils associated with public auctions.

25. Auction for Blended and Packet Teas

There is a need for other innovative approaches. Auctioning of blended teas and packeted teas would be one such approach. It should cover not only teas blended and or packeted by tea producers but also teas blended and or packeted by buyers of loose tea. In fact traders rather than producers may take the lead in organizing auctions of blended and packeted teas, which may be purchased by second stage traders for either domestic consumption or export. On immediate beneficiary effect of this approach would be elimination of the oligopalistic hold on the matter for packer teas enjoyed by few packers with consequent reduction in prices for the ultimately consumers who have to pay exorbitant prices for the teas purchased by them because of high profit margin enjoyed by traders at different levels of distribution channels and do not get any relief even when auction prices decline. Table 3 indicates the percentage of offerings through auctions since 1990.

Table 3 : Production and Sales of Tea

(Quantity in million kgs)

Year	Production	Sold through auctions	Per cent sold in auctions
1900	89.60	24.60	27.45
1910	119.60	34.50	28.85
1920	156.60	37.50	23.96
1930	177.40	42.00	23.67
1940	210.40	45.20	21.48
1950	275.50	113.60	41.23
1960	321.10	173.80	54.13
1970	418.50	241.30	57.66
1980	569.20	307.00	53.93
1985	656.20	505.30	77.00
1986	620.80	468.40	75.45
1987	674.30	472.50	70.07
1988	701.10	504.40	71.96
1989	684.10	477.40	69.78
1990	702.34	474.00	65.80
1991	754.20	501.20	66.45
1992	732.30	448.00	61.18
1993	760.80	441.70	58.06
1994	752.90	428.30	56.89
1995	756.90	428.40	56.66
1996	780.00	427.30	56.52
1997	810.60	442.20	56.99
1998	870.40	454.70	52.24
1999	880.20	464.70	52.79
2000	900.20	476.10	52.89
2004	950.00	506.83	53.13

Source : Various issues of Tea Statistics, Tea Board, Kolkata

The tea market control order came into force from 19th April 1984. It will be seen from the data that quantity of offerings went up to 1991. It however, showed steady decline, except 2004. With the ever-expanding middle class in India, packets and branded goods are becoming more and more popular. The number of producer packet, the sale of which privately permitted under the tea marketing control order, has increased. The poly pouch with the "garden fresh" slogan is popularizing packet teas in India. The consumer packets, packed at the gardens, are sold directly and do not go through the auctions. Improved communications have also helped expanding the private sale market.

26. New Tea Auction Rules – Ahuja Committee, 1985

The tea (marketing) control order 1984 was promulgated by the government of India in April, 984. This order made it obligatory for the organizers of public tea auctions and brokers to obtain a license from the Tea Board. Further-more, all tea manufacturers in India had to register themselves with Tea Board and sell 75 per cent of their annual production through the medium of public auctions. The Chairman, Tea Board being the Licensing/Registering Authority was empowered to oversee the functioning of the tea auction centers and to issue directives whenever necessary to ensure that the public auctions run smoothly, efficiently and in the best interests of all concerned. The Tea Board, thus, became directly involved in the tea auction system. The public tea auction system plays a vital role in the tea trade and industry. There are seven recognized auction centers in India at Calcutta, Siliguri, Guwahati, Cochin, Coonoor, Coimbatore and Amritsar. Out of the total Indian production of 950 million kg in 2004, 506.80 million kg of tea was sold through the auctions (details in Table 3). The tea auction committees at various centers have been reviewing the rules governing their respective auction centers from time to time and have been updating them in line with the changing times, conditions and need. Despite this, the tea board received grievances and requests from all sections of the trade to look into certain areas, which needed further improvement. The "Out lot" sales and distribution of free trade samples were the first amongst the issues raised with the Tea Board. In August 1985, by an administrative order, the Chairman, Tea Board formed a committee headed by Sri S.S. Ahuja, the then Deputy Chairman, tea board "to study the existing rules of all the public tea auction centers in India and to suggest changes wherever necessary to bring improvement in the auction system". This committee on auction rules also known as the "Ahuja Committee" submitted its final report and recommen-

dations in the third week of April 1990. As its first task, the Committee identified eleven areas. These are (a) auction day, (b) catalogues, (c) prompt date, (d) broker's commission, (e) size of lots, (f) brokers commissions, (g) division of lots, (h) withdrawal of lots, (i) sale of outlets, (j) warehouse rent and insurance, (k) closing of catalogues and (l) distribution of samples, for details examination. The Ahuja Committee submitted four interim reports and a final report, the recommendations of which were accepted by the Chairman, tea board. The main features of this report were as appended below:

i. ***Auction Day*** — The committee had examined the possibility of conducting auctions at all the centers on the same day instead of separate days as is the current practice to avoid speculative tendencies, if any. The committee, however, recommended that the present system of holding auctions on different days at different places should continue as it is running satisfactorily. The auctions at each center have to be completed in two days and no more. For this, the auction committees have been asked to look into their infrastructure and make additional alternative auction rooms, if required. The brokers must be given fixed timings and must strictly adhere to them.

ii. ***Catalogue*** — The committee recommended that CTC leaf, orthodox leaf. Darjeeling leaf, green tea, all dusts and the supplemented teas be printed separately. This was because of sampling norms and proper maintenance of category wise statistical data. The brokers have been asked to deliver samples, catalogues etc. strictly within the specified time limits so that the buyers are not inconvenienced.

iii. ***Prompt Data*** — The committee suggested no major change in the present system of payment of prompts at the various auction centers. The buyers and sellers prompt falls due on different days after the date of the sale at various centers. For example, in Coonoor the buyers prompt, is on the 12^{th} day after the date of the sale and for the sellers it is the 13^{th} day after the sale. In Siliguri prompt is payable by the buyers on the 13th day which is paid to the sellers on the 14^{th} day. In Calcutta, the buyer prompt is on the 14^{th} day for leaf and 15^{th} day for dust. Although there is no specification on sellers prompt in Calcutta, the brokers disburse to the producers' prompt on the same day it is received from the buyers. The committee recommended that the payment of the prompt to the

seller by the broker should be the next working day immediately after the stipulated prompt date of the buyer. The committee has also recommended that the auction committee should not extend prompts unless the circumstances are exceptional.

iv. ***Brokerage —*** The sellers pay 1 per cent of the selling price to the brokers as commission. However, in South India, the brokerage is calculated on the selling price minus excise duty. Furthermore, buyers pay to the brokers, for various services rendered at the rate of Rs 5 per 100 kg in Siliguri and Guwahati. In the South there is no commission payable by the buyers to the brokers but there is a system of "lot money" According to this report, henceforth, brokerage paid by the seller will be calculated on the "knocked down" price, thus changing the current practice in the South.

v. ***Size of Lots —*** In the North, tea estates (except Darjeeling) producing two lakh kg or more will have to pack in lots not less than 30 packages during manufacturing periods between 1st July to 30th November. The only exceptions will be BPS, small Dusts and Secondary in the CTC category and tippy teas like BPS, Fannings, Dusts and Secondary in the orthodox category.

vi. ***Division of Lots —*** In order to expedite the speed of sale in the North Indian auction centers, the committee has recommended that brokers should not issue more than two contracts for 30 packages for under and more than three contracts for 31 packages and above. No buyer should get less than five packages in a division. However, for Darjeeling teas there is no change recommended and therefore up to 15 chests one buyer, 16 to 30 chests two buyers and above 30 chests three buyers will continue.

vii. ***Withdrawal of Lots —*** In Calcutta, where auctions normally take place on Mondays and Tuesdays every week, sellers will have to give advance intimation to the brokers about withdrawal of any teas included in the catalogue for sale at the latest by 1.00 p.m on Wednesday of the week immediately proceeding the week prior to the sale in question. This principle will apply to all other North Indian centers. In the South this problem is not so visible and therefore no change has been suggested.

viii. Sale Lot Outlets — The Tea Board had earlier directed that teas remaining unsold in the auction room should not be sold as outlets. The Auction Committees have the option either to supplement the unsold teas in the following week's auction without re-sampling or reprinting them in subsequent auctions with fresh sampling. This practice is to continue.

The quantity of Indian tea sold through different auction centers in India are presented below:-

Table 4 : Disposal of North and South Indian Tea Through Various Auctions During 1984 to 2004

(Quantity in million kg)

Particular/year	**1984**	**1887**	**1990**	**1993**	**1997**	**1999**	**2004**
Total production	639.90	674.30	720.30	760.80	810.60	880.20	950.00
Quantity sold through							
Calcutta	114.70	132.60	129.20	102.30	89.00	95.10	104.30
Siliguri	72.20	80.60	90.00	75.80	80.00	85.30	103.20
Guwahati	89.00	147.70	140.90	151.30	150.20	151.30	158.30
Amritsar	0.30	0.40	0.40	0.10	0.80	0.90	0.90
Total north Indian auction sale	276.20	361.30	360.50	329.50	320.10	332.60	366.70
Quantity sold through							
Cochin	64.00	52.30	52.30	52.00	56.10	58.50	62.50
Coonoor	23.00	27.40	36.90	41.00	44.80	57.30	62.90
Coimbotor	27.50	31.50	24.30	19.00	21.20	16.30	14.70
Total South Indian auction sale	114.50	111.20	113.50	112.20	122.10	132.10	140.10
Total all India auction sale	390.70	472.50	474.00	441.70	442.20	464.70	506.80

Source : Same as Table -1

ix. Warehouse Rent and Insurance — In Siliguri and Guwahati the sellers" liability for rent and insurance is up to a specified time on the prompt date. Thereafter, the liability, passes on to the buyers. In Cochin, Coonoor and Coimbatore, the goods are at sellers risk to the extent of sale price only until a specified time on the second working day after the prompt date. However, in Calcutta the sellers bear additional 14 days rent beyond the prompt date. The Committee recommended that the system in Calcutta should be urgently reviewed so that

the system prevalent in Siliguri and Guwahati finds acceptance in due course and progressively.

x. ***Closing Catalogue*** **—** The committee felt that the availability of teas for the domestic market, despite seasonality of tea production in the North, should be regular and adequate all through. Therefore, regular consultations were suggested to achieve this objective.

xi. ***Distribution of Samples*** **—** This has been a major area of debate and the committee's recommendations were elaborate. The committee felt that issuance of free trade samples to the trade could not be claimed as a matter of right. Free trade samples should be worked out and supplied in a manner that encourages genuine, regular and energetic buyers but at the same time discourages frivolous and/or casual buying. The committee, therefore, specified qualifications for small, medium and large buyers for each category of tea and for each auction center. The committee further recommended that over and above the minimum percentage purchase qualification, each buyer shall have to operate in at least 25 per cent of the sales held for the category concerned for the purchase year to be eligible for free trade samples in the immediate succeeding sampling year. The committee further dealt with matters like purchase of trade samples, restricted sampling of expensive teas, defined powers of the sampling committee and status of 'on account of concerned' teas.

27. Quantum of Samples — The brokers ensure delivery of proper quantum of samples to the buyers in order to streamline the system. Further, it is recommended that brokers while sending trade samples must clearly indicate in the challans the number of large, medium and small samples-category- wise sent in a consignment with its total net weight. The quantity of purchase samples has been increased to 300 gm.

28. Bidding Rates — With a view to improving auctioning efficiency the following scales of bidding should be introduced in Kolkata, Siligure and Guwahati:

Up to Rs 26.99	20 paise/kg
Rs. 27.00 to 49.99	50 paise/kg
Rs 50.00 to 99.00	I Re. Per kg
Rs 100 & above	5 Rs/ kg

29. Claims for Shortages, Non-Delivery, Damaged Teas — The committee recommended that no claim for short weight will be admissible unless the shortage exceeds 0.1 per cent of the declared weight per lot purchased by any buyer. The committee recommends that where lots purchased by the buyers are not to be found at the ware house at all either wholly or in part, a compensation amounting to 30 per cent of value of such teas should be payable to the buyer.

30. Supervision — The committee considered that way back in 1978, the P.L Tandon committee strongly favoured the public auction of teas as the best means of bulk marketing and also desired that infrastructure of the tea board should be strengthened for the proper supervision and co-ordination of the public auction system. Owing to various financial and other aspects, this has possibly not been given effect to so far. Tea (Marketing) control order, 1984 issued by the government under the tea act, 1953, provides that 75 per cent of the tea production is to be routed through the public auctions thereby clearly indicating the mind of the government of India in this respect. The committee, therefore, after carefully reviewing the situation recommended that the tea board should devise ways and means of strengthening the infrastructure for proper supervision and co-ordination of the public auction system in North and South India to sub-serve the Government policy and the larger public interest.

The Ahuja committee comprised of members, from all sections of the Indian tea trade and its, recommendations have been sent by the chairman, tea board to the auction committees. Tea Board accepted some of the recommendations made by the Ahuja committee report and therefore it becomes a directive under the tea (Marketing) control order 1984. The Auction committees can, however, approach the authorities on specific issues with their problems and suggestions to ensure easier implementation of the Ahuja committee report. The 'Report of the committee on auction rules' is a major report on the auction system and is a valuable document produced after a great deal of effort and toil. It is a work of dedication and shows genuine interest in the working of the tea industry. The Report will go a long way in further strengthening the bonds between the trinity of the tea trade, namely, buyers, sellers and brokers.

31. Collaborations Such as Tata-Telly, Meneil Magor Nestle are valid inter-national tickets for global market destinations. Big contract by Iran did help to push up export but such sales cannot

be depended upon until demand for a particular brand arises from consumer level, going alone in the world market to establish a blend is a tough job. Indian big business houses are glancing at tea for diversification for example ITC-who can use their overseas connections not only for bulk exports but marketing a brand as well. Internally most of the big tea companies are buying for better share of their brands at the consumer level. As a result number of packs have appeared in the domestic market leading a healthy competition. A commendable step was taken by **Bombay Burmah group** by creating production facilities for **ecologically cultivated tea at Singampatti—southern tip of India.** There is a wide-open area in the speciality market, taping of which calls for marketing skill. There is no more a fashionable slogan shouting and bureau tic luxuries. It is hopeful sign that mature marketing activity is seen today in Indian tea scene. Hopefully 2010 would begin with a boom of innovative marketing process.

32. Tea Market Trend

Tea is a tradition bound industry. The changing world order in the last three years, however, has left its own impact on tea. The coming down of the Berlin wall and the disintegration of the former USSR have led to many changes and opened up several opportunities for the tea world. The first, second and the third world are moving more and more towards freer economy, freer trade and freer investment. Consumerism has taken the front seat even in the developing and poor countries. Further more, the developed countries are moving towards healthier products and quality assurances. **Environmentally friendly bulk** packaging is being encouraged and to put pressure on the exporters, the disposal or "unfriendly" packaging material is being made the responsibility of the exporter. In addition, many new trends have emerged, particularly for Indian tea, some of which are discussed below.

33. Production

In 2004, the Indian production should reach 950 million kg, which will be second highest ever. Quality consciousness and the widening price concertina have put brakes on rapid growth of production. In 2007, if the weather is right, India should harvest a crop of 1000 million kg. It is also clear that unless new areas are brought under tea cultivation, tea production will grow at a small rate of around 3 per cent per annum. Again, it is necessary to renovate tea areas, which are more than sixty years of age. A replanting programme of

two per cent per annum will ensure a rotation over fifty years. An attempt was made in Union Budget of 2005 to go for Special Purpose Vehicle for replantation/rejuvenation of tea areas by Tea Board. It has however not taken a concrete shape.

34. Domestic Market

India's per capita consumption of tea is amongst the lowest. Yet in volume terms India is the largest consumer. With the population having reached 100 crore even if an Indian were to drink one extra cup a year, the additional requirement of tea for domestic consumption would be 2.55 million kg. If ten cups extra were to be drunk every day by every Indian, then the requirement would be 25.5 million kg. Taken into account one cup extra to be drunk every day by every Indian, the additional requirement works out to 931 million kg per annum. Indian is indeed a very powerful market. Another important factor to note is that the Indians drink the very best of CTCs and are prepared to pay a premium for quality. Because of the strong domestic base, Indian tea prices are generally higher than the world prices. The superior quality of Indian tea and its vast variety has also helped in maintaining higher price levels.

35. Export

It has now become clear that the government of India will not hinder, in any way, exports of Indian tea. Procedures are being simplified and restrictions have been eased or fully removed. The Government of India and the tea industry have been working towards improving per unit returns from exports and value added products have been gaining ground. Whilst it is unlikely that the government will impose any restrictions on exports in the foreseeable future, the pressure from the domestic market will limit the quantum of Indian tea exports in the years to come. A strategy, therefore, has to be evolved so that even through the export quantities remain around 200 million kg, the value will go on increasing. Barter deals and government-to-government buying appear to be thing of the past and trading, in future will be done in hard currency. The former USSR is today an open market and although there is a preference for Indian teas in the Russian Federation and CIS countries, other producers especially China, which has a vast common border, would exploit the large potential of this market. The producer exporters are already playing a major role in certain importing countries and this trend is likely to spread further.

36. The Auction System

The major tea groups, today, are increasingly marketing their own teas either through domestic packers or direct exports. Whilst the auctions will continue to be the barometer for price levels, more and more producers are likely to go in for direct marketing. The smaller producers who have gone in for direct marketing through soft packs may find the going rough unless they start putting in the essential marketing inputs like advertising etc. as well. Their present method of sale is virtually bulk- marketing through a third party. The quantity from these producers is likely to revert back to the auctions.

37. Import of Tea

From time to time idea of importing tea into India has been mooted. Importing cheap teas for domestic consumption will not solve the problem. Indians drink good quality tea and the imported varieties will not suit their taste. Furthermore, if 40 to 50 million kg of tea were to be imported, there would be a phenomenal price increase in the world markets. India has to be very careful so as not to upset the apple cart.

38. Promotion - Healthfulness

As consumption of tea in certain developed countries is not increasing, the time has come to give a new “position” to tea. The world is today more health conscious than ever before and “healthfulness” could be the new slogan for tea. The “cheapness” slogan has to be discarded.

39. Quality

One way of increasing tea consumption, in the world market, is to ensure that the consumer is served good quality teas. Producers and importers of tea will have to make sure that sub-standard teas are neither produced nor imported. Universal acceptance of international standard ISO 3720 will help in lifting quality standards of all growths. India is perhaps the only country today, which strictly follows rigid quality standards.

40. Culture Products

All the tea bagging machines in India is busy fulfilling export- orders and some domestic needs. But the product of the future is instant tea. Time is not far when a “drinkable” pure instant tea, which is both hot and cold water soluble, will be on the shelves.

41. Bulk Packaging

While bulk packaging is still searching for an alternative to the tea chest, paper sacks are being used more and more. The real answer lies in convincing the tea importers to accept gunny bags, which are already popular in the domestic market.

In the overall, the future prospects of tea appear to be bright and the tea industry in India is ready to face the challenges of the 21st century.

42. Marketing of Indian Tea — Domestic Verses Export

Indian tea's popular slogan since Independence has been "world's largest producer, consumer and exporter of Tea". In 2004, however, Sri Lanka forged ahead and exported 238 million kg against Indian exports of 205 million kg. Again, in 1991 and 2003 Sri Lanka exported more than India. Sri Lankan exports for these years were 212 million kg and 235 million kg respectively, against Indian exports of 201 million kg and 202 million kg. Another feature of Indian exports has been the sea change in its profile between 1947 and 2004. In 1947 U.K's share of Indian exports was 66 per cent and in 2004 it has declined to 12 per cent. On the other hand, the former Soviet Union, which bought no Indian teas till the 60's became the major importer of Indian tea, it accounted for 44.9 per cent of Indian tea exports in 2004.

Table 5 : Country Wise Exports from India During 1947 to 2004

(In million kg)

Country / year	1947	1957	1967	1977	1987	1991	1997	1999	2004
United Kingdom	127.20	135.40	117.20	74.30	22.40	22.50	25.40	25.00	25.10
% Of export	66.30	68.00	53.80	32.40	11.09	11.09	12.70	12.10	12.11
Ireland	9.00	8.30	6.20	6.40	2.10	2.50	2.60	2.50	2.50
% Of export	4.70	4.20	2.80	2.80	1.04	1.23	1.28	1.20	1.19
Netherlands	1.50	0.90	3.70	3.40	1.60	1.90	2.70	2.60	2.60
% Of export	0.80	0.50	1.70	1.50	0.79	0.90	1.33	1.27	1.26
West Germany	NII	1.90	2.20	5.80	4.70	4.70	6.90	6.60	6.65
% Of export	Nil	0.90	1.00	2.50	2.33	2.30	3.40	3.20	3.21
Rest of West Europe	0.60	0.10	0.50	0.90	0.50	0.60	0.80	0.80	0.80
% Of export	0.30	0.05	0.20	0.40	0.20	0.30	0.40	0.40	0.40
Poland	NIL	NIL	1.80	5.30	10.70	11.90	14.00	14.70	14.75
% Of export	NIL	NIL	0.80	2.80	5.30	5.90	6.90	7.10	7.11
Yugoslavia	NIL	NII	0.50	4.70	1.40	0.20	0.30	0.40	0.40
% Of export	NIL	NIL	0.20	2.00	0.70	0.10	0.15	0.17	0.16

Country / year	1947	1957	1967	1977	1987	1991	1997	1999	2004
Rest of East Europe	NIL	0.10	1.70	1.40	3.30	1.00	1.60	1.40	1.40
% Of export	NIL	0.05	0.80	0.60	1.60	0.50	0.80	0.70	0.70
USSR	4.00	7.30	20.70	47.70	96.60	104.50	90.70	92.80	94.10
% Of export	2.10	3.60	9.50	20.80	47.80	51.50	44.70	44.90	44.95
Afghanistan	NIL	NIL	5.70	8.60	3.60	1.60	0.80	1.20	1.20
% Of export	NIL	NIL	2.60	3.70	1.80	0.80	0.40	0.60	0.60
Iran	3.90	5.60	1.80	6.60	18.90	14.80	11.70	12.80	12.80
% Of export	2.00	2.80	1.10	2.90	9.40	7.30	5.80	6.20	6.15
Iraq	1.40	0.02	2.50	4.60	8.80	—	0.10	0.04	0.40
% Of export	0.70	0.00	1.10	2.00	4.30	—	0.01	0.02	0.02
Persian Gulf Ports	4.40	2.60	3.00	6.20	7.00	5.20	6.80	7.02	7.02
% Of export	2.30	1.30	1.40	2.70	3.50	2.60	3.35	3.40	3.40
Jordan	NIL	NIL	1.40	0.60	—	0.50	0.10	0.60	0.60
% Of export	—	—	0.60	0.30	0.05	0.20	0.20	0.30	0.36
Rest of Middle East	0.60	0.30	0.05	0.07	0.30	—	0.20	0.20	0.20
% Of export	0.30	0.10	0.02	0.03	0.10	—	0.10	0.10	0.10
Pakistan	NIL	NIL	NIL	4.60	0.60	0.30	0.40	O.4	0.40
% Of export	—	—	—	2.00	0.30	0.15	0.20	0.20	0.26
Japan	NIL	NIL	0.30	0.80	1.40	2.00	1.90	2.30	2.30
% Of export	—	—	0.10	0.30	0.30	1.00	0.90	1.10	1.10
Arab Rep. Of Egypt	1.80	7.30	16.60	14.10	7.80	7.90	7.20	7.60	7.60
% Of export	0.90	3.70	7.60	6.10	3.90	3.90	3.50	3.70	3.76
Sudan	0.70	2.00	10.00	13.60	0.10	—	0.10	0.10	0.10
% Of export	0.40	1.00	4.60	5.70	0.05	—	0.05	0.06	0.06
Tunisia	NIL	NIL	3.80	1.20	1.00	1.70	1.50	1.90	1.90
% Of export	—	—	1.70	0.50	0.50	0.80	0.70	0.90	0.90
Rest of Africa	NIL	NIL	—	0.40	3.70	7.00	9.80	9.50	9.50
% Of export	—	—	—	0.20	1.80	3.40	4.80	4.60	4.60
Canada	8.20	7.70	3.90	2.50	0.80	0.60	0.10	0.15	0.15
% Of export	4.30	3.90	1.80	1.10	0.40	0.30	0.05	0.07	0.07
USA	17.30	10.60	8.40	10.00	1.80	2.50	2.90	3.30	3.30
% Of export	9.00	5.30	3.90	4.40	0.90	1.20	1.40	1.60	1.60
Australia	7.00	3.40	5.40	4.60	0.70	0.80	0.50	0.60	0.60
% Of export	3.70	1.70	2.50	2.00	0.30	0.40	0.25	0.30	0.30
New Zealand	0.50	0.70	0.40	1.30	—	—	—	—	—
% Of export	0.30	0.40	0.20	0.60	—	—	—	—	—
All other countries	3.60	5.00	0.10	0.50	4.30	8.10	13.40	11.95	11.95
% Of export	1.90	2.50	0.05	0.20	2.10	4.00	6.63	5.81	5.81
Total	**191.70**	**199.20**	**217.80**	**229.60**	**201.90**	**202.90**	**203.00**	**206.50**	**205.00**

Same as Table -1

Countries like Poland, Yugoslavia, Afghanistan, Japan, Tunisia and even Germany bought no teas from India in 1947 but today are strong supporters of the Indian produce. Iraq, Iran, Gulf, ARE have been buying more but Canada, USA, Australia, New Zealand and the UK, have reduced their purchased from India substantially. In the 57 years period since 1947, African Countries, particularly Kenya, have been giving stiff competition to Indian CTC teas and have gained popularity in the hard currency areas. Sri Lanka, on the other hand, a major producer of orthodox, has been stepping into the Indian orthodox exports and took credit for catering to the entire expansion and demand in the orthodox segment. The only exception has been the former USSR who has supported Indian orthodox varieties strongly. Sri Lanka has been catering to the growing markets of ARE, Iran, USA, and Pakistan.

An encouraging feature of Indian tea exports has been a rise in value added goods and instant Tea. Packet exports in a 24 years span between 1981 and 2004 went up from 32 million kg to 125 million kg, thus showing and increase of about 400 per cent. The instant tea exports in the same 24 years period nearly doubled raising, from 0.78 million kg to 117.68 million kg. Exports of value added teas have gone up in 9 years from 33.85 million kg to 116.68 million kg. In value terms the earnings from Packets increased from Rs 69.98 crores to Rs 836.65 crores; in the case of tea bags the earnings raised from Rs 3.26 crores to Rs 13.58 crores. The total value of Indian exports in 2004 was Rs 990.50 crores as against Rs 55.38 crores in 1947 and Rs 76.90 crores in 1999.

India's share in world exports is shown in table below:

Table 6 : India's Share in World Exports During 1947 - 2004

(In million kg)

Country/Year	1947	1957	1967	1977	1987	1991	1997	1999	2004
India	191.70	199.20	217.80	229.60	201.90	202.90	203.00	204.20	205.60
% Share	53.30	39.90	35.60	28.20	20.70	17.90	13.20	18.50	18.25
Sri Lanka	130.30	166.80	216.50	185.50	201.20	212.40	234.85	238.05	242.50
% Share	36.30	33.40	35.40	22.70	20.60	18.80	21.24	21.52	21.60
Indonesia	3.90	38.80	26.60	51.30	90.40	109.60	103.90	102.50	104.20
% Share	1.10	7.80	4.30	6.30	9.20	9.70	9.40	9.60	9.70
Bangladesh	N.A	4.50	N	26.00	21.60	25.30	24.30	25.40	25.45
% Share	N	0.90	N	3.20	2.20	2.20	2.40	2.30	2.32

Country/Year	1947	1957	1967	1977	1987	1991	1997	1999	2004
Kenya	4.40	8.20	19.70	70.20	135.00	191.60	245.50	251.10	255.20
%Share	1.20	1.60	3.20	8.60	13.80	16.90	22.20	22.70	22.73
Uganda	1.10	2.80	9.60	14.70	2.10	4.70	15.20	15.10	16.10
% Share	0.30	0.60	1.60	1.80	0.20	0.40	1.40	1.40	1.42
Tanzania	0.50	2.40	6.20	12.00	11.40	15.00	18.80	19.90	20.95
% Share	0.10	0.50	1.00	1.50	1.20	1.30	1.70	1.80	1.82
Malawi	5.90	8.80	16.80	29.90	33.40	41.20	36.50	35.40	36.20
% Share	1.70	1.80	2.70	3.70	3.40	3.60	3.30	3.20	3.21
Mozambique	1.50	5.90	14.40	15.60	2.10	1.00	0.42	0.95	0.97
% Share	0.40	1.20	2.40	1.90	0.20	0.09	0.04	0.05	0.08
Others	20.20	61.70	84.40	180.60	277.50	338.40	223.23	213.60	216.15
% Share	5.60	12.30	13.80	22.10	28.40	29.90	25.12	18.93	19.25
Total	**359.50**	**499.10**	**612.00**	**815.40**	**976.60**	**1132.10**	**1105.70**	**1106.20**	**1122.72**

N : Negligible, *Source : Same as Table 1*

In the domestic front also, the scene has changed. In 1947, Indian consumption was only 39 per cent of production and in 1999 this figure reached 76 per cent. In the past, the equation was "Indian consumption equals production minus exports". In the eighties, this equation was reversed and on several occasions, the government restricted export to conserve tea for the domestic market. The details of Indian consumption of tea in given below:

Table 7 : Indian Consumption of Tea During 1947-2004

(In million kg)

Particulars/Year	1947	1957	1967	1977	1987	1991	1997	1999	2004
Consumption	98.5	112.9	180.7	302.0	446.0	520.0	635	670	740
Growth (% age)	—	14.6	60.1	67.1	47.6	16.6	22.1	5.5	10.5
Average annual rate of growth % age	—	1.46	6.01	6.7	4.76	4.1	3.6	2.3	2.1

Indian Tea Consumption — As Percentage of Production

Particulars/Year	1947	1957	1967	1977	1987	1991	1997	1999	2004
Consumption in m. kg	98.5	112.9	180.7	302.0	446.0	520.0	635.0	670.0	740.0
Production in m kg	254.8	310.8	384.8	556.3	674.3	741.7	810.6	880.2	950.0
% Of production	38.7	36.3	47.0	54.3	66.0	70.1	78.3	76.1	77.9

The break-up of the Soviet Union has therefore had a strong impact on the Indian tea market. However, it gained momentum over the years. Russia and other CIS members did not cross 45 million kg. Total Indian exports thus touched 205 million kg. Indian domestic market continues to grow at around 2 per cent per annum. the 1999 domestic consumption was about 670 million kg. By 2004 this figure was 725 million kg. If export of 205 million kg is added, production in 2004 was about 940 million kg. The CTC element of Indian consumption is over 94 per cent. It is estimated that in 2010 the Indian requirement for CTC teas has been estimated at 1034 million kg, which would go up to 1050 million kg in 2012. State wise split of estimated consumption of tea is furnished below:

Table 8 : A state-wise split of estimated consumption during 1991-1999

(Million kg)

Particulars/Year	1991	1995	1999	2004
Uttar Pradesh	44	50	57	67
Bihar	18	23	25	25
Maharastra	67	76	86	99
West Bengal	38	43	48	52
Andra Pradesh	25	30	32	33
Madhya Pradesh	32	38	40	43
Tamil Nadu	21	23	26	28
Rajasthan	45	48	52	56
Gujarat	45	50	57	67
Orissa	10	12	18	20

Particulars/Year	1991	1995	1999	2004
Kerala	33	37	40	44
Assam	18	20	23	25
Punjab	40	45	50	55
Haryana	18	20	22	24
Jammu & Kashmir	10	15	20	22
Karnataka	26	30	34	36
Others	30	35	40	44
Total	**520**	**595**	**670**	**740**

Source same as Table -1

New strategies will have to be evolved for the Russian Federation, CIS and Pakistan. Above all, exports will have to be given a clear priority over domestic need. While future supply and demand, on the overall, appears 'hand to-mouth' the future of specialty varieties, such as Darjeelings and Assam orthodox, would depend upon aggressive marketing.

43. Unrestricted Import of Tea: To Allow or Not

Proposal of ministry of commerce, Government of India, modified the export-import policy (1992-97) with a view to facilitating the EOU/ EPZ to freely import teas for bulk-re-exports generated unfathomable dissatisfaction among many Barons of the India's tea industry. Tea imports were allowed with the rider that they should be used only for re-export with a 20 per cent value addition. But the imports were insignificant because the facility was limited to re-export of packaged teas, tea bags and instant tea. The Commerce Ministry sought the industry's view on allowing bulk re-export of tea blended with the imported product. Barons of the Indian tea association asserted: (i) having an exportable surplus, India does not need to import teas; (ii) if the imported low grade teas are blended with better stuff of the country to export as tea bags, packets, instant tea, its image would be damaged at the international market and exports suffer in the long run; (iii) under the Exim policy (1997 - 2002) for tea, exporters were not allowed to sell any portion of the manufactured items in the domestic market. But the leaders of the Indian tea industry feared that once bulk teas, allowed to be imported, there would also be an option for unloading these teas in the domestic market. And a few larger business houses, facing stiff competition in the domestic market, would practically use the cheap imported product to reduce their prices in a bid to earn and maintain substantial profit and

hold the domestic share; (iv) import of teas by India would raise international prices of teas while depressing domestic markets, a situation, which would adversely effect the growth of tea industry that may eventually lead to recession. The aforesaid premises, as a corollary, led many barons of the industry to raise strong objection against the government's intention of further liberalizing the Exim policy, which may open the floodgates for import of teas. They felt that the policy, if implemented, would not, in anyway, help the growth of the country's tea industry. But, however, one should not be touchy and emotional while considering the policy of import. Rather, it was imperative to visualize the necessity of imports in the perspective of reality. And no denying the fact, that only such a study can help comment judiciously either in favour or against the proposed policy.

44. Production vis-à-vis- Consumption

Whilst it was unlikely that the government would impose any restriction on exports in the foreseeable future, the pressure from the domestic market would limit the quantum of Indian tea exports in the years to come. AS stated earlier that with the country's population touched to 100 crore, ever if an Indian was to drink one extra cup a year, the additional requirement of tea would be 2.55 million kg; again, if ten cups extra were to be taken every day by every Indian, the additional requirement would be 931 million kg per annum. But how much the industry with its present capacity can produce at the maximum? It may be mentioned, however, that highest tea production was achieved in 2004 at 950 million kg. And it was high in 1999 with the crop amounting to 880 million kg, indicated by Mr. A.K. Bothra, chairman, North Bengal branch of the India tea association at the 27th annual general meeting of the association. And this achievement is, of course, due to maximum favour of all inputs, practically the climatic condition. But he reiterated that the tea industry immediately requires more additional plantation area to meet the target of 1,000 million kg by the end of the twenty first century. Otherwise, tea production will grow at a small rate of around 3 per cent per annum. Nevertheless, it is necessary to renovate tea areas, which are more than sixty years of age. A replanting programme of 2 per cent per annum will ensure a rotation over 50 years. Obviously, the argument in favour of 'exportable surplus' needs be reconsidered. It is a plain truth that if not today, tomorrow India will have to import sizeable quantity of tea either, or to curtail its export for the sake of domestic consumer. Otherwise, where is the guarantee that, in the near future, domestic

consumers will not be strangulated with severe pressure of demand-pull inflation? Where is the guarantee that the industry will be able to maintain exportable surplus, as expected? These matters are, indeed, related with the industry's social obligation to two segments-first, obligations to domestic consumers in terms of right price for the right product at the right time; second, obligation to the nation in terms of helping earn foreign exchange. Contextually, the observation of Mr Jimmy Hilditch may be referred to. In course of summing up the convention papers presented at the U.K. Tea convention held in May 1993, the following table shows the future of India's exportable surplus of tea.

India

Particulars/Year	**1950**	**1960**	**1970**	**1980**	**1992**	**1995**	**1997**	**1998**	**1999**	2004
Exports (m/kg)	181	193	200	224	190	167	203	205	206	205
Production (m/kg)	278	321	419	570	704	756	810	870	880	950
Population (million)	354	429	539	675	869	915	935	937	952	1005
Per Capita (kg)	0.21	0.29	0.39	0.57	0.61	0.68	0.74	0.79	0.87	0.95

He observed: During this period India's "production has increased remarkably. So, too, have their population and the per capita number for the same period. With these statistic it is difficult to assess how India can feed internal demand and increase exports without increasing production".

45. Imports for Re-export

There are countries like U.K, U.S.A., importing huge quantity of teas, of course, high grade, to re-export them in the value added from. It should not go unnoticed that international buyers are fast leaning towards packet tea, instant tea and tea bags. So, it is high time to catch them young. Indian tea barons should realize this fact. They should further appreciate that endeavour to re-export value added teas will help to find new markets and to contribute more foreign exchange in the national exchequer through nontraditional way. This is likely to attract new investment also. This besides, two other significant matter should not go un-escaped from our view. First, India's overwhelming dependence on traditional buyers - Russia and CIS, who were the principal buyers of Indian tea? Although, at the moment, India enjoys comfortable position the possibility of creating discomfort by the infiltrated sellers in these markets should not be over-looked. The 'seller's market' at that time was turned to 'buyer's market'. Second, China is preparing vigorously to exert its pressure

in the international market. Tea is listed as one of the key export commodities. Due to over-whelming importance of hard currency earnings it was very likely that the China government provided all sorts of incentive to the tea industry. It is worth noting that between 1950 and 2004 total tea area in that country increased by more than 7 times, 155,000 hectares to 1,115,300 hectares. Output increased by more than 3 times over the same period from 255 m kg to 950 m kg. Export-increase accounted for 10 times from 18 m kg. in 1950 to 205 m kg in 2004. Nevertheless, China has the greatest range of tea in different grades and varieties. China intends to be at the top of the list of tea traders in the world market. And no denying the fact, China may, at the earliest opportunity, penetrate in the Russian and CIS market. Keeping in view this possibility, the industry should right now find new market, which may easily be possible with selling value-added teas.

46. Standard of Quality

Of course, the standard of quality matters much at any export trade. It may be recollected that only a few years back the quality of tea sold to Russia was so bad that million kgs of tea were destroyed. Serious complaints were lodged to the tea board. Russian television cautioned the domestic consumers with the words: "Don't sip Indian tea". No doubt, industry's goodwill has been severely damaged by this act of the exporters. The questions are obviously, who has to be blamed for this event; what measures have been taken so far to prevent recurrences. The Tea Board, being the appropriate authority, should devise full-proof measures to ensure quality. Tea Board should (i) scrutinize every export order received; (ii) ensure the creditworthiness of the exporter; (iii) arrange intensive checking at the time of shipment; (iv) arrange random checking after un-loading; (v) introduce mandatory use of the Tea Board's logo, subject to the fulfilment of stipulated conditions, for every export.

47. Conclusion

It is unlikely that with further liberalization of imports, the domestic market will be flooded with low- grade imported tea. For the Gresham's Law does not hold good in an open market. The law reacts in the opposite manner-good product drives away bad product. As far as India's domestic tea market is concerned, consumers here drink the best of CTCs. Not only that, they are prepared to pay a premium for quality. Because of the strong domestic demand Indian tea prices are generally higher than the

world prices. And it is to be noted further that in volume terms India is the largest consumer. Evidently, in the perspective of the country's consumer behaviour it is doubtful that to what extent importers will be able to sell the low grade imported stuff to increase their profits and be able to exert dominant voice in the domestic market.

It was unwise to view that once India started buying of low priced tea, the price of its produce in the international market would have fallen. Some Asian sellers would have been benefited out of this transaction. From the viewpoint of open market economy, however, it was felt that the aforesaid promise was not correct. In an open market mechanism only the appropriate substitute and its price played a dominant role in determining the demand of the principal product the vice-versa. Since Indian importers intended to import only cheap variety of teas, the price of Indian tea was likely too remain unaffected until now suppliers entered the market. And in this matter the only threat was likely to come from China- the Asian Dragon-having a large variety and quantity of tea at its disposal.

In the light of the above study it was viewed that there was no point of becoming shaky even though the Ministry of Commerce allowed free import of teas for re-exports in bulk as well. The only necessity is to remain alert against the unscrupulous traders who may take the advantage of import liberalization policy of the Government of India just to further their own interest.

Part Five : Oolong and Other Teas — World Production, World Exports & Imports, Producers and Importers of Green Tea etc.

48. Introduction

The origin of green tea dates back to 1611 when the East India's Company established a factory for manufacturing green tea in Hirado Island in Japan. Until about a decade ago, green tea was mostly consumed in the producing countries in Asia and North Africa. China is the main producer and consumer of green tea. Green tea is getting increasingly more attention in the world markets because of its health benefits. It contains more vitamins and minerals than black tea and produces many effects that can fight infection and disease in human bodies. World green tea production, consumption and exports are mainly dominated by China followed by Japan, Indonesia, Vietnam, India, Bangladesh, Sri Lanka etc.

i. ***Distinct Quality —*** Green tea is distinct from black tea in as much as the brew from it on infusion of water is nearly similar to the brew from fresh green tea leaves. This characteristic is maintained because of killing of enzymes which cause oxidisation of phenolic components. As a result of action of bacteria and other micro-organisms, the green tea leaf as also the black tea leaf,spoils easily. Therefore, it has to be preserved for use during off-season and transportation to distant markets. The most primitive, and by far the cheapest, method of preservation is sun drying which removes moisture from tea leaves thereby preventing spoilage. Unlike black tea, green tea is not fermented during its manufacture and the green colour and the chemical composition is maintained to retain the original characteristics. Green teas rich in caffeine and tannins are quite distinct because of their bitter or astringent taste due to polyphenolics.

ii. ***Manufacturing Processes —*** There are two distinct and prominent methods of making green tea. De-enzyming is typical of green tea processing which can be done through either steaming or pan- heating. Rolling and twisting can be done either through baking or roasting. The Japanese method uses the steaming process to deactivate the enzymes whereas the Chinese follow the pan heating method. In both cases, raw materials used are high quality leaves and buds, freshly harvested from green bushes.

iii. Conservation Ratio — On an average 4.2 to 4.8 kg of green tea leaves are required to manufacture 1 kg of manufactured black tea, whereas 4.6 kg to 6.1 kg of leaf are required for making 1 kg of made green tea. Green tea is more vulnerable to spoilage under adverse keeping conditions than black tea and it has to be stored under controlled atmospheric conditions.

49. World Production of Green Tea

World production of green tea has been growing consistently and increased from 167.06 m kg in 1978 to 667.61 m kg in 1999. The share of green tea in total tea produced has been consistently increasing and Japan dominated with more than 60 per cent share. From September 1980 onwards, China started having a much larger share. However, Japanese production of green tea has declined so much so that it has only 12.81% share in comparison with China which produces nearly 75 per cent of the world production of green tea. Vietnam has been also increasing production of green tea and of late it has a stable 5 per cent share.

The share of green tea produced in total tea has been consistently increasing from 9.35 per cent in 1978 to 23.45 per cent in 1999. [tables 13 and 14]. However, green tea has less than 10 per cent share in world exports of tea and that share has been fluctuating. More and more green tea production is retained in producing countries for domestic consumption.

Table 13 : Percentage of Green Tea Production

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
India	4.72	3.73	2.40	1.96	1.97	1.66	1.86	1.96	1.80	2.13	1.55
Bangladesh	0.31	0.12	0.12	0.11	0.11	0.09	0.06	0.22	0.23	0.19	0.20
Srilanka [Med]	0.00	0.00	0.00	0.00	0.19	0.16	0.27	0.28	0.32	0.26	0.24
Indonesia	10.43	11.75	5.82	7.89	5.29	6.78	6.85	7.93	7.34	6.38	5.97
China	0.00	0.00	50.70	52.11	58.26	56.12	57.04	55.18	57.71	61.89	65.76
Japan	62.69	60.38	29.06	26.46	23.22	23.81	21.76	22.10	21.02	19.79	17.45
Vietnam	8.56	9.55	4.52	4.40	4.36	4.64	5.06	5.30	5.01	4.42	4.27
Georgia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Russian Fed	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USSR/CIS	13.29	14.48	7.39	7.06	6.60	6.75	7.10	7.03	6.58	4.93	4.55
Total Green Tea production [m kg]	167.06	162.32	352.00	386.65	424.21	431.26	425.15	432.17	445.32	486.50	514.72

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
% share of Green Tea in total tea produced	9.35	8.93	19.05	20.53	21.79	21.00	19.39	18.88	19.56	20.78	20.79
	1989.00	**1990.00**	**1991.00**	**1992.00**	**1993.00**	**1994.00**	**1995.00**	**1996.00**	**1997.00**	**1998.00**	**1999.00**
India	1.62	1.59	1.82	1.67	1.27	1.25	1.43	1.41	1.35	1.34	1.23
Bangladesh	0.19	0.27	0.24	0.20	0.16	0.19	0.09	0.02	0.02	0.03	0.04
Srilanka [Med]	0.19	0.18	0.15	0.07	0.24	0.24	0.08	0.09	0.09	0.10	0.06
Indonesia	6.57	6.58	6.13	6.22	5.62	5.66	5.76	6.13	5.88	5.90	5.54
China	63.51	64.32	66.46	69.04	71.61	71.67	72.28	71.89	72.41	74.61	74.44
Japan	18.29	17.39	16.35	16.36	15.68	15.35	14.81	15.10	14.90	12.83	13.26
Vietnam	4.51	4.60	4.54	4.48	4.41	5.00	5.17	5.04	5.07	4.82	5.09
Georgia	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.29	0.26	0.36	0.33
Russian Fed	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.01	0.01	0.01
USSR/CIS	5.13	5.07	4.31	1.96	1.02	0.64	0.00	0.00	0.00	0.00	0.00
Total Green Tea Production [mkg]	494.91	516.91	537.73	562.46	587.54	562.10	572.44	587.32	612.02	643.62	667.61
% share of Green Tea in total tea produced	20.24	20.36	20.84	23.09	23.04	22.32	22.70	22.23	22.53	21.73	23.45

Source : various issues of ITC Bulletin, London

50. World Exports of Green Tea

World exports of green tea in 1999 totalled 144.82 m kg, 70 per cent more than what it was two decades ago. In 1978, China had 60.75 per cent share in production, consumption and export of green tea in the world and the same had increased to 84 percent in 1999. [Table 14].

Table 14 : Percentage share of Green Tea Exporting countries

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
India[e]	3.77	3.27	1.44	4.58	4.32	4.93	1.58	2.23	2.59	5.72	3.21
Srilanka	0.00	0.00	0.00	0.00	0.11	1.33	1.10	1.74	1.89	1.23	1.35
Indonesia	0.05	0.16	0.14	0.15	0.31	0.15	0.19	0.16	0.14	0.21	0.14
China [Mainland]	60.75	61.82	67.57	64.82	70.96	69.96	83.40	83.22	85.07	84.41	84.07
Taiwan	20.38	19.10	14.66	12.18	5.25	6.46	3.66	3.37	3.05	1.70	2.11
Japan	4.55	3.99	3.70	4.18	3.90	2.96	3.80	2.42	1.69	1.27	1.32
Vietnam	10.50	11.65	12.48	14.09	15.16	14.22	6.27	6.86	5.57	5.46	7.81

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Total Green Tea Exports mkg]	74.25	76.38	72.10	63.88	62.67	70.33	71.80	72.89	71.77	82.38	93.51
% of Green Tea	9.24	8.98	8.39	7.50	7.64	8.08	7.63	7.65	7.38	8.47	9.03
% of Green Tea Prod'n exported	44.46	47.15	20.48	16.51	14.78	16.32	16.89	16.87	16.13	16.92	18.16
% of Green Tea Prod'n retained	55.54	52.85	79.52	83.49	85.22	83.68	83.11	83.13	83.87	83.08	81.84
	1989.00	**1990.00**	**1991.00**	**1992.00**	**1993.00**	**1994.00**	**1995.00**	**1996.00**	**1997.00**	**1998.00**	**1999.00**
India[e]	2.93	3.15	3.09	2.47	2.69	2.94	3.65	4.10	3.08	2.30	2.07
Srilanka	0.02	0.44	0.03	0.40	0.62	0.73	0.97	0.55	0.49	0.36	0.38
Indonesia	1.48	1.82	2.67	4.48	10.08	7.43	3.93	5.91	4.51	2.71	5.06
China [Mainland]	85.83	86.92	86.86	85.41	79.36	81.00	81.38	76.34	80.94	85.78	83.99
Taiwan	1.78	1.06	0.91	1.05	0.69	0.74	0.99	1.59	0.71	0.27	0.38
Japan	0.62	0.30	0.26	0.25	0.27	0.30	0.56	0.58	0.51	0.50	0.52
Vietnam	7.33	6.30	6.18	5.94	6.28	6.85	8.52	10.93	9.76	8.06	7.60
Total Green Tea Exports [mkg]	74.25	76.38	72.10	63.88	62.67	70.33	71.80	72.89	71.77	82.38	93.51
% of Green Tea	9.10	8.39	9.02	9.95	9.67	9.91	7.53	6.51	8.13	10.05	11.64
% of Green Tea Prod'n exported	20.66	18.41	18.05	17.98	18.95	18.17	14.37	12.47	15.90	20.22	21.68
% of Green Tea Prod'n retained	79.34	81.59	81.95	82.02	81.05	81.83	85.63	87.53	84.10	79.78	78.32

Source : various issues of ITC Bulletin, London

51. World Imports of Green Tea

Prior to 1990 Pakistan was a key importer of green tea but thereafter Morocco emerged as the most significant importer with over one-half of world imports (Table 15).

Table 15 : Countries Importing Green Tea

[% share]

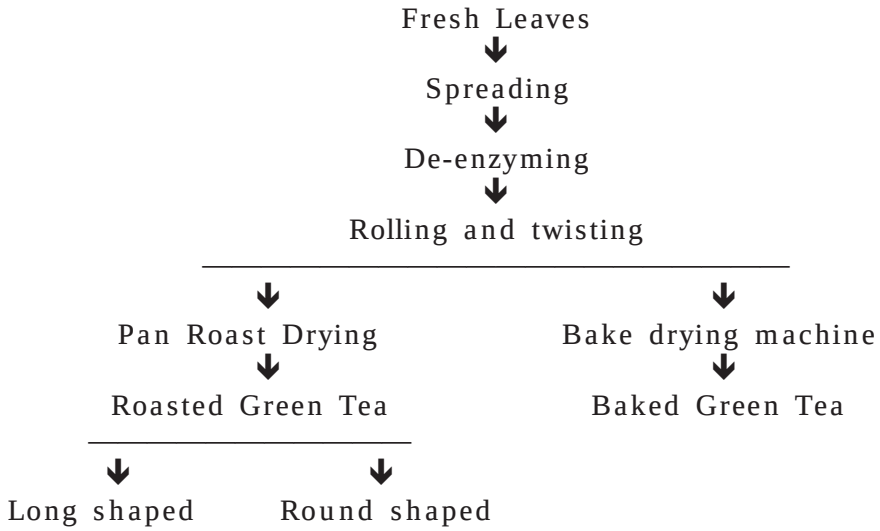
	1993	1994	1995	1996	1997	1998	1999
Austria	0.04	0.06	0.3	0.17	0.28	0.36	0.48
UK	1.77	2.93	2	1.47	1.1	0.71	0.89
Belgium and Lux.	0.88	1.13	0.41	0.38	0.16	1.17	0
Denmark	0.01	0.01	0.02	0.01	0.02	0.06	0.03
Finland	0.01	0.02	0	0.08	0.14	0.04	0
Germany	0.58	0.51	0.88	2	3.27	7.15	9.74
Ireland [Rep.]	1.13	0.11	0.05	0.01	0.18	1.47	0.17
Italy	0.42	0.24	0	0.58	0.5	0.32	0
Netherlands	1.36	1.18	1.52	2.15	2.25	1.83	1.32
Switzerland	0.05	0.04	0.06	0.17	0.23	0.4	0.57
Total [mkg]	52.23	60.29	62.4	62.38	70.19	72.92	76.15

	1993	1994	1995	1996	1997	1998	1999
Japan	10.49	7.83	10.36	17.35	16.11	8.66	15.82
Pakistan	8.03	6.02	3.24	2.89	0.8	1.32	1.57
Egypt	0	1.97	0.29	0	0.25	0.03	0.21
Morocco	50.56	54.35	60.18	45.32	49.79	54.85	46.26
Australia	0.41	0.37	0.41	0.51	0.4	0.49	0.57
New Zealand	0.04	0.1	0.02	0.02	0.29	0.2	0.06
Tunisia	2.87	3.32	3.4	3.37	3.56	2.71	1.84
USA	9.39	9.66	8.51	9.26	5.9	8.62	10.1
Canada	1.7	2.04	2.13	2	2.26	2.31	3.39
France	10.25	8.11	6.21	12.26	12.5	7.3	6.97

Source : Various issues of ITC Bulletin, London

52. Producers of Green Tea

i. China **—** Nearly 75 per cent of all tea produced in China is green tea and China has 84 per cent share in world exports of green tea (Table-2). China also exports sizable quantity of other teas, which includes Oolong tea, Pouchong tea and speciality teas.Production of green tea in China includes several sequential processes.China produces several types of green tea, each with distinct flavour and taste (Box-1).



Box - 1 : Chinese Method of Making Green Tea

According to available statistics, China' s exports of green tea have fluctuated between 55.87 million kg and 121.63 million kg during the period 1990-99 [Tables 4 & 5] On the whole, the export market for Chinese green tea is balanced and well distributed. The key destinations have been Morocco [23 per cent share] followed by CIS/ USSR [13.86 per cent], Senegal [6.25 per cent], USA [5.70 per cent], and Afghanistan [5.19 per cent]. Exports to Mali during 1990-99 have been only 2.96 per cent with a very high coefficient of variation indicating a very high fluctuation in percentage share that has ranged between0.18 and 9.54 per cent. In 1999, Mali had 4.87 per cent share in the Chinese exports of 121.63 million kg of green tea. This was of course less than the share of Morocco and USSR/CIS. Pakistan with a 4.40 per cent share and a high rate of growth has been consistently importing green tea from China.

China also exports sizable quantity of other teas, which includes Oolong tea, Pouchong tea, and speciality teas [Tables 14 and 15]. Quantities have ranged between 23.16 million kg in 1990 and 3.65 million kg in 1997. Japan had imported nearly half of these exports.

Table : 16 Analysis of Per Cent Share of Exports of Green Tea from China 82.80 Per Cent Share of World Exports of Green Tea

{1990-99 averages}

	1990	1991	1992	1993	1994	1995	1996	1997
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
France	3.62	2.11	2.25	4.64	2.7	2.7	0.72	2.22
USSR/CIS	12.09	16.41	6.26	17.53	22.86	1.99	11.67	22.57
USA	6.35	5.4	5.72	4.53	6.24	7.54	10.13	4.2
Afghanistan	6.78	2.81	4.64	10.1	2.74	6.42	8.86	5.49
Hongkong	5.94	5.46	10.01	8.43	9.62	4.17	2.47	3.94
Japan	1.69	2.51	4.11	4.84	3	3.47	5.3	4.87
Pakistan	3.03	1.07	4.37	2.92	6.04	5.51	7.8	5.98
Algeria	4.45	6.93	2.76			0.66	0.28	0.2
Libya	3.81	3.58	9.07	0.59		2.69	1.38	2.16
Mali	0.18	0.56	0.79	0.46	1.13	9.54	3.54	2.27
Morocco	30.8	33.61	30.12	24.22	20.47	22.76	14.73	13.46
Nigeria		3.67	3.67	1.61	5.96	5.29	7.71	3.87
Senegal	3.37	3.78	3	3.96	4.99	7.65	10.24	9.04
Tango	2.7	1.87	2.47	1.95	1.36	2.46	1.71	3.36
Other countries	15.2	10.22	10.76	14.21	12.89	17.11	13.46	16.36
Total exports [mkg]	82.73	84.33	86.32	88.43	82.72	66.88	55.87	78.78

	1998	1999	Avg	COV	G. Rate	Min.	Max.
	(9)	(10)	(11)	(12)	(13)	(14)	(15)
France	10.88	5.88	3.77	76.43	6.39	0.72	10.88
USSR/CIS	13.16	14.04	13.86	47.13	1.56	1.99	22.86
USA	3.75	3.17	5.7	35.89	-4.59	3.17	10.13
Afghanistan	2.31	1.76	5.19	55.11	-7.13	1.76	10.1
Hongkong	2.94	0.58	5.36	59.05	-18.88	0.58	10.01
Japan	0.74	2.71	3.32	44.52	-1.82	0.74	5.3
Pakistan	2.88	4.42	4.4	45.09	9.35	1.07	7.8
Algeria	4.9	1.82	2.75	89.97		0.2	6.93
Libya		0.6	2.99	92		0.59	9.07
Mali	6.23	4.87	2.96	104.64	43.98	0.18	9.54
Morocco	13.18	25.68	22.9	32.38	-7.91	13.18	33.61
Nigeria	4.02	5.21	4.56	37.94		1.61	7.71
Senegal	10.45	6.05	6.25	46.19	13.69	3	10.45
Tango	3.75	3.33	2.49	31.75	5.27	1.36	3.75
Other countries	20.81	19.88	15.09	23.4	6	10.22	20.81
Total exports [mkg]	111.68	121.63	85.94	22.23	2.07	55.87	121.63

Source : Various issues of ITC Bulletin, London

Table 17 : Quantity-wise Analysis of Green Tea Exports from China 82.80 Per Cent Share of World Exports of Green Tea

{1990-99 mkg averages}

	Average	CV	Growth Rate	Min.	Max.
France	3.63	96.76	8.59	0.41	12.51
USSR/CIS	12.11	49.34	3.67	1.33	18.91
USA	4.6	16.11	-2.61	3.31	5.66
Afghanistan	4.15	50.11	-5.2	2.14	8.93
Hong Kong	4.48	61.54	-17.19	0.7	8.64
Japan	2.71	40.21	0.21	0.83	4.28
Pakistan	3.61	37.63	11.61	0.91	5.38
Algeria	2.54	90.05		0.16	5.85
Libya	2.44	98.19		0.53	7.83
Mali	2.57	106.37	46.96	0.15	6.96
Morocco	19.82	39.46	-6	8.23	31.23
Nigeria	3.82	36.62		1.42	6.33
Senegal	5.32	52.82	16.05	2.59	11.67
Tango	2.23	50.08	7.45	0.95	4.19
Other countries	13.3	43.44	8.2	7.52	24.18
Total Exports	85.94	22.23	0	55.87	121.63

Source : Various issues of ITC Bulletin, London

Table 18 : Percentage Share of Exports of Other Tea from China

{1990-99 averages}

	1990	1991	1992	1993	1994	1995	1996	1997
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
USA	4.57	5.58	5.80	4.00	2.33	2.11	2.56	3.47
Afghanistan			1.23	4.12	1.68	1.43	3.81	3.61
Hongkong	32.45	30.95	27.11	22.41	18.61	17.08	15.48	18.54
Japan	40.35	48.96	44.10	36.12	44.64	57.47	57.67	49.95
Malaysia	3.36	3.37	1.91	2.32	2.18	2.43	2.43	2.33
Mongolia	9.19	0.00	2.94	13.89	0.04	0.25	0.02	
Singapore	2.30	3.19	4.03	4.19	6.44	6.48	3.46	4.07
Other countries	7.79	7.87	12.88	12.95	24.07	12.74	14.57	18.03
Total exports [mkg]	23.16	25.72	24.76	27.08	32.12	31.69	32.83	36.54

	1998	1999	Avg	CV	GRate	Min	Max
	(9)	(10)	(11)	(12)	(13)	(14)	(15)
USA	4.40	3.90	3.87	33.05	-4.21	2.11	5.80
Afghanistan	2.68	0.95	2.44	52.32		0.95	4.12
Hongkong	16.23	17.60	21.65	29.10	-7.64	15.48	32.45
Japan	49.94	55.37	48.46	14.91	3.24	36.12	57.67
Malaysia	2.95	4.07	2.74	24.75	1.25	1.91	4.07
Mongolia	0.00	0.00	2.93	174.11		0.00	13.89
Singapore	3.42	1.42	3.90	40.85	-2.61	1.42	6.48
Other countries	20.38	16.69	14.80	34.87	9.46	7.79	24.07
Total exports [mkg]	36.16	44.38	31.44	20.75	6.73	23.16	44.38

Source : Various issues of ITC Bulletin, London

Table 19 : Exports of Other Tea from China

{1990-99 averages}

Country	Quantity-wise [mkg]				
	Average	CV	Growth Rate	Min.	Max.
USA	1.19	30.7	2.24	0.67	1.73
Afghanistan	0.8	51.48		0.3	1.32
Hongkong	6.52	15.38	-1.43	5.08	7.96
Japan	15.5	31.68	10.19	9.35	24.57
Malaysia	0.87	41.5	8.06	0.47	1.81
Mongolia	0.96	151.45		0	3.76
Singapore	1.21	43.78	3.94	0.53	2.07
Other countries	4.84	47.03	16.83	1.8	7.73
Total	31.44	20.75	6.73	23.16	44.38

Source : Various issues of ITC Bulletin, London

ii. Japan — Black tea production has practically ceased after 1971 since it had become highly uncompetitive after trade liberalization. Production of green tea in Japan has been gradually decreasing since 1980. Japan is a mountainous country and about 60 per cent of tea plants are located on the hillsides and plateaus in Shizuoka, Kyoto, Mie and Kagoshima districts. The Japanese method of manufacturing green tea is a complex process involving several steps and several types of green tea are manufactured in Japan. Japan is a significant producer of green tea and most of it is consumed internally. The share of Japanese tea to total green tea export was only 4.55 per cent in 1978. However, it has reduced to 0.52 per cent in 1992. Japanese exports are mainly directed towards USA and Canada.The method of manufacturing green tea is a complex process involving several steps. Several types of green tea are manufactured in Japan with the details as under:

In addition to the domestically highly popular grade Sen Cha made of young tender leaves and well twisted, Japan produces several other grades of green tea, Gyokuro or Pearl Dew is the finest tea in Japan made from leaves grown under the shade which reduces the tannin content, increases caffeine and amino acids, brightens the colour of the leaf and sweetens its flavour. Matcha or ceremonial tea is made of leaves from shaded bushes. The manufacturing process is similar to that for Gyokuro but without rolling. After drying, the product is pulverized, Kamairicha is made in Kyushu district. The raw

material is the same as in Sen-cha, but the first process is parching in place of steaming. It has a curly appearance. Bancha is coarse tea, made of coarser leaves, or by separating from raw Sen-cha in the refining process.

Source : Kunio O Tea Industry in Japan "Tea Science and Human Health" Proceedings of the International Symposium on Tea Technology, Kolkata.

Table 20 : Exports of Green Tea from Japan

{1990-99 averages}

	1984	**1985**	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**
Green Tea %	98.03	97.62	96.03	94.49	97.62	94.63	87.89	87.54	88.62	92.99	90.14
Green Tea [mkg]	2.73	1.76	1.21	1.05	1.23	0.64	0.28	0.25	0.26	0.31	0.31
Total [mkg]	2.79	1.81	1.26	1.11	1.26	0.67	0.32	0.29	0.29	0.33	0.35
	1995	**1996**	**1997**	**1998**	**1999**	**Avg.**	**CV**	**Growth Rate**	**Min.**	**Max.**	
Green Tea %	93.7	86.21	86.03	86.47	91.18	89.08	3.14	-0.02	86.03	93.7	
Green Tea [mkg]	0.46	0.43	0.5	0.65	0.76	0.42	41.41	5.45	0.25	0.76	
Total [mkg]	0.49	0.49	0.58	0.75	0.83	0.47	41.46	5.48	0.29	0.83	

Source : various issues of ITC Bulletin, London

iii. India — India produces only a small quantity of green tea. Its share in green tea production has been declining from 4.72 per cent in 1978 to 1.23 per cent in 1999. During 1993-94 India exported 3.36 m kg [nearly 84 per cent of green tea production] to Afghanistan and Russia. In 1999 India exported around 3 m kg having a 2.07 per cent share in world exports. Although India is not a large consumer of green tea, in the hilly regions of Kangra and Kashmir valleys, green tea goes well with low temperatures. In some Indian markets green tea is also sold as herbal tea usually mixed with aromatic condiments.

During 1993-94 India exported 3.36 m kg [nearly 84 per cent of green tea production] to Afghanistan. Thereafter exports to Afghanistan declined rapidly but exports to Russia picked up. Like black tea, Russia has been having a large share in Indian green tea exports. Percentage share of green tea export from India was 2.07% in 1999. The procedure in India regarding green tea is as under:

53. Process chart of Indian Green Tea

Freshly plucked leaves

⬇

Steaming [upto 2 minutes]

⬇

Curling and drying [in hot air at 90º-100ºC for 40-50 minutes the leaf moisture reduces from 76% to about 50%]

⬇

Rolling [without heat for 15 minutes]

⬇

Pressing and drying [hot air at 50º-60ºC for 30-40 minutes, leaf moisture reduces to about 30%]

⬇

Curling [Drying directly on a hot pan at 80º - 90ºC

⬇

Twisting [for 40 minutes under pressing and rolling by a curling-hand mounted on a pan]

⬇

Drying [at 80ºC until moisture content of 6% is achieved]

⬇

Made Sin Cha

⬇

Storage

Temperature below 100ºC, moisture content below 6% concentration of oxygen lower than 2% and humidity controlled inert gas packaging.

***iv. Indonesia* —** Indonesia produces about 37 m kg of green tea with 5.54 per cent share in world production. Indonesia has a large demand for scented teas and a significant proportion of Indonesia green tea is scented using jasmine, red gambir and other types of flowers. Therefore Indonesia has only 5.06 per cent share in world exports of green tea. Since 1989, Indonesia has exported sizable quantity of green tea to the Middle East and Morocco.

Table 21 : Percentage share and unit value of exports of green tea from Indonesia 4.86 Per Cent share of World Green Tea Exports

{1990-99 averages}

	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**
Green Tea %	1.56	2.35	3.72	9.06	8.94	4.08	4.26	6.56
Green tea mkg	1.73	2.6	4.53	11.23	7.59	3.23	4.33	4.39
All teas mkg	110.96	110.33	121.78	123.93	84.92	79.23	101.53	66.84
	1998	**1999**	**Avg**	**CV**	**G.Rate**	**Min**	**Max**	
Green Tea %	5.26	7.56	5.34	49.1	12.62	1.56	9.06	
Green tea mkg	3.54	7.33	5.05	56.67	7.06	1.73	11.23	
All teas mkg	67.22	96.99	96.37	21.84	-4.93	66.84	123.93	

Source : various issues of ITC Bulletin London

Table 22 : Exports of Green Tea from Indonesia

{1990-99 averages}

	Quantity-wise [mkg]				
	Avg	CV	Growth Rate	Min.	Max.
Green Tea	5.05	56.67	7.06	1.73	11.23
All Teas	96.37	21.84	-4.93	66.84	123.93

Source : various issues of ITC Bulletin London.

54. Importers of Green Tea

***i. Consumer Preference* —** Major importers of green tea are Japan, USA, Indonesia, North African countries and Afghanistan. The consumers in these markets have different tastes and preferences. However, a common feature generally sought is that the dried green tea leaves should have bright olive green colour without any brown or red. The Chinese green tea is preferred in Japan and USA. Chinese green tea leaves are generally polished using French chalks or gypsum and coloured with indigo. Afghans prefer the green tea liquor similar to Chinese green tea and unlike the Moroccans, they are much less fussy about the appearance of the dry tea leaves.

***ii. Morocco* —** Morocco has the largest market for green tea having imported as much as 35.23 m kg in 1999 and almost

all of that came from mainland China. Imports of green tea in Morocco have been rising and so also its share in the world imports. During 1990-99, Morocco imported an average of 33.67 m kg having a 51.62 per cent share at a moderate unit import price of US $ 2.10. Imports from China have been consistently increasing [98.4 per cent share in 1999]. Per head consumption of tea in Morocco is in excess of 1 kg.

iii. ***Japan —*** Japan has been a significant consumer of green tea but its imports have been less than one-fourth of the imports of Morocco. Of the total tea imported during 1993-99, black tea had taken an increasing share between 28 to 42 per cent. In terms of per unit import value in 1993, green tea was only 44 per cent of the black tea and 59 per cent of the other teas. While the volume and unit value of imports of other teas has been somewhat declining, the unit import value of green tea has increased slightly from US$ 2.20 in 1993 to US$ 2.45 per kg in 1999.

iv. ***France —*** Nearly 82 per cent of green tea imported in France is from China and 13 per cent is re-exports from Belgium. The French market had paid an average of US$ 3.71 per kg. The quantity imported has fluctuated and the average for 1990-99 was 5.36 m kg in 1997 as much as 8.78 m kg of green tea was imported.

v. ***USA —*** USA imported an average of 6.20 m kg of green tea during 1990-99 in which China had nearly 77.68 per cent share. The popularity of green tea in US is largely on account of its health benefits which has been receiving increasingly more and more media attention. Although imports from other countries are small, they receive higher unit import value when compared to China, which on average received just about US$ 1.11 per kg.

vi. ***Tunisia —*** Although in 1997 Tunisia imported 2.5 m kg of green tea imports, this was abruptly halved in 1999. A highly fluctuating pattern of imports of green tea in Tunisia from China existed during the years 1990-99 with the average of 82.46 per cent Further the quantity-wise [mkg] average imports of green tea in Tunisia from China for the period 1990-97 is 1.38.

vii. Canada — In 1999 Canada imported 2.58 m kg of green tea. Imports have been increasing consistently and exhibiting a good growth rate. China, Hong Kong, Japan and Taiwan are the main sources although US also had nearly 34 per cent share. Green tea from Taiwan fetched the highest price at US$ 4.49 per kg whereas China, Hong Kong and USA teas fetched under US$ 3.5 per kg.

55. Ooolong Tea

i. China — Oolong tea is produced mainly in Fujian and Guangdong provinces of mainland China and Taiwan. Oolong tea is semi-fermented. In 1990, 90 million cases of Oolong tea and 70 million cases of black tea were produced in Japan. Oolong tea is more stable than other beverages and is therefore easier to pack in tins, cans or bottles. As black tea is milk or lemon flavored, its storage in vending machines is somewhat difficult. For these reasons, Oolong tea has found favour with the food processors particularly in Japan.

ii. Taiwan — Tea production in Taiwan has been declining and production in 1999 at 3.07 m kg was less than one-third of the production in 1987. Production of green tea has been declining and reached a low of 0.55 m kg in 1999. However, Taiwan is a key producer of Oolong tea and almost all of its production in 1999 was of this type. During 1990-99, the share of green tea in tea exports has been between 14 and 33 per cent. Information on exports of green and other teas from Taiwan is not available.

Part Six : Current Tea Trends, FAO Projections Domestic Consumption, Imports, Research & Development etc.

56. Current Tea Trends

Next to water, tea is the most widely consumed non-alchoholic beverage world over and it is grown in more than 32 countries. Amongst them, India is the largest producer (28% of the world production). World Tea Trade is going through a significant change. While developed markets stagnate, growth is expected in the developing countries. These markets have now been opened in the wake of WTO regime. This will facilitate increasing global competition in the areas of cost, price, quality, supply schedules, packaging, market focus and customer satisfaction.

In India, tea is grown in 13 States with diverse agro-climatic conditions. Tea production in India has been increasing and so also has domestic consumption. Increased production in tea was achieved by enhanced productivity through introduction of high-yielding clonal material, improved water management and transferring results of research to the field. Further, cultural practices such as pruning cycles, proper use of fertilizers and foliar applications of nutrients and plant protection measures using safe chemicals have increased yields. Production also increased on account of increased plant density and rehabilitation of old tea lands through replanting, using the best available planting materials and better husbandry. Vast resources of skilled and motivated workers, competent managerial manpower, strong research backing, modernized and upgraded manufacture etc., have all contributed to a sound base and progressive industry. The growth profile in terms of compound growth rate of area, production, productivity, yield and exports during the last five decades is given below :

Table 23 : Growth rates of area, production, yield and export of tea

Period	Area	Production	Yield	Export
1950-60	0.45	1.16	0.98	-0.39
1960-70	0.74	2.98	1.98	+0.47
1970-80	0.67	3.48	2.37	+1.06
1980-90	0.96	2.03	1.48	-0.68
1990-00	0.53	1.35	0.83	-0.34
2000-01	0.67	2.19	1.53	-0.03

Source : X Five Year Plan. Report on sub-group on Plantation Crops II - Ministry of Commerce

57. Food and Agriculture Organisation (FAO) Projections for 2005

According to FAO, world black tea production is estimated to be in the region of 2700 million kg of which India's contribution is expected to be 1015 to 1018 million kg. World consumption by 2005 is estimated to go up to 2670 million kgs. and India's export is likely to rise to the level of 246 to 250 million kg. China, Indonesia and African countries are expected to increase production. There will be a production surplus of 24 million kg and possible imbalance and downward pressure on prices. Of course the emergence of that situation is contingent upon weather conditions in production areas.

58. Decline in the Rate of Domestic Consumption

The recent study conducted on behalf of Tea Board by the Indian Institute of Management, Calcutta (IIMC), reveals that tea consumption has not been of the order as seen in the past. Expected annual domestic demand for the next 5 years as estimated by IIMC is as follows:

Table 24 : Demand projections for Tea

Year	Rural	Urban	Total
2000	388	265	653
2001	398	275	673
2002	408	285	693
2003	418	296	714
2004	428	307	735
2005	439	318	757
2006	450	330	780

Source : X Five Year Plan. Report on Sub-group on Plantation Crops II - Ministry of Commerce

59. Imports

Imports touched around 14 million kg in 2004 against average levels of 1 to 2 million kg in the past. The unique CIF value of tea imported from a few countries was lower than the prices faced at Indian auctions. This has affected market sentiments. With the emerging trends in the globalised economy, markets can no longer be protected. Indian Tea Industry will have to compete in the

domestic market. Protecting the home market is going to be a challenging task and the Tea Industry has to evolve some strategy to counter the new competing forces unleashed by globalization.

Continued supplies of tea at reasonable prices to the domestic market and to maintain and improve the export share in the global tea trade were the twin objectives of the previous plan period. These twin objectives hold good for the X Plan period and they could be fulfilled, only if the industry continues to grow with profit and remains healthy.

60. Present Status on Research and Development in Tea

i. R&D Contributions on Tea — Tea Research Association and UPASI Tea Research Foundation have released 30 high-yielding vegetative clones each. This has enhanced productivity from 1416 kg. per hectare in 1981 to 1850 kg per hectare in 2000 in North India and 1645 kg per hectare to 2300 kg per hectare in 2000 in South India. UPASI-TRF-I recently released in South India has yield potential upto 11000 kgs per hectare.

Biotechnological approach in tea breeding has progressed towards protoplast fusion, haploid line and market developments in pruning, DNA, finger printing and patenting of elite clones. Nutrition in Tea is now based on computerised model and green leaf yield potential. Sulphur and zinc nutrients have been accommodated along with NPK requirements.

Cultivation aspects like pruning, shade management, organic nutrition in soil, soil amendment and application of weedicides and balanced application of fertilizers have been refined over the years to harvest increasing yield. Further, Irrigation Drainage Technologies in tea have been improved and their requirement in improving yields has been established.

Protection of crops is linked to minimum application of pesticides and its linkage to follow Integrated Pest Management (IPM) practice. Maintaining bio-diversity and minimum or no pesticide residue is the call of the day. Biocides and biocontrols have been developed. Chemistry of Tea manufacture and flavour chemistry of Tea have helped in refining manufacture of Tea on scientific basis and understanding the role of enzymes involved in it.

Quality improvement in Tea has been achieved through training, modernization of factory, upgrading of plucking standard and improving sanitation and hygienic situations. ISO-9000 and HACCP as a package for quality improvement, have been introduced.

Research on health benefit aspects has yielded positive results. Tea drinking is beneficial in the cure of Hypertensions, diabetes, cancer, kidney, malfunction, dental caries etc. Tea contains antioxidants which help human beings to avoid many health complications. Packaging of tea is now being done with recently developed packaging materials like jute, laminated bags, multi-wall paper sacks and use of flexible packaging substances.

ii. Approach to X Plan Period — Specific areas of research can be identified to launch new areas of fundamental research in different fields, like advance programmes in bio-technology, characterization of clones etc. Nutrition of Tea Plants is a grey area. Computer simu-lation models for balanced nutrition for Tea will be a step to apply non-contents of fertilizer to the Tea plant based on variable criteria like soil conditions, bush frame and age, environmental factors etc. This will help in scientific management of tea estates in accordance with the production need.

Computer aided database, if stored for future utilisation and guidance to the management and sectional information of tea gardens will help both the research institutes and tea estates to save time and initiate prompt action in taking corrective actions.Quality of Tea can be enhanced from the information on bio-chemical pathways, if these are identified and packages are developed.

Electronics can play a big role once the bio-chemical pathways are identified and these are linked to computer sensors By-products of Tea can be gainfully utilized for other industrial use. Similarly, value added items like RTD, flavoured tea are the areas on which new research could be thought of.

Sustainability is a major problem in Tea. It is observed that Tea productivity is not increasing in the replanted areas. This has been linked to soil sickness, reasons for which are not

well established. Bio-agriculture is a new research area, which can give answers to the problems as indicated, in organic tea estates with stable yields.

Quality control is a major issue in Tea. The Quality Control Laboratory Chain in South India as well as in North India needs to be strengthened soon. Well developed field laboratories for quality testing of tea and monitoring of adversities with Tea Estate is essential. The conducive environment for trade has prompted such steps to ensure quality tea production. If needed, a phased programme can be developed and computer net work monitoring may be essential.

61. New Proposal for Research During X Five Year Plan

Network programme for transfer of technology, computerisation and software development, data collection and strengthening of transfer of technology units in each zone (7 centres in North East, 7 centres in South India and connection with base laboratories) have been made. A chain of Quality Control Laboratories (4 in North East - Tocklai, Dibrugarh, Cachar, Nagrakata), upgradation of laboratories in South India (Valparai, Coonoor, Vandiperiyar, Gudalur) have been established. Proposals relating to (i) Integrated Nutrition Management and Computer Simulation of data in each of the Advisory Centres and connecting base laboratories including development of models, (ii) Irrigation and Drainage Research Project, (iii) Bio-chemical Analysis and Quality Upgradation Programme in North East and South India and (iv) Development of Forecasting Model for Pest

Disease Control including Bio-control aspects are on the process of implementation. Soil management and Organic Cultivation of Tea, Tea and Human Health, Value Added items and Product Diversification in Tea, Packaging, Eco-friendliness and other related areas and Bio-technology in Tea are new proposals for research in the Tenth Five Year Plan.

Part Seven : Exports Markets & Competitiveness

62. Introduction

Keeping in view the global competition in black tea mainly among India, Sri Lanka and Kenya, there is need to assess their competitive positions. The World Bank study has done so in the context of Sri Lanka's tea industry. This analysis [**Table 11**] while quite useful is based on recent theories of competitiveness as per Porters Framework. That framework, and for that matter other writings in this area are largely based on manufacturing industry while the agricultural scene is rather different. The framework with suitable modifications, would perhaps be suitable for application to the industrial part of agriculture but not quite so far to agricultural production and trade commodities which continues to be analyzed in traditional theories of comparative advantage. One takes a rather simple view of competitiveness in global trade in tea. The competitive positions in the market are a cumulative expression of interactive effects of all variables from production and processing to consumer markets.

The details of global players in tea industry [country position of competitive factors are given below] **[Table 25]**

Table 25 : The Global players in the Tea Industry : Country position on Competitive Factors

	India	Sri Lanka	Kenya
Natural Resources and Human Capital			
Land	Average	Weak	Strong
Water Resources	Average	Strong	Strong
Quality of tea bushes	Weak	Weak	Strong
Yields	Average	Weak	Strong
Availability and quality of workers	Average	Average	Weak
Literacy rate	Low	High	Average
Macro economic Environment			
Macro economic and sector policy	Weak	Average	Strong
Sector investment growth	Weak	Average	Strong
Exchange rate regime	Strong	Strong	Strong
Trade and tax regime	Weak	Strong	Average
Price regime	Weak	Strong	Strong
Labour regime	Weak	Weak	Strong

	India	Sri Lanka	Kenya
Infrastructure			
Transport and communications	Weak	Average	Weak
Marketing	Average	Weak	Strong
R & D	Average	Weak	Average
Extension	Average	Weak	Strong
Marketing Environment			
Key market's size and growth rate	Strong	Average	Average
Income and growth of income in key markets	Weak	Average	Strong
Price position in key markets	Weak	Strong	Strong
Competitive strength	Weak	Average	Average
Micro-marketing and co-ordination			
Production/Marketing co-ordination	Strong	Weak	Strong
Local Processing and linked industries	Strong	Strong	Average
Quality control	—	Strong	Strong
Risk sharing	—	Strong	Strong
Technical, financial and managerial skills	Weak	Average	Strong
Cost structure	Average	Weak	Strong
Marketing strength	Average	Average	Average
Product innovation	Strong	Average	Weak

Source : Reproduced from World Bank [1997], Sri Lanka's Tea Industry, Discussion Paper No. 368 Washington DC. August p.86

63. Competitor Analysis of Sixteen specific Markets

An attempt has been made on the basis of data given in **Annexure II** to present competitor analysis for 16 specific markets, which together cover an average of over 70 per cent of world imports of tea.On the supply side, analysis have been made on 13 countries, commanding over 96 percent of the world exports. For illustration, consider the UK market. During 1990-99 it commanded an average 13.01 per cent share in the world imports in quantity 145.99 m kg and rate of growth @0.24 per cent and per head consumption 2.52 kg per annum. All in all, UK is a very large size market to which many countries supply. Sri Lanka, a key supplier to the UK market, has a 6.16 per cent share with a decline in rate of growth at - 3.44 per cent with unit input value at US$ 2.01. As regards, Sri Lanka, 5.2 per cent of tea exports from Sri Lanka have gone to UK with growth rate at - 6.15 per cent and an export unit value realisation at US$ 1.97. For each cell in the **Annexure-II,** interpretations are similar and provide the basis of comparison and assessing competitive position.

Comparing relative position in terms of market share rate of growth in market share and unit value realisation yields a good understanding of competitive position which are summarized in **Annexure-III**.

For illustration, Kenya is the market leader with 28 per cent of the total World Tea Market, comprising UK, Pakistan, Egypt and Ireland. In contrast, India is a market leader only in 16 per cent of World tea market which includes Russian Federation, Poland and Germany. For Sri Lanka leadership is of 2.5 per cent markets. China leads in 7.5 per cent for markets but a large share of that is in green tea. Argentina has a market leadership in USA, which commands a 7.53 per cent share in the world imports **(Annexure-III)**.

Analyzing markets in this framework, an understanding of and evaluating the competitive position, would help the tea industry to develop competitive products and market strategy. After all, Paulskrugman puts it, "A country does not loose in the competitiveness game but performance of firms do. An individual firm is competitive and it can "sell its goods at the market price and make money". Otherwise the firm goes bust but the economy does not. However, in case of tea, economies of small nations would also falter if their firms fail to compete. Thus consequences of uncompetitiveness could be a disaster for both countries as well as firms depending upon how important tea imports are to their economies. To that extent, India, as a nation, has a large cushion and that is probably the reason for our complacency and lack of competitiveness in world markets.

64. Area, Production and Exports of Tea of Different Countries

Although as many as 34 countries are producing tea in the world, the major countries are India, China, SriLanka, Indonesia, Kenya, Uganda, Myanmar etc. On an average, India has an area of 498 thousand hectare with an average annual production of 830 million kg showing an average yield of 1666 kg per hectare. Sri Lanka, on an average, cultivates tea to the extent of 191 thousand hectare producing average an annual crop of 295 million kg with the yield rate of 1545 kg per hectare. In spite of the fact that China occupies more than twice the area [average of 1115 thousand hectare] held by India, the production was not significant it was only 689 million kg on an average. This was due to low yield rate [618 kg per hectare]. On the export front, Kenya exports 93 per cent of total production followed by Sri Lanka at 83 per cent, Indonesia 66 per cent, China 36 per cent, India 24 per cent etc. There are various reasons for low exports from India and these are discussed separately in Part VII.

Table 26 : Area, Production and Exports of Tea of Different Countries

a. Area Under Tea in Different Countries (Area in '000 hectares)

Year	India	Sri Lanka	China	Indonesia	Kenya	Uganda	Myanmar	Others@	Total
1989	415	221	0	129	87	21	58	555	2551
1990	416	221	1061	135	97	21	59	550	2560
1991	420	222	1061	137	100	21	58	551	2570
1997	434	194	1076	154	118	20	67	627	2690
1998	474	195	1056	157	118	20	68	604	2692
1999	490	195	1130	157	120	20	68	512	2692
2000	504	189	1089	157	122	21	68	515	2665
2001	509	189	1141	161	132	21	68	514	2735
2002	512	189	1155	162	132	21	68	517	2756

b. Production of Tea in Different Countries [Qty in million kgs]

Year	India	Sri Lanka	China	Indonesia	Kenya	Uganda	Myanmar	Others@	Total
1989	688	208	525	147	181	5	50	689	2503
1990	720	234	540	161	197	7	36	689	2584
1997	731	278	665	158	240	20	54	738	2883
1998	798	280	670	159	245	22	57	721	2952
1999	825	284	676	161	249	25	60	693	2973
2000	847	307	683	157	236	29	60	673	2992
2001	853	296	702	161	294	33	60	692	3091
2002	826	310	715	166	287	34	60	701	3099

c. Exports of Tea from Different Countries [Qty in million kgs]

Year	India	Sri Lanka	China	Indonesia	Kenya	Uganda	Myanmar	Others@*	Total
1989	213	204	204	115	163	3	5	218	1125
1990	210	215	195	111	170	5	5	224	1135
1997	188	256	194	105	220	18	25	244	1250
1998	189	260	195	102	230	20	25	234	1255
1999	191	262	194	99	242	22	25	225	1265
2000	207	280	228	106	217	26	25	245	1334
2001	183	288	250	99	258	30	25	262	1395
2002	201	290	253	100	268	31	25	264	1432

Source : Tea statistics, Tea Board of India, Kolkata

Note : @ Others' include Bangladesh, Taiwan, Japan, Vietnam, Papua & New Guinea, USSR/ CIS, Iran, Turkey, Tanzania, Malawi, Mozambique, Zaire, Mauritius, Rwanda, Burundi, Cameroon, Argentina Brazil, Peru, Ecuador, Zimbabwe, Thailand, Malaysia, South Africa, Australia, Ethiopia and Nepal.

* Others' include Bangladesh, Taiwan, Japan, Malaysia, Vietnam, Papua & New Guinea, Iran, Turkey, Malawi, Mozambique, Zaire, Mauritius, Rwanda, Brundi, Argentina, Brazil, Peru, Ecquador, Zimbabwe, Cameroon, Thailand, Nepal, Myanmar, Georgia, Ethiopia and South Africa.

Part Eight : Constraints, Suggestions & Remedial Measures

65. Constraints

Viewed from long-term perspectives, the Indian Tea Industry has several constraints that are directly affecting both production and productivity. The following are some of the important constraints.

- Old age of tea bushes - Nearly 40 per cent of present tea plants in India have exceeded the economic threshold age limit of 40 years. This has been affecting productivity.
- Limited availability of land for extension in traditional areas of tea cultivation.
- Slower pace of replantation, the rate of replantation is less than 0.4 per cent as against the desired level of 2 per cent
- Fluctuations in tea prices.
- Higher rate of taxation on income from tea.
- The dual structure (agriculture and industry) of Tea Industry has resulted in the incidence of high taxes, some of which are not applicable to non-plantation agriculture.

  * Stiff competition from soft drinks is needed to position tea as a health drink.

- Poor drainage and lack of irrigation when needed greatly reduces yield.
- There is considerable gap between potential and current tea yields.
- Low productivity and high cost of production on account of high input cost particularly wages and the social benefits that always with wages, reduce attractiveness of tea production.
- Untrammeled growth of small growers and poor adherence to quality production norms.

66. Cost of Production

Labour cost accounts for a major part of the total cost of production of tea which has been rising sharply. The stagnation in productivity

levels is compounded by high land labour ratios. The productivity and cost of production matters the most in determining the profitability of tea estate. Considering the high cost and inadequate resources, the owners of tea gardens prefer to continue with the existing tea bushes for reasons of economy.

67. Production Base Getting Concentrated

India's Tea production is skewed towards black tea, especially the CTC variety which accounts for 98 per cent of production. Within black tea, CTC variety is dominant for reasons of strong flavour and higher cuppage and productivity. What counts in the Indian domestic market is strength, affordability, cuppage and availability. Orthodox tea constitutes a significant portion of the world tea trade and fetches higher price realisation than CTC variety. Sri Lanka dominates in supply of orthodox tea. Lower cost CTC tea producers like Kenya, etc. are competing against Indian tea for market share and has displaced Indian Tea in key export market cities like UK.

Domestic production of orthodox tea has dropped by 40 per cent during the nineties; however, orthodox tea has significance in the World trade. Indian Tea Industry lags behind Kenya, Malawi in terms of yield per hectare mainly due to old age of tea bushes. The aging bushes are pulling down gains from adoption of improved cultural practices and increase in areas under tea. Domestic production of green tea is marginal; China dominates the global market for green tea.

68. Issues Impacting India's Export Performance

There are various issues which have some impacts on the performance of Indian exports. If these issues are addressed squarely, there are hopes of increasing India's exports. These are as follows

- Inadequate efforts made in respect of marketing and brand building of Indian tea in overseas market.
- Exposing India's tea exports to concentration of risk arising out of over-dependence on Commonwealth of Independant States (CIS), UK and UAE.
- For CIS and UK markets, growth rates have been slower as compared to other import destinations.

- Indian teas are getting edged out of emerging higher growth markets by competing produce from Sri Lanka, Kenya and China.
- A large market like Pakistan which accounts for 9% of world imports remains closed to India. Black CTC tea from Kenya dominates consumption in Pakistan. Though Indian Tea would work out cheaper on landed cost basis in Pakistan, trade in tea remains marginal because of political sensitivities.
- Stagnant export realisation.
- Limited presence in emerging markets.
- Market share depleting in matured markets.
- Tea exports constitute less than 2 per cent of India's export revenues and hence it has not been covered under the priority list.
- Given policies and regulations are oriented towards protection of domestic market; availability of tea in domestic market and price stability are the over riding concerns dictating policy formulation.

69. India's Competitive Position in World Tea Trade

India's competitive position has weakened in the world tea trade due to various reasons which are discussed in various interaction meets/ work shops/seminars etc of national and international nature. The following factors are held responsible for such weakness;-

- India's tea exports are facing a double crunch with a production slow down and loss of share in major markets served and inability to make significant headway in potential/emerging markets.
- World export growth @5.3 per cent Compound Annual Growth Rate (CAGR) was higher than India's export growth @3.4 per cent - CAGR during the period 1995-99.
- Export realisations in dollar terms have been stagnant during the 1990's.
- Region-wise trends indicate that other than the CIS countries, India's share has been declining (in North America, India continues to be a marginal player).
- In UK, the second largest importer after the CIS group, Indian tea has lost significant market share to Kenyan produce.

- In green tea China has registered a much higher growth rate (@15.3 per cent CAGR) than Indian tea exports (@3.4 per cent CAGR) during 1995-99.

- Even in India's traditional strongholds, CIS, Sri Lanka has made significant inroads since 1993 following the disbanding of the centralized marketing system. The main reasons attributed to Sri Lanka's success are better and more organised marketing efforts.

70. Indian Tea Industry — Supply Side Constraints

The Indian tea industry is facing various supply side constraints. The rate of growth of land under tea cultivation dropped from the level of 15 per cent + during the 1970's and the 1980's to about 6-7 per cent during the 1990's. Growth in land under tea cultivation was much higher in Kenya and Indonesia during the 1990's. India already has the second highest area under tea cultivation after China and further scope for expansion is limited.

India's cost of production is higher than that of Kenya and Sri Lanka essentially due to the higher production overheads, besides labour costs. Thus Indian CTC tea is less competitive than Kenyan produced tea on the issue of pricing alone. With the opening up of the Indian market post WTO, a possible scenario is that cheaper imports may cater to the domestic demand while finer quality tea could be diverted to export markets.

The inward-looking nature of the tea industry has resulted in a lack of innovation and genuine value creation efforts and the result is a rather diluted export focus due to lack of competitiveness in international markets. Consumer satisfaction more than production efficiency is the key to long-term survival and growth. The Indian tea industry thus has to move towards 'productising' Indian tea into a 'consumer product'. It needs to shift away from the commodities, nature of exports in order to move up the value - curve.

The industry needs to address the issue of value creation through a concerted effort that addresses the product form and the delivery system (with the accent on convenience and innovation in packaging). Focused brand building and a marketing campaign that positions tea as a 'healthy alternative to other beverages' and reinforces the superior value of Indian tea, are critical. The industry also needs to establish strategic alliances in its major markets.

71. Schemes during the Xth Five Year Plan

For effectively dealing with the constraints, the following five schemes have been taken up for the X Plan period [2002-07].

i. ***Plantation Development Scheme*** — Under this Scheme, extension of loans will be continued for undertaking extension planting, replanting/replacement planting and procuring irrigation equipments. Similarly, subsidy support for replanting/replacement planting, rejuvenation pruning and consolidation will also be continued. Renovation of the existing field assets rather than expansion would be the thrust area during the X Plan. Further, subsidy for irrigation and subsidy for new planting at different scales is possible under the scheme.

ii. ***Quality Upgradation and Product Diversification Scheme*** — Under this scheme, loan will be advanced for procuring tea processing machinery, tractors, light commercial vehicles, packaging machinery and setting up of cooperative factories. During the X Plan period, thrust would be on more value realisation. For this purpose, the factories are required to be equipped with adequate machinery for undertaking dual manufacture of orthodox or CTC type as the market demands. Further, proper infrastructure needs to be created for improving the volume of value added teas and specialties such as green teas, flavoured teas, ready to drink teas, etc. In order to ensure quality of tea, the process of manufacture needs to undergo changes to suit the emerging new markets. To facilitate this tea growers and manufacturers may participate in the quality improvement programmes such as capital HACCP and ISO certification.

iii. ***Market Promotion Scheme*** — The scheme would continue to support activities such as market research survey, uninational campaign for Indian tea in selected markets, brand promotion support to Indian companies for launching the brands in inter-national markets, genetic campaign for tea in new markets and setting up of an umbrella unit in India to meet the requirements of product and packaging standards in international markets. There is an all round realisation that the growth rate of the domestic markets need a step up for sustainability of the tea industry. Towards this end, there is a need to make special provisions for launching domestic schemes under the scheme.

The market for tea is changing. Tea is now facing increased competition from soft drinks. In view of this, tea needs to protect its carefully nurtured market. It also needs to make forays into soft drink markets with a view to creating competition rather than merely reacting to it. This can be done through further value addition and development of new products

The system of auction will have to be strengthened and technologically improved by moving to appropriate electronic formats modifying the existing systems. Accordingly, it is proposed to extend financial support for creating suitable database/information collection/dissemination system and electronic auction system.

iv. ***Research and Development Scheme*** — Research and development scheme may expand the extension services of the research institutes so that the gap between lab and land is narrowed down and all the growers are able to ensure interface with the research institutes through a network of advisory centres. Further, research institutes may be directed to focus attention on productivity improvement, cost reduction in field operations, quality manufacturing process, value addition, product diversification, etc. Greater awareness about environmental issues for emphasizing the ecofriendliness of tea has to be created. Organic tea is emerging as a special product and demand for it is likely to increase. Therefore, there is an urgent need for research intervention for developing appropriate package of practices. Health benefits of tea have been rediscovered recently through scientific research. Awareness campaigns will make tea "the new age drink" that is beneficial for physical health.

v. ***Human Resource Development Scheme*** — The scheme will aim at achieving overall improvement of the skills of persons associated with tea plantations at all levels (workers to managers) through extensive and intensive training. For this, the services of (i) Indian Institute of Plantation Management, (ii) Training Centre for Small Growers and Manufacturers (iii) Comprehensive labour welfare schemes implemented by Indian Tea Association (ITA) and United Planters Association of Southern India (UPASI) and (iv) Imparting technical training by Tea Research Association and UPASI may be availed of.

The innovative idea of a Mothers Club being tested in Dooars region provides a new model for improving workers' health at the estate level. This model needs to be extended to all other tea growing regions for which additional funds need to be earmarked under this scheme. A new approach is required to tap local talent and internal training in estate management. In addition, continuing development of the managerial skills of existing managers is also required. The existing status of small and marginal farmers and identifying their basic needs for development of these sub sectors and evolving strategies to make them more active participants in overall development may be given priority. Organizing training programmes on modern aspects of tea growing and manufacture, establishment of demonstration plots in the important areas of small growers concentration and supply of high yielding planting materials at subsidized rates.

Demonstration plots and trial plantations in important areas with concentration of small growers in collaboration with UPASI and CSIR in Himachal Pradesh may be explored Further training of small tea growers by UPASI, Assam Agricultural University, North Bengal University, etc.may be conducted. In addition, study tours to small tea farmers in North Eastern States, West Bengal, etc. to learn improved cultural practices being adopted by them are to be organized.Visit to Cooperative Tea Factories in Nilgiris to study their devotions, etc.is another area which requires to be looked into. Quality upgradation scheme which aims at creating an awareness among the small growers and manufacturers as to the importance of adopting finer plucking standards and improvement of manufacturing process of tea are to be launched.

Tea Board implemented the programmes like (a) Quality awareness campaign in different villages, (b) Quality upgradation experiment cum demonstration in different regions, (c) publicity including advertisements, film/posters, notices, etc. (d) Quality awareness seminars/conferences/ farmers' meets for growers as well as bought leaf and industrial cooperative tea factories in different talukas during the current financial year include.

While area for expansion of tea in the estate sector is getting exhausted, there is distinct scope for bringing additional area

under tea in the small growers sector. The land policy of the Government is also conducive to this development. Growing of tea especially in the North Eastern region would help in generation of sufficient income to sustain rural households, creation of employment oppor-tunities for unemployed youth and landless labourers, conservation of natural resources through control of shifting cultivation and degradation of forest areas, and providing a means of harmonious living by minimizing the social unrest in the rural areas.

72. Development of Small Tea Growers - Measures during the Xth Plan Period

The Tenth Plan has adopted multi-dimentional measures for the welfare of the small tea growers who are concentrated in some parts of Assam, Tamil Nadu, Karnataka etc. and constitute a major share in total tea estates of the country. Some of the measures are (i) setting up of demonstration plots in each of the North East States for demonstrating all aspects of tea growing, in a more compre-hensive manner, (ii) formation of central nurseries for supply of right kind of planting material to the small growers, (iii) arranging training programmes to all the participating farmers on all aspects of tea growing in collaboration with TRA, Assam Agricultural University and North Bengal University, (iv)launching of advisory services in each State for periodic field visits and advising on practical aspects of cultivation and providing soil analytical survey, (v) arranging study tours for the growers to visit the developed areas especially in south India as well as foreign countries such as Kenya and Indonesia where considerable work has been done for the benefit of small tea growers.

All activities will be carried out by the Tea Board through its regional offices and in collaboration with respective State Governments.

73. Progress in Recent Techniques in Cultivation of Tea

In recent times, micro-propagation, hybrid seed production and seedlings, hi-density planting, integrated nutrient management, use of bio-fertilizers, micro irrigation, fertigation, protected cultivation, organic farming, integrated pest management and use of bio-pesticides, mobecular diagnostics, pesticides residues, etc. are some of the techniques in tea cultivation.

Propagation of tea includes release of high yielding clones, bi-clonal seed stock and grafted plants. These planting materials have shown extremely satisfactory results. However, existing materials and techniques need to be improved.Standardisation of package for cultivation of organic tea is yet to be made.High density planting is sufficient for obtaining higher yield from an unit area. Any further increase in the density would only lead to uneconomic production in the long run.

With introduction of stringent Minimum Residual Limits (MRLs), integrated post harvest management, techniques required to be further researched. More research and development efforts are called for in the areas of micro-nutrient management.

74. Production Target for Xth Plan

Based on the projected domestic demand, as per studies conducted by Indian Institute of Management, Calcutta and World Export demand as estimated by Food and Agriculture Organisation and removal of quantity restrictions (QRs) under the Agreement of Agriculture of WTO, the estimated production and export targets during the Xth Plan period are shown below :

Targets	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**
1. Domestic Consumption*	693	714	735	757	780
2. Export ++	234	241	248	256	264
Total production	**927**	**955**	**983**	**1013**	**1044**

*** Based on IIMC study**

++ According to FAO, export availabilities are projected to reach 1600 million kg in 2005, it is targeted to achieve a share of 16% of the total global exports

Source : Xth Five Year Plan - Report of Sub-group on Plantation Crops - II - Tea, Coffee and Rubber - Ministry of Commerce

75. FAO Projections for Black Tea - 2005

FAO made future projections taking into account the committed reduction in tariff rates for tea imports. This reduction was on account of trade liberalization after 1994. The FAO projections indicate that world black tea imports would increase by a further 2.9 per cent, from 1355 m.kg to 1394 m.kg by 2005 because of the impact of tariff reductions resulting from the URA.

Black Tea	Country	Without tariff reduction		With tariff reduction	
		m.kg	% share	m.kg	% share
Production	India	1015	36.11	1018	35.96
	Sri Lanka	285	10.14	287	10.12
	Kenya	278	9.80	280	9.94
	China	220	7.83	224	7.92
	Indonesia	210	7.47	213	7.51
	Turkey	215	7.65	215	7.60
Exports	India	245.8	17.12	249.8	172.20
	Sri Lanka	254.5	18.22	262.6	18.09
	Kenya	254.0	17.69	256.8	17.68
	China	192.0	13.37	201.2	13.85
	Indonesia	200.0	13.93	214.0	7.51

Source : FAO, (1995), Impact of the URA on the World Tea Economy : Projections to 2005, Committee on Commodity Problems, IGG of Tea, Rome

76. Approach to Xth Five Year Plan

According to the "Approach to Tenth Five Year Plan" targets should no longer be production oriented, but shall aim at improving productivity, value addition and marketability. It further states that one must concentrate on increasing the productivity of existing gardens rather than establishing new plantations with huge investments. There should be continued efforts towards further increasing the profitability of tea gardens through replanting/ rejuvenation and mechanization of operations.

The main thrust would be on quality so as to make our teas competitive in the light of opening up of the economy under the WTO agreement on agriculture. Thrust is to be given on improving marketing capabilities as well as substantially improving packaging and value addition. Conversion to organic methods of tea growing to be encouraged.

Information technology needs to be given due consideration for making available ready information to the tea industry and for promotion of our produce in other markets.

There must be continued efforts towards further increasing the profitability of tea gardens through replanting/rejuvenation and mechanization of operations.

77. Strategies for the Tenth Plan Period

The strategies of the Tenth Five Year Plan are to : (i) enhance production through vertical development measures such as replantation, rejuvenation, pruning, infilling of vacancies with better varieties, etc. (ii)improve the productivity of small tea gardens, (iii) emphasize special attention on irrigation and drainage (iii) manufacture additional crop; tea processing facilities are to be augmented by construction of new tea factories (iv) modernize the existing tea factories for ensuring production of clean teas without any trace of foreign material in end products, (v) encourage product diversification and creation of facilities for dual manufacture of tea (orthodox and CTC), (v) encourage value addition and production of instant, ready-to-drink tea, decaffeinated tea and specialty teas, (vi) ensure adherence to the prescribed international and domestic SPS (Sanitary and Phyto-sanitary) standards for tea, (vii) make higher investment on R&D and transfer of technology, (viii) reach technological advances to smaller estates where potential for improvement is the best, (ix) reduce packaging costs and use alternative and inexpensive packaging materials, (x) explore the possibility of setting up of modern packaging and blending units within India with foreign collaboration, (xi) support for promotion of value added teas in overseas market by exporters, importers to take advantage of IT tools for promotion vigorously, (xii) encourage organic tea cultivation and production of green teas, (xiii) initiate special promotional programmes in thrust countries, (xiv) need to continue an intensive generic promotion campaign within the country so as to increase per capita consumption and to arrest declining trend in domestic demand. A strong and vibrant internal market will create the necessary synergy's for expanding the export market, (xv) reduce the cost of production by improving productivity and minimizing wasteful expenditure to increase profits from the existing plantation The competitive advantage of tea industry depends primarily on quality of manpower. Therefore, HRD inputs are critical to future development of the tea industry.

78. On the Production Front

On the production front, the strategies required to be adopted are (a) implementation of HACCP and ISO standard, (b) launching of quality assurance scheme by Tea Board, (c) undertaking a planned programme to encourage shift in production from CTC to orthodox, (d) designing and launching of a separate scheme, (e) focusing on increasing yield of area under tea in order to contribute a higher

percentage to world production and also increase exportable surplus, (f) reducing cost of production by educating workers at garden levels through workshops while maintaining targets for replanting, rejuvenation planting, etc.,(g) narrowing down in number of grades produced which lead to confusion in importers' mind and (h) exploring the possibility of providing zero interest/low interest loans for purchase of rolling machines for orthodox, especially in the context of the crisis in South India.

79. On the Product Front

On the product front, continuous emphasis on value added forms of tea (tea bags followed by packet tea and instant tea) in order to maximize returns and foreign exchange earnings, may be made. For this, there is a need to undertake specific activities to promote these forms of tea. These include (i) exemption of import duty on tea bagging machinery and filter papers, (ii) arranging of workshops to help promote packaging standards in association with Indian Institute of Plantation Management (IIPM), (iii) on the bulk tea exports, focus on orthodox and Darjeeling as thrust areas while maintaining traditional markets, (iv) improving packaging standards to meet world norms, (v) encouraging export of green tea with focus on specific markets like Morocco. Marketing an Indian green tea that is unique and not necessarily a replica of Chinese green tea, and (v) developing specific value added products i.e. flavoured tea and teas with herbal infusion while maintaining the brand equity of Indian tea.

80. On the Marketing Front

On the marketing front one must identify markets based on global predictions on demand and ability to pay premium demand by different types of Indian teas and develop specific strategies for focused markets and allocate funds in these markets coinciding with penetration strategies.

There is need to build on value perceptions around Indian tea with Darjeeling as flagship and launch promotional campaign in major markets and provide legislative protection for teas of Indian origin alongwith Indian geographical indications such as Darjeeling, Assam and Nilgiris. Further attempts may be made to launch an Indian tea logo as a mark of quality and speciality tea register together with extensive promotion of speciality teas by way of using using website as a marketing tool to hasten the buying process. Emphasis may be

shiftted from product to quality based on appearance, cuppage, ecology, sensitivity to bio chemicals, health benefits and lifestyle. There is a need to project India as a stable, reliable producer and supplier which will honour commitments.

81. On the Infrastructure Front

Infrastructure is the key factor in sustaining development for any sector and tea is not an exception to this. Keeping this in view there is a need to (i) develop infrastructure for value addition, (ii) provide duty free facility to exporters, (iii) support the purchase of foreign brands/distribution arrangements/warehouses in foreign markets by Indian companies. Further traditional markets for primarily bulk tea must be retained. A drive to locate large growing segment of consumer markets across the globe has to be further launched and strengthened. We must promote our own global brands and secure a long term markets for Indian tea in origin.

82. On Government Front

Government may further consider duty free imports of capital equipments/machinery for packaging of tea bags, instant tea, ready to drink tea and canned tea machinery and duty free imports of filter papers for tea bags and remove infrastructure bottle necks and improve infrastructure facilities (ports, customs, banking, insurance, etc.). Provision of incentives for value added teas. Launching promotional campaigns for Indian teas in thrust markets, conducting market service to assist Indian exporters in their marketing efforts and deputation of delegations to prospective countries to enhance contract for exports as well as to study strategies followed by competing producer countries are some of the other areas to be strengthened.

In order to increase India's export potential, the option of importing tea for re-export will have to be kept open, as world blends will require teas from other growing areas. A separate focus on tea bags is essential. One of the highest value added emerging markets is instant tea and ready to drink beverages. With a view to making India to a globally competitive position in value added teas, there is need for setting up of the blending, packaging and processing facilities at internationally competitive levels. Globally, competitive canning lines, processing equipment and branded/private level option needs to be organized. This is a highly technical field and an early edge would open up sophisticated markets in future.

83. Investment Activities during Xth Plan Period 2002-07

i. Proposed Development Measures — The development measures contemplated for the X Plan period in terms of physical area and the anticipated contributions are presented below:

Sr. No.	Activity	Area to be developed (ha)	Contribution (m.kg.)
1	Extension/new planting	4,500	4
2	Replanting	20,000	14
3	Rejuvenation/pruning	50,000	25
4	Irrigation	50,000	10
5	Improvement of drainage	100,000	10
6	Productivity improvement	120,000	12
	Total :	**344,500**	**75**

More thrust would be on renovation of field assets and improving productivity from the existing areas rather than expansion. It is proposed to integrate the above activities under one scheme viz: Plantation development Scheme during the X Plan period. The total requirement of funds for the Five Year period adds up to Rs.939 crores. The sources of fund would be as under :

(Rs. in crore)

Sr. No.	Sources of Fund	Amount
1	Tea Board	
	Loan	29.00
	Subsidy	130.00
2	33 AB a/c. Under Tea Development Account Scheme	405.00
3	Tea Industry's own resources	81.00
4	Bank/Institutional loan	294.00
	Total :	**939.00**

ii. Quality Upgradation and Product Diversification — One of the main reasons attributed to the price slump in South India during 2000, was the poor quality image. It is, therefore, proposed to pay more attention towards quality improvement of the basic product and on value addition. All the process

related activities and quality upgradation and product diversification programmes would be covered under a new scheme viz. Quality Upgradation and Product Diversification Scheme. The estimated requirement of funds adds up to Rs.811 crores with the following sources of funds :

(Rs. in crore)

Sr. No.	Sources of Fund	Amount
1	Tea Board	
	Loan	24.00
	Subsidy	100.00
2	33 AB a/c. Under Tea Development Account Scheme	250.00
3	Tea Industry's own resources	109.00
4	Bank/Institutional loan	328.00
	Total :	**811.00**

***iii. Research and Development* —** Research areas to be covered during the Plan period are (i) integrated nutrient management, (ii) forecasting model for pest incidence, (iii) energy conservation, (iv) product diversification and value addition, (iv) tea and human health, (v) transfer of technology, (vi) establishment of chain of quality laboratories in the important tea growing regions, (vi) irrigation and drainage, (vii) biochemical analysis and quality improvement, (viii) soil management and organic cultivation of tea, (ix) packaging, eco-preservation and other related areas, (x) biotechnological aspects and (xi) pesticide residues, metals, myco-toxic and connected research work.

Development areas include (a) setting up of a training centre and advisory centres for the benefit of small tea growers in NE region, (b) opening of new Development offices of Tea Board for closer interface with the small growers in the non-traditional areas, (c) strengthening the existing field offices of the Board, (d) setting up of nurseries for supply of planting materials to the small growers, (e) setting up of demonstration plots, (f) organizing study tours, workshops, seminars etc. and (f) institution of productivity and quality awards

The estimated requirement of funds for the above activities including service charges for implementing the schemes would

be in the region of Rs. 225 crores with the following source of funds :

Tea Board : grant in aid	Rs. 125 crores
Tea Industry : contribution	Rs. 100 crores
Total :	**Rs. 225 crores**

iv. Market Development — As a result of changes in the market scenario, the marketing orientation demands a new approach. Towards that end, it is necessary to make a specific provision for launching generic promotion campaign in the domestic market in joint collaboration with the tea industry. Besides, the regular promotion measures such as market research survey, uni-national campaign, brand promotion support, participation in fairs and tea festivals, exchange trade delegations etc. would be continued. The estimated funds requirement for the above activities is in the region of Rs.300 crores to be equally shared by the Tea Board and the industry on 50:50 basis.

Financial assistance to be extended under this Scheme would be in the form of subsidies for various market development and export promotional activities.

84. Summary of the Tenth Plan outlay

It is proposed to cover the above noted activities under the following schemes :

Sr. No.	Sources of Fund	Amount
1	Tea Board	
	Loan	53.00
	Subsidy	535.00
2	33 AB a/c. under tea development Account scheme	655.00
3	Tea Industry's own resources	440.00
4	Bank/Institutional loan	622.00
	Total :	**2305.00**

The estimated outlay and the sources of fund for each of the scheme is summarized in the table below :

Sl. No.	Name of the scheme	Estimated fund requirement	Tea Board		33 AB Deposits	Industry's resources	Bank / Institutional finance
			Loan	Subsidy			
1	Plantation development scheme	939	29	130	405	81	294
2	Quality upgradation and product diversification scheme	811	24	100	250	109	328
3	Market promotion scheme	300	—	150	—	150	—
4	Research and development	225	—	125	—	100	—
5	HRD	30	—	30	—		—
	Total :	2305	53	535	655	440	622

Source : X Five Year Plan. Report on Sub-Group on Plantation Crops II - Ministry of Commerce.

Part Nine : Price Stabilization Fund, Price Stabilization Fund Account, Guidelines

85. Background

Deeply concerned with the problems being faced by the growers of coffee, tea, rubber and tobacco due to continued low prices of these commodities (both domestic/export), for quite some time, Government of India (GOI) has taken a series of measures to ameliorate the hardships being faced by the growers of these crops. The Price Stabilization Fund Scheme (PSFS) is yet another step in the direction by GOI to safeguard the interests of the growers.

86. Objective

The PSFS aims at providing financial relief to the growers when prices of these commodities fall below specified levels, without resorting to the practice of procurement operations by the Government agencies.

87. Duration of the Scheme

The Scheme will be operational for a period of ten years, subject to a review after five years.

88. Mode of Intervention

Under the scheme, a fund called the Price Stabilization Fund will be established with contribution from the GOI and entry fee @Rs 500 from each grower desirous of participating in the Scheme. The corpus of the fund shall remain undistributed and interest earnings alone will be utilized for operationalising the PSFS.

89. Who Can Participate in the Scheme?

Initially, the Scheme will be open to growers of tea, coffee,rubber and tobacco having operational holdings of 4 hectare or less. Subsequently coverage of other growers could be considered.

90. How to Become a Member?

Growers of aforementioned commodities willing to participate shall apply to the respective commodity Board in the prescribed form within the date stipulated thereof. The Commodity Boards will select

the members on first come first serve basis with preference being given to the members with the least holding size. The Commodity Boards will thereafter enroll the eligible growers as member who will be required to deposit an amount of Rs 500 with the Commodity Board.

91. Opening and Maintenance of Bank Account

The member would be provided with an application form to enable him/her to open the 'PSF' account with the designated bank branch. The Commodity Board will also inform the concerned bank branch for opening the account in the name of the member. The account will be maintained as Savings Bank Account and would be entitled for payment of interest at rates applicable to Savings Bank Accounts. No service charges of any kind would be levied. Members have to deposit their annual contributions to the account by 31 March every year. Govt. of India contributions to the account would be made not later than 31 May every year. At the end of the duration of the Scheme, the entire balance in the account would be payable to the member.

92. Modus Operandi for Calculation of Contributions from Govt. of India and Members

Govt. of India will announce a price band for each commodity based on the seven year moving average of international prices as the mid point with the lower bound and upper bound as 20 per cent (-) and 20 per cent (+), respectively.

When the average prices fall below the lower bound of the band in a particular year, Govt..of India will contribute upto Rs.1000 to the account of the member. In that year the member will not be required to contribute any amount to his/her account.

In those years when the average price pierces the upper bound of the band, the member will have to contribute Rs.1000 to his/her account while the Govt..of India will not contribute any amount

In the normal years when the price remains within the price band, the member will be required to deposit Rs.500 each year to his/her account within a specified date. The Govt..of India will also contribute upto Rs.500 to the member's account during the normal year.

During years when the average market price falls below the lower bound of the price band, the member would be allowed to draw Rs. 1000 from the account.

At the end of the ten year period, the balance outstanding can be withdrawn by the grower including the Govt..of India's contribution and the interest earnings. The initial contribution of Rs. 500 as an entry fee however, will not be refunded.

The Scheme will be implemented through a Trust Fund to be set up jointly by Ministry of Commerce and NABARD and the operations will be monitored by a High Powered Committee set up by the Ministry of Commerce.

93. Defaulters

In case a member defaults in making his contribution within the stipulated date, he will be deemed as a defaulter. The PSF account maintained with the bank would be closed and no further deposits either from the Govt. of India or the member, would be credited to the account.

94. New Membership

New growers willing to subscribe to the Scheme during the period of operation of the Scheme may be admitted in place of dropouts; however, the benefits of the Scheme will be restricted to the remaining period of the Scheme.

Illustration

The operation of the Scheme is illustrated below. Let us presume that the 7 years moving average price of the commodity is Rs. 43/. The lower bound of the band would be Rs. 34.40 and the upper bound of the band would be Rs. 51.60. If the prevailing price of the commodity is Rs. 31/- per kg the position will be as under.

Price of Commodity	Contribution to the a/c	Withdrawal from a/c
Price say Rs. 31 per kg [below lower bound]	Rs. 1000 by GOI. No contribution by member	Rs.1000 can be drawn by member
Rs. 45 per kg [within the price band]	Rs. 500 by GOI Rs. 500 by member	No drawals
Rs. 52 per kg [above upper bound	Rs.1000 by member No contribution by Govt..	No drawals

95. Price Stabilization Fund Account

Guidelines for Opening and Maintenance of Account by Banks

- ✓ The account will be opened by designated bank branches based on a Certificate of Eligibility issued by the concerned Commodity Board.
- ✓ The banks would not insist on introduction of the account holder and would rely on the Certificate issued by the Commodity Board.
- ✓ The accounts would be opened with the deposit of Rs. 100/- which will be the minimum balance in respect of these accounts. The accounts would be designated as PSF Accounts.
- ✓ The account would be maintained as Savings Bank Account and would be entitled for payment of interest at the rates applicable for SB Account.
- ✓ No service charges of any kind would be leviable.
- ✓ In accordance with the terms and conditions of the scheme, deposits will be made by the account holders or by the Government of India through the concerned Commodity Board which would be credited to the account.
- ✓ Drawals would be allowed from the account only on receipt of specific advice from the concerned Commodity Board in any particular year. The advice would indicate the extent of drawal that could be allowed to the member.
- ✓ Members have to deposit their annual contributions to the account by a prescribed due date which is presently set as 31 March.
- ✓ The Government contributions would be made not later than 31 May every year.
- ✓ When the grower fails to contribute his share to the account by the due date, he will be deemed to be a defaulter.
- ✓ Once the account is in default i.e. if the contribution due from the member is not made by the prescribed due date, i.e. by 31 March, the account would be closed.

- ✓ No further deposits of the grower members should be accepted for credit to a defaulter's account.
- ✓ No Government contributions could be credited to the defaulter's account.
- ✓ At the request of the grower member, the balance in the defaulters account could be repaid to the extent of the member's contributions with interest thereon.
- ✓ No part of Government's contributions and interest thereon should be paid to the defaulter grower members.
- ✓ After payment of the dues to the defaulter, the balance represen-ting Governments contributions and interest thereof in such accounts should be remitted back to the Price Stabilization Fund Trust through the concerned Commodity Board.
- ✓ Banks have to provide an annual return to the concerned Com-modity Board indicating the number of accounts maintained, the balance therein and the list of accounts to which Government contributions were credited during the year and also a list of accounts which have turned into default with details of accounts closed on account of default. Further, details of payments made to the defaulting member as well as amount remitted to the Government from the defaulting account, on its closure should also be sent to the Commodity Board every year.
- ✓ At the end of 10 years, the entire balance in the account is payable to the grower members.
- ✓ In case of any doubt, clarificaton/s could be obtained from the Price Stabilisation Fund Trust Office, R No. 133, C wing Nirman Bhawan, Maulana Azad Road, New Delhi 110 011.

Part Ten : Madhukar Committee — Report of the Working Groups on Problems of the Industry

96. Background

A meeting on the problems of Tea Industry was convened at RBI, Mumbai Shri Vepa Kamesan, the then Deputy Governor, RBI as Chairman. The meeting was attended by L V Saptarishi, Addl. Secretary, Ministry of Commerce, Chief Executives of various Banks, Chairman, Tea Board and representatives of Tea Associations. During the above meeting, a small Working Group was constituted to study the problems of tea industry in-depth and come out with acceptable solution. The Working Group was chaired by Shri Madhukar, Chairman and Managing Director, United Bank of India, and members were Chairman, Tea Board, representatives of Ministry of Commerce and Industry, Govt..of India, Representatives from NABARD, Kolkata, State Bank of India, Tea Associations of North India and South India. It was further decided that Working Group would submit the report to the RBI before 25 July 2002.

In the light of the above decision, a meeting of the Working Group was convened at United Bank of India, HQ, Kolkata on 22 and 23 July 2003 where 05 representatives from United Bank of India, 03 from State Bank of India, 02 from Tea Board, Kolkata, 02 from India Tea Association, 01 from NABARD RO, Kolkata, 01 from United Planters Association, South India, 01 from Ministry of Commerce, and 01 from Nilgiri Boughtleaf Tea Mfg. Association. Before convening this meeting, a questionnaire was circulated among the members of the Group and the data elicited by the questionnaire is given below.

97. Suggested Solutions based on the feed backs

Based on the suggestions received from the various Members of the group and the replies to the aforesaid questionnaire, the current problems of tea industry vis-a-vis the suggested solutions were discussed at length in the above meeting of the Working Group. During the discussions, it was decided that for revival of the tea industry, all the agencies involved in the process viz. the Banks, NABARD, Tea Board, Govt. of India, Tea Associations and the borrowers have their respective roles to play. The deliberations were accordingly structured on the above basis and ***the decisions taken thereof are appended below:***

98. For Banks

i. The major problems currently being faced by the tea industry are due to the high cost of production, and sharp decline in sale price as a result of which many tea borrowers are findings it difficult to maintain their cash budgets prepared by them at the beginning of the season. Since this projected cash budget is the basis of providing working capital limit to the tea borrowers, operations in their accounts become difficult because of low cash inflow resulting in irregularity in the accounts. Normally, the borrowers are required to liquidate their outstandings in their tea hypothecation account by the end of the season. But failure on the part of the borrowers to liquidate the hypothecation dues by the end of the season, results in further difficulty for the borrowers as they are not in a position to avail fresh working capital limit for the next season. In view of this, it was recommended that

The seasonal deficit of tea borrowal accounts [classified as standard assets] may be converted to a term loan repayable within a period not exceeding 5 years subject to the conditions that at least 50% of the peak hypothecation outstanding has been liquidated by the borrowers:

ii. In many tea accounts, it has been observed that though the borrower is not in a position to liquidate its seasonable dues by the end of the season, it is backed by adequate stock of tea which could not be sold due to lack of demand in the market. In such cases, there is no need of converting the dues to a term loan and instead, an extension of repayment period to liquidate the outstanding seasonal dues in hypothecation account to a maximum period of 6 months may be allowed without affecting its drawing in the tea hypothecation account of the current season. Accordingly, the Working Group recommended that;

Extension of period to liquidate the working capital dues of last season may be allowed to a maximum of six months in those cases where the entire outstanding is backed by a stock of tea or the prompt receivables without affecting the drawings and the working capital limit of current year, provided atleast 60% of the tea hypothecation outstanding has been included and in this case there is no need of conversion of working capital limit to term loan as stated above.

iii. In order to enable the borrowers to operate the tea garden during the current season after aforesaid conversion/ restructuring of the account, a fresh working capital may be extended and it was recommended that

Release of needbased working capital finance for current season based on realistic position, keeping in view the production track record, accepted price levels, market demand etc. may be allowed in accounts classified as standard assets.

iv. Many tea borrowers are enjoying term loan facilities from banks, which were taken earlier to meet various project costs undertaken for development and expansion of tea garden/ processing units and they are not in a position to service their installments of such loans as per the earlier terms stipulated at the time of sanctioning such loans. In view of genuine problems of tea industry, it is recommen-ded that

Reschedulement of existing term loans repayment schedule on the basis of borrowers' future position and repayment capacity, may be allowed.

v. As the banks are required to undertake the aforesaid conversion/restructuring/reschedulement in many tea accounts, such accounts should not be treated as NPA because the borrower could not service in time on installments or liquidate tea hypothecation dues and the account was otherwise treated as standard asset. In the light of the above discussions, it is recommended that

After the conversion/restructuring and rescheduling in tea accounts, the term loan as well as working capital limit shall be treated as current dues, and need not be classified as NPA provided that at the time of conversion/ restructuring, rescheduling, the account was classified as standard assets as per the prudential norms issued by RBI from time to time. The asset classified thereafter would be governed by revised terms and conditions adopted adopted at the time of restructuring of the account.

vi. The tea advances have since been categorized as agricultural advance as per the latest guidelines of RBI. The prudential norms in respect of agriculture advances, inter-alia, treat that

in respect of advances granted for agriculture purpose, interest and/or installment of principle remains unpaid for two harvest season but for a period not exceeding two and half years, such an advance will be treated as NPA. The crop cycle for tea plantation is one year and hence in terms of the above guidelines issued by the RBI, the tea accounts are not getting full benefits because of the existing ceiling period not exceeding two and half years, whereas for tea plantations crop cycles are equivalent to two years. In view of the above and considering the current crisis through which the tea industry currently passing, it is recommended that

In respect of tea advances where interest and/or installment of principle remains unpaid for two harvest seasons but for a period not exceeding two years, such an advance should be treated as NPA.

vii. In case of many tea accounts, the borrowers are in current capital expenditure towards development of tea gardens, expansion of tea processing units, without arranging the corresponding sources of long term finance, particularly, when the tea industry was doing well. Tea borrowers did not face much problems at that time, as they could finance such projects either out of cash generation or by utilizing a portion of their working capital advance. Assets were created out of such capital expenditure and such assets are also changed to the lending banks. However, due to the current problem of the tea industry, such borrowers are now finding it difficult to meet their working capital requirements as a portion of it is tied up with capital cost of the project. In such cases the banks, may allow working capital term loan to meet such mismatch in the asset liability position of the borrowers, provided that working capital facilities extended to such borrowers is not utilised for interunit investment to a company under the same group or for any other purpose outside the tea business of the unit and debt equity ratio in such cases is not worse than 3:1 This facility may be given to genuine and good borrowers having satisfactory track records, for capital expenditure incurred during the last 3 years and not supported by any long terms source. The Working Group accordingly recommended that

Fresh working capital term loan in an account classified as standard asset may be allowed where due to capital

expenditure incurred by the borrower during the last three years for development /extension of tea estates processing units etc. without arranging corresponding long term funds resulting in asset liability mismatch, affecting the net working capital position of the borrowers. This facility would be granted to genuine, good borrowers with satisfactory track records having a minimum debt equity ratio of 3:1 and who have not diverted funds by way of investment in other companies, transferring fund to the subsidiaries group company or created assets other than for productive purposes.

viii. There is a continuous demand from the industry that the rate of interest being charged by the lending banks is required to be reduced at this hour of crisis, for enabling them to become more competitive. In this respect it was mentioned that all the individual banks have their own credit rating system which is linked with the prices i.e. credit of interest and does not justify to allow a rate of interest not commensurate with its credit rating. However, considering the difficult time through which industry passing, it is recommended

Bank may allow a rate of interest upto two stages better than the rates as applicable to such borrowers according to its credit rating by the individual banks subject to the condition that after such reduction, such rate of interest should not be below prime lending rate [PLR]

99. For NABARD

Under refinancing scheme, NABARD is presently charging 10% p.a. interest for various projects under tea finance. Considering the current crisis it is recommended that

Under the refinancing schemes related to tea industry NABARD may charge an interest rate of 0.5% below the rate applicable to a similar project to other industry.

100. For Tea Board

The Tea Board is at present providing 20% capital subsidy in respect of certain capital cost projects, including development of tea plantations, it was fill that Tea Board may allow similar subsidy in respect of those capital expenditure which a tea borrower has

incurred during the last 3 years arranging the corresponding long term funds and which has created productive assets towards such borrowers enhancing its production capacity and if such subsidy is allowed by the Tea Board, there will be corresponding reduction in the long term loan requirements from banks. It is recommended that ***Tea Board may provide 20% capital subsidy in respect of those capital expenditure incurred during the last three years in creating assets for enhancing the production capacity of the borrowers, where such borrowers could not arrange for the food tie-up of such capital costs provided the borrower is having satisfactory track record. Such release of subsidy should have linkages with the term loan from the bank for the same purpose, if availed, the subsidy should be released to the lending of such borrower.***

101. For Central and State Governments

The representatives of Ministry of Commerce, Govt..of India mentioned that the Central Govt. is likely to set up a Price Stabilization Fund for plantation including tea industry, and its modalities of operation is now taking final shape. All members of the Group appreciated the efforts taken by the Government and requested for expanding the creation of the Fund because the benefit should accrue to the industry as soon as possible. It was further discussed that the respective State Govts. may avail the facility under Rural Infrastructure Development Fund being provided by NABARD for the purpose of development of infrastructure at the tea estates such as housing, irrigation,etc. which will ease the financial burden of the borrower who are at present supporting these expenses.

The State Govt.. may also consider reimbursement [by availing RIDF] of the capital expenses incurred by tea borrowers during the last three years for meeting these requirements of infrastructure of tea estates. The Working Group therefore recommends.

[a] The formation of Price Stabilization Fund for plantation including tea industry is to be expedited.

[b] The State Govt. may avail the RIDF Fund from NABARD to meet the expenses towards development of infrastructure at tea estates and reimbursement of earlier expenditure incurred by the tea borrowers during last three years for the purpose of building up required infrastructure at tea estates.

102. For Tea Associations

At present the Associations do not communicate with the banks as a result of which their views on the latest development in the industry is not forthcoming. Many policy decisions in respect of efficacy of auction system, review of various benchmark parameters like average yield, coverage of tea cultivable land, replantation, conversion ratio of green leaves, wastages, etc are not being regularly communicated by the Associations. It is expected that there should be continuous interface between the associations and the banks. Moreover, the Association shall bear the moral responsibility for fostering for improved performance among its members and assist them towards this objective in every possible way.

The Association has a greater role for better marketing efforts to improve the domestic demand for tea as well as developing new export markets for better price and for more export orders. Currently the tea market is under threat from contemporary beverages and the Association is required to immediately initiate image boosting exercises for tea.

In the light of the above discussions it is recommended that :

The Tea Associations should have regular interface with the tea lending Banks to appraise the bankers about the general health of the industry, major policy decisions, the status of the Industry and the needs of the industry. They will foster for the improved performance among its membership and assist the members towards this object in every possible way.

The Tea Associations will have to take a more active role for development for both domestic and global tea markets through publicity in different media and thwart the challenge posed by contemporary beverages. It should carry out continuous efforts to improve the tea price in the domestic as well as international market.

103. For Small Tea Growers and Bought Leaf Factories

The small tea growers and bought leaf factories are facing certain specific problems due to price differentiation, non-realisation of receivable in time, etc. As more in-depth study is required for these problems, separate working groups may be formed under the chairmanship of the convener bank of SLBCs of the respective States

with members from SBI, Tea Board and the Industry to study the problem in-depth and come out with their recommendations within a month. In the light of these discussions it is recommended that :

Separate Working Groups under the chairmanship of the Convener Bank of the SLBC of respective States along with the member from lead bank of the district, SBI, Tea Board and the Industry may be formed for an in-depth study of the problems of small tea growers and bought leaf factories and the report of the Group[s] may be submitted within a month.

104. For the Tea Borrowers

The Group's recommendations in this respect are:

Every tea borrower should report its unaudited results at least each quarter.

The tea borrower should have better financial discipline. There should be no diversion of fund to any sister unit or outside the business without proper tie up of funds and consultation with its lending banker[s] prior to taking up any such commitments. There should be atleast 1% replantation every year in each tea estate.

Part Eleven : Package of Relief Measures for Tea Industry

105. Introduction

The tea industry has been experiencing difficulties in their operations since 1998 on account of drastic fall in the prices of tea both in the domestic and international markets. The problems were triggered by a glut in production during 1998 and the depressed conditions continued unabated till the end of 2003. The prices are now looking up and the industry is seeing the trend as a turn around and they expect market conditions to remain favourable in the coming years. During 2002, the RBI had announced certain relief measures following studies conducted by an Expert Committee. While the financial assistance extended under the scheme benefited the industry to some extent, the Tea Associations had represented to the government for a fresh look at the package relief measure since market conditions continued to be unfavourable even during 2003.

Following a request received from the Chairman, Tea Board, IBA had arranged a meeting between senior bankers and representatives of Tea Board/Tea Association of Kolkata on January 12, 2004. At the meeting the Chairman, Tea Board and representatives of major Tea Associations presented difficulties faced by them both in the domestic and the export market, the current state of tea industry, the challenges and opportunities in the global market, efforts being made by the tea industry to overcome their weaknesses, and their expectations of relief measures from the banking industry. Based on the discussions in the meeting, this package of relief measures was prepared and was approved by the Managing Committee of the Association in its meeting held on 31 October 2004.

106. The Status of Tea Industry in India

India is the largest producer of tea in the world and the country has retained its leadership in production over the last 150 years. India is also the largest consumer of tea in the world. Tea has been an important foreign exchange earner contributing to about Rs. 2000 crore to the export basket even though in terms of share in the world market, we lag behind Sri Lanka, Kenya and China. The fragmentation of USSR, strained relationship with Pakistan and the problems in Iraq had adversely affected Indian tea exports in the last decade. The relatively higher cost of production and poorer quality of

our output has affected the competitiveness of our tea industry. High cost of labour coupled with low productivity has been the primary reason for the high cost of production. Productivity and quality of tea produced in the country is also affected due to existence of ageing plantations in the country. A significant portion of our tea plantations is aged beyond economic life of tea bushes. The tea gardens of Sri Lanka and Kenya are of relatively younger origins. It is therefore felt that the Indian tea industry needs to take drastic measures to improve productivity and also take up replantation/rejuvenation on a war footing, to improve competitiveness and long term viability.

The necessary conditions continuing since 1998 had resulted in many of the tea plantations incurring losses in the recent years. The strained cash flows has also affected much needed developmental activity in the plantations.

107. Outlook for the Future

There has been a pick up in the demand for tea and consequentry prices since December 2003. The tea industry representatives view the developments as a turn around and expect the positive sentiments to continue over the next 4-5 years. The prospects of reviving business with Iraq and Pakistan, add to the optimism. The Government has also initiated promotional measures aimed at developing new export markets and encouraging consumption of tea in the country. The Government has also earmarked more funds for development of this sector in the Tenth Plan. This could encourage tea growers to take up replantation/rejuvenation on a larger scale.

108. Approach to Restructuring of Borrowers Accounts

Borrowers under the tea sector could be divided into three segments: 1) Small tea growers with holdings not more than 10 hectares 2) Bought leaf factories which do not have own gardens and 3) Large tea growers and manufacturers. The bank lending to this sector consist of both term loans for development gardens, construction of factory sheds, processing facilities, etc. and working capital facilities for on-going production. Any restructuring exercise would involve segregation of overdues into a separate facility to be repaid over a period of time. The unit would need fresh working capital limit for operations and may also need term loans for replacement/balancing of facilities to achieve projected levels of production. As part of restructuring, the units may also like to carry out productivity

improving measures like implementation of voluntary retirement schemes, etc. While in respect of small tea growers, a standardized approach could be taken, it is felt that decision on restructuring of larger units should be on the basis of case-by-case evaluation. In the prevailing market conditions and interest rates scenario, banks could consider converting existing rupee loans into foreign currency denominated funding. This would enable the units to enjoy the benefit of lower interest rates without the banking system having to make sacrifices.

While restructuring the borrowal accounts in the tea sector the regulatory requirements vide RBI's circular DBOD No. BP.BC.98/ 21.04.048/2000-2001 dated March 30, 2001 will have to be kept in mind. The industry had sought extension of delinquency period beyond 2 half years on the plea that the harvesting season for tea is 9-12 months. However, Reserve Bank of India had not acceded to this request.

109. Recommended Relief Measures for various segments of tea industry

***i. Small Tea Growers* —** Banks may carve out irregular portion of outstanding in term/working capital loan accounts as on 31 December 2003, into a Special Tea Term Loan (STTL) repayable in 5 to 7 years with a moratorium of one year. Interest on STTL may be charged at the Benchmark Rate of the bank. Fresh working capital limit may be considered based on assessment of requirements. Working capital limits upto Rs. 2 lakh may be sanctioned at a concessional rate of interest not exceeding 9 per cent p.m. For loans exceeding Rs. 2.00 lakh, interest may be charged at the Benchmark Rate of the bank.

***ii. Bought Leaf Factories* —** Banks may carve out irregular portion of outstanding in term/working capital loan accounts as on 31 December 2003 into a special tea term loan (STTL) repayable in five to seven years with a moratorium of one year. Fresh working capital limit may be considered based on assessment of requirements. Interest on STTL and fresh working capital may be considered at Benchmark Rate of the bank.

***iii. Large Tea Growers and Manufacturers* —** It is suggested that restructuring options for the borrowers coming under this

category may be considered on a case-to-case basis on merit. The position of accounts as on 31 December 2003 may be considered for restructuring. Irregular portion of outstanding in term/working capital loan accounts as on 31 December 2003 may be carved out into a Special Tea Term Loan (STTL). As part of the restructuring exercise, funding requirements for carrying out a VRS exercise or such other measures for improving productivity could also be considered depending on the viability of the proposal and suitable repayment fixed on the basis of cash flow projections. The repayment of STTL may be allowed over a period of 5 to 7 years including a moratorium of one year based on the cash flow projection. Interest on STTL may be charged at the Benchmark Rate of the bank. Banks may examine feasibility of converting Rupee Loans including restructured loans into Foreign Currency Loans to pass on the benefit of lower interest rates to the borrowers. Fresh working capital limit may be considered based on assessment of requirements. Interest on fresh working capital would be as per the pricing policy of the bank. In cases where the asset cover is insufficient, banks may seek additional collateral security from the borrowers.

110. Conclusion

Tea growing regions, because of the use of shade trees in West Bengal and the Northeast, can be classed as forests. In Kerala, they are converting potato and other available land to tea and the findings of the experts are that tea areas carry out the same positive functions as forest land, so far as ecology and land erosion are concerned. Industry's plea is simple, tea areas with shade are almost as good as forests and certainly much better than the degraded forests. As such, degraded forests can be given to the industry for growing tea not only in the national interest but also in the ecological interest. And it is the industry has formed partnership with the Government to extend its wings and gives effective support to the industry by allotting land, a big portion of which can be degraded forests. Pragmatism is called for not legalism or bureaucratism. As these forests 'on paper' cannot claim any standing trees, it would be better to plant these areas with tea and shade trees! We may classify shaded tea areas as forests and the ratios laid down for forest -land, will be effectively maintained. We may have to only amend the definition of a forest! Taking about the Government, as an active partner, the first partnership contribution industry seeks from the Government is maintenance of law and

order and rationalization of taxation. The industry and Government have gone into a genuine partnership where it is in the interest of both parties to see that the industry keeps on growing and generates increasingly more wealth, so that the Government can partake of it and get bigger revenue amounts in coming years. As a good partner, it is industry's duty to see that both the Center and the State earn increasingly more revenue from the tea industry. Government should consider by taking a smaller percentage of a big and growing cake, rather than a big percentage of a stagnating and slowly diminishing smaller cake. Hence there is a necessity for continuous growth of production through increased productivity of both land and labor and increased production with more land coming under tea.

While the industry understands that the Government has certain basic fiscal needs, and is willing to do its best, the Government also has to appreciate that if the industry is to prosper, taxes have to be rationalised, more lands have to be allotted and law and order must be maintained. However, even with all the help and understanding from the Government, the industry will not be able to hold its own in the new climate of free market economy and globalization, unless its productivity improves most of which will have to come from the workers, through industry's efforts. Demanding productivity from workers as a quid pro quo for increase in wages does not work. It is industry's responsibility to ensure that workers are trained and motivated to use this training in the overall interests of all concerned.

Part Twelve : Product Diversification, Exports of Packet Teas, Tea Bags, Instant Teas

111. Background

Even 50 years ago, tea drinkers abroad used to buy 'pure' tea from the producing country of his choice from among the neighbouring grocers. The teas of different origins were being sold under well advertised brand names by trading companies located in the importing countries. These companies got their merchandise from a number of tea producing countries. In other words, there was a so-called international division of labour under which tea was grown by poor developing countries especially for the purpose of exports in bulk as raw materials to various developed countries. The imported tea was then sold by the developed countries through a network of large sized companies with substantial capital investment who were marketing the tea in attractive consumer packs under different brand names built up by intensive campaigns. This division of labour was not based on any natural advantage as understood in the theory of international trade. It was based on historical factors and on advantages artificially created for different companies by virtue of dominant position of their countries over the erstwhile colonies. The companies not only controlled over 40 or 50 per cent of the markets of developed countries but also controlled trade channels for marketing and distribution of tea. Moreover, there were some bigger companies which owned plantations and controlled a large part of retail marketing of packaged tea. Thus, it is of vital importance that an attitudinal change must precede our attempts towards boosting of tea exports by the developing countries. This would work as catalyst to mark a departure from the traditional position of tea producing countries being content with export of tea as a primary product to value added items. This change covers the diversification into blending of tea and its packaging would enable the tea producing countries to free themselves from the vagaries of the wholesale market of tea and enter the consumer markets directly where prices are more stable compared to wholesale markets. Packet tea can help the producing countries to earn added value on account of blending and packaging and thereby earn more foreign exchange. Similar is the case of instant tea and tea bags.

It may, therefore, be the strategy of all the developing countries that they should bring in certain structural changes in the product they export. This will help them in improving their share in world trade

and in earning more foreign exchange. Besides, this would enable the developing countries to be known not only as exporters of 'primary' products but also as exporters of 'convenient' products or manufactured goods which can directly find place in the display counters of the consumer stores in the developed countries. In other words, a switch over from 'primary' to 'processed' goods might open up new vistas of economic growth for the developing countries through increased exports. India, which is one of the developing countries, has progressively ushered in diversification in many of its agricultural commodities in recent years. India started by exporting groundnut seeds and then moved to export of oilseeds and thereafter to products like meal. In case of leather products, India has moved from raw hides to tanned, semi-processed to processed and finished leather, and for over a decade, India has been developing markets for shoe uppers, shoes and leather as well as leather garments and goods. The same could happen in the case of tea. The question is what type of structural changes in tea exports i.e. product diversification has been achieved in India so far.

112. Export of Packet tea

India is the largest producer and exporter of tea in the world and is expected to produce 850 million kgs in 2004 assuming an average annual growth rate in tea production to the extent of a little over 3 per cent, other things remaining constant. On an average, India produced about 820 million kgs annually during the last five years. India produced 826 million kgs of tea in 2002 and her share in world production was 27 per cent. The volume of her tea exports was 201 m kg in 2002 which accounted for 14 per cent of world exports and these are mostly in bulk form. India has been trying to maximise exports particularly in the form of processed tea such as packets, tea bags, and instant tea.

In India, tea packets containing loose tea are still the normal form of packaging. India for the first time started the export of packet tea [in consumer pack upto a size of 1 kg] in 1965. Six years later she ventured into export of tea bags, instant tea, etc. Since then India has been making steady and consistent progress in the export of packet tea. In 1965, with only two firms in the field, she had exported 2 m kgs of packet tea and at the end of five years, with entry of few more firms, her tea exports doubled to 4 m kgs 1971-72 and in another 4 years, exports reached the level of about 11 m kgs [1975-76]. The progress, since then, noteworthy with the entry of more than 200 firms in the field.

The year-wise growth of exports of packet tea in India for the last two and a half decades since 1973-74, is given below:

Table 27 : Export of packet tea from India during 1973-74 to 2001-2002

Year	Quantity [th kg]	value [Rs.]	Unit value [Rs/kg]
1973-74	4744	50216.00	10.58
1974-75	6095	83051.00	13.56
1975-76	10787	172457.00	15.99
1976-77	12612	193635.00	15.37
1977-78	25187	519834.00	20.64
1978-79	38599	787384.00	20.40
1979-80	30024	580703.00	19.34
1980-81	32322	699834.00	21.65
1981-82	20493	468216.00	22.85
1982-83	10101	263232.00	26.06
1983-84	17368	521288.00	30.01
1984-85	21841	930552.00	42.61
1985-86	25690	994063.00	38.69
1986-87	16847	595727.00	35.36
1987-88	21142	785994.00	37.18
1988-89	25541	879841.00	34.45
1989-90	75817	3548148.00	46.80
1990-91	71514	3908642.00	54.64
1991-92	78321	4520917.00	57.72
1992-93	65245	4040263.00	61.92
1993-94	64917	4685722.00	72.18
1994-95	52042	3577669.00	68.75
1995-96	83965	6162394.00	73.39
1996-97	81016	5714458.00	70.53
1997-98	78115	7490434.00	97.89
1998-99	82013	8904328.00	108.57
1999-2000	63518	674390.00	106.16
2000-01	69315	7195601.00	103.89
2001-02	42719	5211372.00	121.99

Sources : various issues of Tea Statistics, Tea Board, Kolkata

India's export of packet tea increased from 5 m kgs in 1973-74 to 43 m kgs in 2001-02. Yearwise data further revealed that on many occasions India could not retain the volume of her preceding years exports. Export of packet tea showed a record increase of 84 m kgs in 1995-96 followed by 82 m kgs in 1998-99 and 81 m kgs in 1996-97. On an average India exported about 68 m kgs fetching Rs. 712 crore with average unit price of Rs 105 per Kg. India acquired an important position as the worlds largest direct exporter of packet tea surpassing the U K. She is the leading exporter of packet tea

and accounts for 60 percent of world trade in packet tea. It is interesting to note that packet tea imports constituted nearly 20 per cent of total world imports and India constitutes for nearly half of it by way of direct export of this item during the year.

113. Direction - Regionwise Packet Tea Export

During the last 4 decades major changes have already taken place in the tea market in the world. Countries like USA, UK, Canada and others have preference for packet tea, tea bags, instant tea in recent years. The countries in the region of West Asia and North Africa place their order mostly for these items. The exports of packet tea in the countries of West Europe [United Kingdom, Irish, Netherland, Germany, Austria, Finland etc.] are also gradually falling. On an average, about 4 m kgs are exported to West Europe, 21 m kg to East Europe, 1.5 m kg to America {North & Latin America].

114. Export of Tea Bags

In order to cope up with changing consumer preferences, India started production and export of tea bags from 1971 onwards with three firms. Progress made since then has been considerable and at present there are many firms manufacturing tea bags. The progress relating to export of tea bags in India is set out below:

Table 28 : Export of Tea bags during 1973-74 to 2001-02

Year	Quantity [th kg]	value [Rs.]	Unit value [Rs/kg]
1973-74	4744	50216.00	10.58
1973-74	144	3571.00	24.80
1974-75	108	2752.00	25.48
1975-76	157	5914.00	37.67
1976-77	285	10560.00	37.05
1977-78	390	18522.00	47.49
1978-79	238	10570.00	44.41
1979-80	493	20275.00	41.13
1980-81	754	32591.00	43.22
1981-82	777	33531.00	43.15
1982-83	618	23172.00	37.50
1983-84	514	24259.00	47.20
1984-85	631	36551.00	57.93
1985-86	590	37839.00	64.13
1986-87	467	31845.00	68.19

Year	Quantity [th kg]	value [Rs.]	Unit value [Rs/kg]
1987-88	498	32424.00	65.11
1988-89	626	44409.00	70.94
1989-90	546	46875.00	85.85
1990-91	496	43715.00	89.20
1991-92	483	71408.00	147.84
1992-93	520	72536.00	139.49
1993-94	1007	101456.00	100.75
1994-95	1008	144180.00	143.04
1995-96	861	125811.00	146.15
1996-97	1716	252479.00	147.16
1997-98	2169	449957.00	207.45
1998-99	2415	498180.00	206.29
1999-2000	2305	557207.00	241.74
2000-2001	1917	385332.00	200.96
2001-2002	2542	597103.00	234.89
2002-2003			

exports of tea bag in 1973-74 was 144 thousand kgs which went up to 2524 th. kgs in 2001-02 showing an increase of 17.6 times. There was an appreciable increase of this item from 1994-95 on wards. Except 1995-96, exports of packet tea boosted up from 1716 th. kg in 1996-97 to 2169 th kgs in 1997-98. It further improved from 2415 th. kgs. in 1998-99 to 2542 th. kgs. in 2001-02. Average export of packet tea during last five years was to the level of 2270 th. Kgs. fetching Rs 219 per kg. It is also observed that average unit price stands at Rs 201 per kg.

115. Direction of Tea Bag Exports — Region-wise

Tea bags are exported to mainly countries like United Kingdom, Irish Republic, Germany, France, Belgium & Luxemberg of West Europe. A substantial quantity is also exported to east Europe i.e CIS countries (Russian Federation, Ukraine, Latvia, Kazakhasthan, etc.) and Poland. Meagre quantities are exported to USA, Canada and Brazil of America as well as Iran, UAE, Kwait, Bahrain, Muscat ,Yemen of West Asia and North Africa. Further less quantity in the level of 20 thousand is exported to Asia other than West (Japan), Africa other than North (Angola, South Africa) and Australia and Oceania (Australia). It is interesting to note that over the last three years quantities exported to East Europe has increased from 1816 th.kg in 1999-00 to 2115 in 2001-02, while it was 16 th. kg 84 th. kg during the period in America. There was fall in exports from 207 th. kg to 106 th. kg in West Asia and north Africa.

116. Value Added Concept

By introducing structural changes in tea exports India has been sharing the value added market. Before making any attempt to define 'value added' concept it would be worthwhile to mention that despite over a century of India's entry in world tea export market Indian tea has been hardly known by name or origin except in the country like UK and Germany. In these countries there was good demand for fine Darjeeling Tea while Chinese and Srilankan Tea are well known in export markets abroad. Even the small amount of value that may be added on account of the consumer preference for a particular origin of tea has not reached us. The first value added exercise could, therefore, start with Indian tea known for superior quality and flavour to create among consumers a purchasing preferecne for Indian tea. The next stage would be to create awareness among the consumers about the regional varieties such as Darjeeling tea, the Nilgiris tea, the Assam tea, Kangra tea etc..

117. Forms of Value Addition

There are three methods by which values are added to tea. These are (i) Breaking bulk and blending involving no technology but require skills that we possess. (ii) Consumer packing in attractive packets, cans or bags using modern packing materials, if sold in other brand names (to devote attention towards marketing and promotional skills) and cost, if sold under own brand name (iii) Product processing and qualitative improvement extracting tea solubles i.e., solids and flavour. The country which exports tea in bulk quantities without recourse to value added system is, therefore, not only deprived of legitimate share or value added but also fails to reach the consumer directly. The value added items of tea which are sold in the retail market, are in the forms of tea in consumer package and tea bags.

118. Sharing of Value Added Tea

The sharing of value added which could be seen from the price differentials in respect of packet teas and tea bags as compared to bulk teas is shown below:

Table 29 : Price differentials during 1966-67 to 2001-02

(fob Rs./kg)

Year	Packet tea	Tea bag	Bulk tea	Percentage of value addition in packet/bag to bulk tea	
1966-67	9.88	—	8.18	20.80	—
1971-72	9.48	20.39	7.47	26.90	173
1973-74	10.58	24.80	7.63	27.90	225
1974-75	13.76	25.48	9.16	50.20	178
1975-76	15.99	37.67	11.22	42.50	178
1976-77	15.36	37.05	12.01	27.90	235
1977-78	20.64	47.49	23.29	-14.00	208
1978-79	20.40	44.41	20.61	-1.90	113
1979-80	19.34	41.13	18.12	6.70	127
1980-81	21.65	43.22	19.15	12.80	122
1981-82	22.85	43.15	18.15	25.90	138
1982-83	26.06	37.50	18.72	39.20	101
1983-84	30.01	47.20	24.79	21.00	91
1984-85	42.61	57.93	34.12	24.80	70
1985-86	38.69	64.23	30.25	27.70	112
1986-87	37.42	63.84	29.53	26.50	116
1987-88	37.18	65.11	31.10	19.50	109
1988-89	34.45	70.94	31.13	10.60	128
1989-90	46.80	85.88	42.97	8.90	100
1990-91	54.64	89.20	53.58	3.50	69
1991-92	57.72	147.84	55.61	3.80	62
1992-93	61.92	139.49	56.05	10.50	148
1993-94	72.18	100.75	65.19	10.70	55
1994-95	68.75	143.05	64.64	6.40	0
1995-96	73.39	146.15	71.25	3.10	105
1996-97	70.53	147.13	75.44	-6.50	95
1997-98	97.89	207.45	85.79	14.10	142
1998-99	108.57	207.45	107.81	-0.70	91
1999-2000	106.16	241.74	100.61	5.60	143
2000-01	103.81	200.96	89.41	16.10	125
2001-02	121.99	234.89	89.98	36.90	164

Source : Various issues of Tea Statistics, Tea Board, Kolkata

The data presented in the above table showed that packet tea and tea bags added more value approximately 27% and 173% respectively than the bulk tea during 1971 - 72. Value addition in respect of packet tea and tea bags stood at 37% and 164% respectively in

2001-02. Value addition for packet tea ranged from 3% to 39% during the period from 1966-67 to 2001-02, while it ranged from 55% to 235% during the same period in respect of tea bags. Value addition was reduced to minimum during 1990-91 and 1992-93 in respect of packet tea and tea bags as compared to bulk tea because of increase in the price per kg of bulk tea.

Packet tea can offer a dependable and standardised product to a consumer while tea bags standardisation simplifies the process of brewing. In the second stage, by marketing tea under a brand name, although being a costly process in terms of high costs of distribution and consumer promotion, the exporter gets an easy access to preferences and some command over the market, together with increase in profitability comparatively higher than the returns available from the export of loose tea.

119. Instant Tea - Its Development

As regards instant tea, India is still on the threshold of product development. With the gradual acceptance of instant tea by the consumer, its demand is bound to rise gradually in the near future. Instant tea is processed in two forms, the cold water solubles (CWS) and hot water solubles (HWS). These are manufactured both from the green leaf and from the black tea or from a combination of both types. HWS has limited market in the UK, Australia, etc. While CWS has markets in USA. Tata Finlay, is specialising in CWS and food specialities in HWS. Both the products are manufactured in South India. The data relating to export of instant tea from India is given in the table below:

Table 30 : Export of Instant Tea from India : 1974-75 to 2001-02

Year	Quantity (Th.kg)	Value (Rs.)	Unit Value (Rs./Kg)
1973-74	295	9217.00	31.24
1974-75	255	563.00	33.58
1975-76	478	19162.00	40.09
1976-77	584	25064.00	42.92
1977-78	598	31533.00	52.73
1978-79	686	35500.00	51.75
1979-80	656	30509.00	46.51
1980-81	761	36608.00	48.11
1981-82	832	41712.00	50.13
1982-83	799	43185.00	54.05
1983-84	1049	66874.00	63.75
1984-85	1138	95538.00	83.95

Year	Quantity (Th.kg)	Value (Rs.)	Unit Value (Rs./Kg)
1985-86	938	80428.00	85.74
1986-87	1134	94896.00	83.68
1987-88	8661	66611.00	7.36
1988-89	1147	100986.00	88.04
1989-90	925	90068.00	97.39
1990-91	1283	158039.00	123.18
1991-92	1740	270592.00	155.51
1992-93	1122	221463.00	197.56
1993-94	1320	228667.00	173.23
1994-95	1230	260940.00	212.15
1995-96	1868	446403.00	238.97
1996-97	2483	578336.00	232.92
1997-98	2428	629703.00	259.35
1998-99	2602	653770.00	252.26
1999-2000	2783	831013.00	298.60
2000-01	2574	741979.00	286.04
2001-02			

Source : Various issues of Tea Statistics, Tea Board, Kolkata

It will be seen from the above table that the export of instant tea increased from 295000 kg in 1973-74 to 2594000 kg in 2001-02 showing an improvement of less than 10 times. Similarly, in value terms it was Rs. 92.17 lakh in 1973-74 and 7419.79 lakh in 2001-02.

120. Export Market for Indian Tea

Indian instant tea is exported to 23 countries. Among those countries USA accounts for about 71% of the total followed by Switzerland 9%, Canada 6%, Italy 5%, etc. It is interesting to note that instant tea is gaining popularity in United Kingdom, France, Austria, Netherlands, UAE, Japan etc.

121. Incentives to Value Added Teas

In order to encourage value added teas, the Central Government has been providing various incentives as under :

A. Package Tea

	Rate of duty Rs/Kg
(a) Tea packed in unit containers of content not exceeding 25	Rs. 0.44 + duty for the time being leviable for loose tea

grams and ordinarily intended to sell to consumers in those pack.	which has not already been paid (w.e.f. 11.3.86)
(b) Tea packed in unit containers of content exceeding 25 grams but not exceeding 20 kgs whether or not ordinarily intended for sale to consumers in that pack.	Rs. 1.10 + duty for the time being leviable for loose tea which has not already been paid (w.e.f. 11.3.86)
(c) The packed in bags for retail consumption known as "Tea Bags".	There is no excise duty on Tea Bags, but duty leviable for loose tea should be paid if such loose tea is used for manufacture of tea bags (w.e.f. 15.5.86) 11% + duty for the time being leviable for loose tea (w.e.f. 11.3.86)

B. Instant Tea

Rebate allowed on export (w.e.f. 9.9.86)

a. **Loose Tea**:

A rebate on excise duty @50 paisa per kg on loose un-blended/ blended tea exported out of India is granted w.e.f 9.9.1986

With effect from 4.12.1986 the rebate is granted on export @50 paise per kg on loose un- blended/blended tea exported out of India provided the duty of excise so paid is not less than 50 paisa per kg.

Full rebate of excise duty has been granted on loose tea exported out of India w.e.f. 27.4.1988.

b. **Package Tea** :

(i) A rebate on Excise Duty @ 50 paisa per kg on loose un-blended tea which is used in the manufacture of blended tea and packet tea exported out of India is granted w.e.f. 9.9.1986.

(ii) A rebate of additional excise duty on export of packet tea at the following rates are also granted w.e.f. 9.9.1986

(a) Tea packed in any kind of container not more than 25 grams net of tea — Rs. 0.44 per kg

(b) Tea packed in any kind of container more than 25 grams but not more than 1kg net of tea — Rs. 1.10 per kg.

c. **Instant Tea**

The whole of the duty of excise leviable on instant tea provided that the duty of excise has already been paid on loose tea used in the manufacture of such instant tea w.e.f. 1.3.1986.

W.e.f. 27.4.1988 the whole of the duty of excise leviable on instant tea.

C. Loose Tea

Rebate of Excise Duty granted on exports of Bulk tea w.e.f. 23.7.1983 has been withdrawn w.e.f. 1.2.1985.

D. Cash Compensatory support : W.e.f. 1.4.1989 the C.C.S. Has been granted at the following rates on f.o.b. Value of exports (valid upto 31.3.1992.).

Description of the product	**Rates of C.C.S.**
(a) Tea Bags	8% (Eight)
(b) Packet Tea caddies and Tea chestlets	18% (Eighteen)
(c) Instant	8% (Eight)
(d) Quick Brewing Black Tea	12% (Twelve)

122. Problems of Value Added Instant Tea

For expansion of exports of value added items of Tea, India is facing various problems. These are : (i) Dearth of indigenous know how in international market, (ii) inadequate production capacity of tea bags, (iii) lack of investment for establishment of firm's brand name and entry into the super markets in foreign countries (iv) imposition of various tariff as well as non-tariff barriers created by developed countries against the entry of Indian tea in consumer packs.

123. Long term Strategy for Marketing of Value Added Items

For evolving a long term strategy for marketing of value added items, the "Committee on Tea Marketing" set up by the GoI recommended in its report a three phased approach which is quoted below:

In the first phase packet tea export should be confined to our neighbouring countries through local collaboration particularly in those cases where there are no packeting facilities and tea is imported in packages especially in premium range. This would mean less investment, no clash of interest among own customers and a price advantage on account of lower freight. On both sides of India upto Africa and South East Asia, there is great demand for imported packet teas where our exported tea could successfully compete with others.

The second phase would be collaborating with existing packers in Europe and supplying the blends in bulk and sharing part of their profits.

The third phase could be independent marketing efforts in value added, medium priced tea in major markets of UK and Ireland. Over riding all these phases, there are atleast two considerations to ponder over.

First, research into new tea products and tea blending continues. Second, to support export of value added tea abroad in the form of packets, bags and instant tea, we should first encourage and organise markets at home. It was noted by the Committee that exact strategy would depend on three factors like creating favourable market conditions, increasing investment on export promotion and building of organisational marketing strengths.

As regards tea bags, the Committee has recommended that the facilities for manufacturing units in India with tea bagging facilities should be carefully examined and maximum encouragements may be given. It has also been observed that to acquire market facilities and skills abroad, the cost will be high and will have to be standardised. The public sector agencies like Tea Trading Corporation and State Trading Corporation will be able to work on the problem of external marketing of value added items of tea. As regards instant tea, the Committee recommended that the existing companies in the field as well as new entrants should be encouraged. The company should invest capital in promoting technical and marketing skills by encouraging only or part acquisition of R&D equipments and sharing international promotion expenditure on time bounds which must be result oriented and monitored against expected returns.

124. Potential and Scope for Instant Teas

Tea is probably one of the most widely consumed beverage in the world and is accepted and acclaimed everywhere. The worldwide acceptance of tea is because of its zero alcohol content, stimulating effect and aroma etc. Many types like black, green, orange, flavoured, golden, pekoe, etc. grades of tea are available in the market. These types are mainly classified according to their manufacturing process, compiled with spices and other flavour rendering substances. Brewing of instant tea is a common and old practice. Black and green teas are only products obtained on a large scale from the tea bush and at present none of the other products mentioned above are being exploited on a commercial scale. Efforts will be made for developing and standardising suitable and effective technologies for tea industry to keep pace with other tea producing countries like China, Sri Lanka and Kenya who has already made their mark in the world export market for tea.

125. Tea Powder

Although commercial production of instant tea began in the 1940s, little information is available as to what sort of process is suitable, as these techniques have been kept a secret by patent rights over the manufactured products. Generally, tea powder, the basic material is derived from the fermented leaf. The usual steps adopted in the preparation of powder are extraction of tea solids followed by concentration of extracts and finally drying of these concentrates, to convert them into powder. Extraction is generally carried out by recovering the solids in water. Concentration of extracts is effected by evaporation of the water at low temperature and under reduced pressure. The final step of drying the concentrated leaf is achieved by subjecting the concentrate to either low temperature, spray, fridge or foam drying. The solid thus obtained is brown in colour and amorphous in nature but on breeding it turns into brown powder.

One such study was conducted in the tea research laboratory in Himachal Pradesh Krishi Vishwa Vidhyalaya, Palampur. The yield of powder from the fermented tea was generally better than that of made tea. At present a number of laboratories are set up which have invented the technologies for preparation of tea powder.

Part Thirteen : Small Tea Growers – Problems and Prospects

126. Introduction

India is the world's largest producer, consumer and exporter of tea accounting for 30%, 20% and 11% of global production, consumption and exports respectively. India has 112 thousand registered tea estates covering an area of 5,07,196 ha with estimated annual production of 840 million kg in 2004. Small gardens (up to 10.12 ha) constitute 98.38 % of total tea estate, 16.92% of total area and 16.21% of total production.

Assam has 39390 registered tea gardens occupying an area of 2.67 lakh ha (53% of area) with an annual production of 452 million kg (55% of total). Amongst them there are 30,174 small estates(84.64 % of the entire North Indian estates) cultivating 30,717 ha (74.13%) and producing 49,487 kg (75.26%). Besides, tea industry provides employment to nearly 5.55 lakh work force. Though tea cultivation is spread through out the estate, the major districts are Dibrugragh, Tinsukia, Jorhat, Golaghat, Sibsagar, Darrang, Sonitpur and Cachar Valley. The average productivity of the estate is 1,850 kg per ha and is at par with all India productivity at 1,865 kg per ha. The highest productivity is observed in Darrang (1,984 kg per ha.) and lowest in Karbi Anglong (866 kg per ha). Tea cultivation in small holdings in Assam ranges from 0.13 to 3.0 ha or more are spread over almost all the districts. However, the highest concentration is in the 5 districts viz. Dibrugarh, Tinsukia, Sivsagar, Johrat and Golaghat.

127. Concept of Small Tea Cultivation

The concept of small tea cultivation in home stead gardens and unutilised land along with other crops to sell the green leaf to the existing big factories for enhancing farm income was initiated during the seventees by the then Janata Government in Assam. Encouraged by the Government.

Patronage a few farmers of erstwhile Sibsagar district initiated tea cultivation in their high land ranging from 0.13 hectare to 3 hectare. During the end of eighties the Department of Tea Husbandry of Assam Agriculture Industry surveyed the possibility of growing tea in small scale and Advisory Cell was established to promote small scale tea cultivation by providing technical know-how. In the meanwhile,

the formation of all Assam Small Tea Growers Association during 1987 was another landmark for extension of Small Tea Cultivation in Assam. In 1991, the Tea Board of India approved the proposal of the Agriculture University to provide financial support to the Advisory Cell of the Department of Tea Husbandry and Technology and the Cell was reconstituted as "Small Tea Growers Advisory Programme" to the broad mandate. Apart from Self Employment the cultivation of tea has opened a wide vista of business opportunities by providing not only indirect employment but also creating a sound base for farm income. In a nutshell tea cultivation could act as a catalyst for the overall economic changes in the rural scenario of Assam especially in tea growing districts. There are 38,393 small tea growers in the State. The Small holdings are spread over all the districts, however concentration is in the five upper Assam districts viz. Dibrugarh, Tinsukia, Sibsagar, Jorhat and Golaghat.

128. Socio economic Profile of the Selected Borrowers

Small Tea Growers of Assam have been categorised into 6 socio - economic background viz. (i) Sedementary cultivators, (ii) Educated rural youth, (iii) Educated urban youth, (iv) In service personnel, (v) Tea garden workers/supervisors, and (vi) Sleeping growers.

129. Field Practices and Cultural Operations

i. ***Climate and Soil —*** In Brahmaputra valley, tea is cultivated on flat lands at an alleviation of 50-120 msl. In Barack valley, tea is grown in small hillocks and to some extent plains adjoining the hillocks. The alluvial soils are generally deep fertile, have good water logging capacity and respond well to manure. The annual rainfall of the State varies from 210-290 cm.

ii. ***Variety —*** The small tea growers are generally using a mixture of clonal plants and seedlings of seed origin. They also use approved planting materials recommended by the Tea Board.

iii. ***Land preparation and planting —*** Deep Cross Ploughing followed by harrowing and levelling is done and small drains are dug as per specification (45 cm x 30 cm) at 105 cm spacing between drains. The rehabilitation crops are also sown with same spacing as that of tea after 18-24 months. The planting density varies from 14,000 to 17,000 bushes per

hectare. About 2 kg of farm yard manure, 30 gm SSP, 30 gm rock phosphate and 2 gm thymate are mixed with excavated soil and the pits are refilled with natural compaction.

iv. ***Manuring and Fertiliser*** **—** The young tea is manured with 10:5:15 NPK mixture. The matured tea crops of more than 5 years of age is given fertiliser in the ratio of 110 to 140 kg : 30 to 35 : 110 to 140 kg per hectare of NPK. Generally, ring method is adopted for manuring and fertiliser. However, in some cases broadcasting method is also applied.

v. ***Shade*** **—** Conventionally, tea is grown under shade. These shade trees help in regulating the temperature and humidity at the bush level and minimising the loss of water through evaporation and transpiration.

vi. ***Pruning*** **—** The bushes are pruned to maintain the desired shape and height in the plantation, revitalise the vegetative vigour and attain good yield of crops. Pruning is carried out in pre-monsoon or post monsoon period since adequate soil moisture is pre requisite. Generally, 4 year pruning cycle is followed in Assam. The pruning cycle followed by small tea growers is as follows: (a) 1st year : Prune at 30 cm and centre, (b) 2nd year : Cut across at 75 cm and recentre, (c) 3rd year : Prune 28-40 cm/level skiff at 60 cm, (d) 4th year : Prune at 50 cm, (e) 5th year : Deep prune/top prune at 35 cm, and (f) 6th year : Unprune

vii. ***Weed control*** **—** Weeds are responsible for considerable loss to the crop. It is estimated that dicot weeds can cause 12% loss in the crop while grasses are responsible for 20% crop loss. Weed control is achieved by use of paraquat dichloride, 2,4 - D and glyphosphate. Application of weedicides in different doses during 3-5 years and hand weeding for 2 years are also made to control weeds.

viii. ***Pest control*** **—** Tea is prone to attack by various pests like mites, caterpillars, thrips, etc. Mites are controlled by spraying Acaricite with water and other pests are controlled by spraying thiodan or ekalux, etc. Fungal and bacterial diseases are controlled by spraying fungicides.

ix. **Irrigation —** There is definite increase in crop yield due to irrigation either by sprinklers or by drip system. Some small

tea growers are nowadays adopting sprinkler irrigation to increase the green leaf yield during the dry period. It is done in the morning or night.

x. ***Drainage*** **—** The drains of 2 ft wide and 3 ft deep are sprayed over the area of 40 ft intervals along with the slope of the land.

xi. ***Harvesting and post harvest management*** **—** Harvesting of tea involves regular removal of young shoots comprising an apical bud and two or three leaves immediately below it. The shoots arising out of the sticks (frame) of pruned bushes are called primaries. Tea shoots are plucked in the months of mid February to mid December and plucking round (the number of days between two successive plucking) of 4 - 14 days is followed by small tea growers and 7 day plucking round is most common. Harvesting is carried out when the shoots attain maximum weight without compromising the quality.

130. Infrastructure Support

The Small Tea Growers Advisory Programme in the Assam Agriculture University, funded by Tea Board, impart required training and provide technical inputs free of cost. Tea Board has recently sanctioned another small Tea Advisory Cell at Tocklai Experimental Station for the benefit of small tea growers. Further, small tea growers have informal access of information from the big gardens in the organised sector, located nearer to them. For processing green leaf there are sufficient number of bought leaf factories operating in the district. Besides, most of the gardens in the organised sectors have their own factory.

131. Credit flow

Out of the farmers visited only a few small tea growers had availed of loan from banks. All others raised plantation with their own funds or borrowed from relatives. Many of them did not approach bank for loan with the apprehension that they will have to waste their time running after bank officials without any effective results. It was learnt that most of the tea growers did not have patta land. Further, in many cases title was not clear which was a handicap in obtaining loan. The growth of small tea sector has slowed down on account of limited availability of further suitable land as major portion of the land has already been put under cultivation. Further, as most of the

plantations are 8 to 10 years old, there is hardly any possibility of rejuvenation or replantation. Requirement of loans for such operations may arise after another 5-6 years. A field study reveals that farmers expressed their requirement for working capital for purchase of fertilser, pesticides and payment of wages including advance during puja season.

132. Inputs (Raw materials) and Output (Production)

Input like planting materials, fertilisers, pesticides, insecticides, etc. are locally available. Generally, small growers purchase fertilisers, etc. from the wholesalers in nearby towns and also purchase clones from big estates or private nurseries because of low requirement. Average yield reported by the farmers ranged from 1200 kg to 2000 kg green leaf per bigha which is equivalent to 1850 to 3000 kg made tea per hectare.

133. Cost of Cultivation

The farmers have reported that average cost of plantation up to 4 year is Rs 76,750 while it was Rs. 45,000 per acre in the first year.

134. Marketing

All the small tea growers sell their green leaf either to nearby big gardens or to bought leaf factories and average price varies from Rs. 6.70 to Rs. 9.35 for depending upon the quality. It was learnt that during 1998-99, the green leaf was maximum at Rs. 11.50 to Rs. 12.00 per kg. and in some cases it was Rs. 13.00 per kg.

The major problems in marketing of green leaf is the poor handling in transportation, etc. The factory owners buy on 'first come first served' basis or at competitive price and growers had to be at the receiving end.

The situation has now been solved through the price sharing scheme of Tea Board. The scheme states that the growers must be paid minimum @ 60% of the average auction price upto Rs. 70 per kg of made tea. Beyond this, if auction price is more, then the amount should be shared @ 50:50 basis.

135. Problems of Small Tea Growers

i. ***Unorganised Growth*** — The production of green leaf from small tea growers is not matched with the demand for tea

market. Further, the production of green leaf is not properly channelised to tea processing facilities. In many cases, unsuitable land and marginal lands were utilised for cultivation of tea affecting the quality as well the productivity of the plantations.

ii. ***Land Patta and Title*** — Most of the small tea gardens established on government land, ceiling surplus land, grazing land or annual patta land are deprived of being registered with tea board. As a result they could not avail the benefit of plantation subsidy scheme and the bank loan. Although, there is a provision for issuing provisional registration to the growers with annual patta, normal land, etc. on the basis of certificate of enjoyment of holding for tea plantation, the revenue authorities are making in ordinate delay in this regard.

iii. ***Technical Backup*** — There is a vide technological gap between the trained and untrained small tea growers. Small tea growers may be imparted training in certain areas like drainage, manuring, weed/pest control, pruning, etc. This may help in enhancing the producti-vity of tea crop.

iv. ***Ecological Imbalance*** — The mushrooming growth of tea plantation has reported a large scale ecological problem by way of clearing village wood lots. The commercial forestry (bamboo plantation, etc.) has vanished and crops like orange, pineapple, sugarcane, citronella have been replaced by tea. The indiscriminate use of pesticides and agro chemicals have brought in havoc to river and waterline population.

v. ***Finance*** — About 98% of small tea cultivation has been developed through self finance or finance arranged by growers themselves from informal sources. In absence of financial back up most of the plantation could not be developed on scientific lines.

vi. ***Marketing*** — In the absence of well knit marketing channel for the produce of small tea growers, the term is ,many a time, dictated by factory owners and growers are at the receiving end. The problem is aggravated due to the fact that some growers tend to supply inferior leaf.

vii. ***Uncareful handling*** — The growers and the transport agents do not appreciate the utmost need of maintaining the ultimate

product quality to realise better option market and take little care to maintain high standard in parking and avoid damage in handling and transport.

136. Conclusion and Recommendations:

(a) Conclusion

The small tea sector has come up in the districts of Assam since the last 15-20 years and presently contributes 25-30% of the State Tea production. The sector suffered due to recession in green leaf price during the last four years commencing from 2000.

The scientists in the Tea Husbandry department of Assam Agriculture University opined that the operational cost of production in a matured plantation would not be more than Rs. 5.00 per kg. Due to unscientific cultivation, price fluctuations, etc. small tea growers are facing difficulty in repayment of loans.

Mushrooming growth of tea plantation has brought in large scale ecological problem.

Although, a Small Tea Growers Advisory Programme has been set up in Assam Agriculture University at the instance of Tea Board, it can hardly meet the requirements of large number of growers, primarily due to inadequate staff strength.

The benefits of Tea Board Plantation Subsidy Scheme, Price Stabilisation Scheme of Government of India etc. have hardly been gone to the growers due to defect in the prevailing system of land ownership and timely inaction of Government.

At present, agents are involved in transporting of green leaf from farmers to bought leaf factories in many areas. This has resulted in reduction of net gain to the growers and quality of made tea is also not maintained.

(b) Recommendations

The integration of small tea growers areawise under a single management to synchronise farm activities to the tune of market requirement.

Setting up of multi point advisory centres at different locations is essential to encourage small tea growers with proper scientific and technical back up.

Arrangements for training on scientific and cultural operations as well as organisation of awareness camps.

Maintenance of ecological balance through utilising high lands for tea plantation and not destroying village wood lots.

Developing viable mixed cropping system to be adopted by small growers.

Carrying out research on developing a prototype processing unit capable of manufacturing small quantity of green leaf.

Streamlining the marketing system and developing market linkages in a scientific and systematic manner.

Allowing only registered agents to transport and supply green leaves to factory and implementation of price sharing scheme during slumps in the market.

Integration of small farming units and its attachment to a single processing unit for sale of green leaf.

Marketing of small tea growers production under a separate logo or brand as in case of Amul or NOGA (Nagpur Orange Growers Association).

Strict watch on bought leaf factories for improving the quality of made tea.

Facilitating term loan/working capital loan for expanding existing gardens.

Creating better awareness among small tea growers about the credit facilities, subsidies and other functional schemes of the Tea Board. Before sanctioning any fresh loans, adequate care to be taken to verify land records, technical feasibility of the land, marketing facility, tie up arrangement with leaf factories and proper verification of the application.

137. Policy Issues

* There is a need to frame Government policies for allotment of land pattas to those farmers taking up tree plantation on government/quasi government lands to enable the farmers to register with the Tea Board.

* Government may issue land holding certificates to the effect that the farmer is a small tea grower having holding with government land/annual patta land under his possession so as to enable him to get provisional registration with the Tea Board. All these will help farmers to avail of benefits of the price subsidy scheme.

* Government may strengthen the mechanism for price fixation for the small tea growers.

* For ensuring quality tea from the small tea growers sector, an effective co-ordination mechanism amongst small tea growers, green leaf transporter and bought leaf factory may be evolved.

* The existing Directorate of Tea, Government of Assam may be entrusted with the task of co-ordinating the entire activities of the small tea sector in Assam.

* The Small Tea Growers may take up organic tea cultivation in a later stage after gaining experience in tea cultivation for few years.

* Setting up of tea nurseries with technical support from Assam Agricultural University (AAU) and financial support from banks may be considered at different places in the district. Further, streamlining of small tea growers advisory programme by AAU may be strengthened.

* Tea Board may redesign its schemes to make it accessible to the farmer.

* Improve co-ordination among various segments of industry, Government (Central & State), University/Research Organisations, Financial Institutions, Tea Associations/Tea Factories, etc. for better quality tea and stabilisation of falling prices.

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ANNEXURE - I

i) Number of Tea Estates - a) North India

Districts/State	1951(+)	1961	1971	1990	1995	2000	2001
Darrang		98	94	93	116	829	829
Goalpara		10	10	13	13	249	249
Kamrup		15	14	15	13	54	54
Lakhimpur		229	233	15	20	326	326
Dibrugarh		@	@	280	385	21388	22392
Nowgong		22	23	24	34	213	213
Sibsagar (a)		254	262	264	471	15735	16375
Cachar		116	114	121	115	206	206
North Cachar		—	—	9	9	8	8
Karbi Anglong		—	—	14	20	143	143
Total Assam	**785**	**744**	**750**	**848**	**1196**	**39151**	**40795**
Darjeeling		99	97	102	83	85	85
Dooars		155	151	163	168	545	548
Terai (b)		47	48	82	92	910	921
Total West Bengal	**296**	**301**	**296**	**347**	**343**	**1540**	**1554**
Tripura	55	55	53	58	57	292	292
Bihar	9	3	3	1	17	244	244
Uttar Pradesh	45	33	30	8	11	11	11
Himachal Pradesh	1115	1385	1385	1660	3679	3679	3679
Manipur		—	—	2	5	39	39
Sikkim		—	—	1	1	74	74
Arunachal Pradesh		—	—	6	21	50	50
Nagaland		—	—	1	8	94	94
Orissa		—	—	1	2	1	1
Meghalaya		—	—	—	—	15	15
Mizoram		—	—	—	—	12	12
North India Total	**2305**	**2521**	**2517**	**2933**	**5340**	**45202**	**46860**

(a) Including Karbi Anglong & North Cachar upto 1989,
(b) Including West Dinajpur,
(c) Including Cooch Behar,
\+ Break up by district are not available
@ Figures prior to 1981 included with Lakhimpur,
* Provisional

ANNEXURE - I continued

ii) Number of Tea Estates - b) South India

Districts/State	1951	1961	1971	1990	1995	2000	2001
Kanyakumari		6	7	7	7	7	7
Tirunelveli		3	3	4	4	4	4
Madurai		4	4	6	6	6	6
Coimbatore		34	31	40	45	52	52
Nilgiris		4942	6405	6760	25749	60549	62145
Total Tamil Nadu	**2772**	4989	6450	6817	25811	60618	62214
Cannanore		8	11	—	—	—	—
Palghat		5	5	32	33	33	33
Kozhikode		22	19	—	—	—	—
Malapuram (d)		—	1	1	1	1	1
Trichur		1	1	1	1	1	1
Trivandrum		6	6	6	6	6	6
Quilon		28	110	104	104	104	104
Ernakulam		4	16	2	2	2	2
Kottayam		1902	2863	3705	953	954	954
Idukki (e)		—	—	204	4978	4967	4967
Wynaad (+)		—	—	34	53	85	85
Total Kerala	**1125**	1976	3032	4089	6133	6153	6153
Chikmagalur		11	14	14	29	29	29
Coorg		1	1	6	7	7	7
Hassan		1	1	1	1	1	1
Total Karnataka	**12**	13	16	21	37	37	37
Total South India	**3909**	6978	9498	10927	31979	66808	68404
Total All India	**6214**	**9499**	**12015**	13860	37319	112010	115264

(d) New District formed since 1969 out of Kozhikode District.,

(e) New District formed since 1972 out of Kottayam & Ernakulam District.,

\+ Break up by district is not available

* Provisional

Note: Since 1998 figures are inclusive of Small Growers operating in different tea producing District/States

ANNEXURE - I [continued)

ii) Area under Tea in India - a) North India

Districts/State	1951(+)	1961	1971	1990	1995	2000	2001
Darrang	25320	26509	30897	39989	40284	41037	41233
Goalpara	1467	1603	2098	3141	3176	3460	3454
Kamrup	1881	2074	2713	3557	3013	3442	3436
Lakhimpur	46926	50243	57297	4212	4494	4815	4727
Dibrugarh	@	@	@	68207	68998	93076	94080
Nowgong	5064	5577	6372	7780	7723	7994	8001
Sibsagar (a)	44571	46433	51930	63348	62810	74807	75864
Cachar	30445	29928	31018	35075	29969	32008	32272
North Cachar	—	—	—	3696	4263	4004	4047
Karbi Anglong	—	—	—	1358	1550	1869	1869
Total Assam	**155674**	**162367**	**182325**	**230363**	**226280**	**266512**	**268983**
Darjeeling	16569	18605	18245	20065	18932	17228	17318
Dooars	54609	54756	59485	67760	69175	69703	70017
Terai (b)	8402	9344	10769	13345	13083	20548	21467
Total West Bengal	**79580**	**82705**	88499	101170	101190	107497	108802
Tripura	4773	5055	5444	5778	5952	6623	6700
Bihar	1644	534	460	22	76	1350	1445
Uttar Pradesh	2605	2084	1818	876	1068	1068	1068
Himachal Pradesh	4317	4183	4183	2063	2312	2325	2325
Manipur	—	—	—	140	347	907	950
Sikkim	—	—	—	171	172	296	300
Arunachal Pradesh	—	—	—	195	1361	2176	2250
Nagaland	—	—	—	13	256	1214	1270
Orissa	—	—	—	213	219	214	214
Meghalaya	—	—	—	—	—	351	370
Mizoram	—	—	—	—	—	391	400
North India Total	**248593**	**256928**	**282729**	**341004**	**339233**	**390906**	**395077**

(a) Including Karbi Anglong & North Cachar upto 1989,
(b) Including West Dinajpur,
(c) Including Cooch Behar,
\+ Break up by district are not available,
@ Figures prior to 1981 included with Lakhimpur,
* Provisional

ANNEXURE - I [continued]

ii) Area under Tea in India - b) South India

Districts/State	1951	1961	1971	1990	1995	2000	2001
Kanyakumari		451	484	434	434	434	434
Tirunelveli		449	509	800	800	800	800
Madurai		734	944	945	946	973	973
Coimbatore		10249	10058	10187	11241	11764	11784
Nilgiris		20840	22651	26237	35537	60427	61634
Total Tamil Nadu	**33375**	**32723**	**34646**	**38603**	**48958**	**74398**	**75625**
Cannanore		1448	1505	—	—	—	—
Palghat		574	635	681	829	850	850
Kozhikode		4014	3874	—	—		—
Malapuram (d)		—	174	174	174	174	174
Trichur		401	459	466	496		530
Trivandrum		1082	1057	1023	965	965	965
Quilon		3006	2673	1362	1348	1348	1348
Ernakulam		161	147	2	2	2	2
Kottayam		29098	26747	2019	776	840	840
Idukki (e)		—	—	23584	26710	26748	26748
Wynaad (+)		—	—	5375	5475	5483	5483
Total Kerala	**33203**	**39784**	**37271**	**34686**	**36775**	**36940**	**36940**
Chikmagalur		1168	1222	1320	1414	1428	1434
Coorg		178	205	261	290	299	299
Hassan		448	443	395	395	395	395
Total Karnataka	**1669**	**1794**	**1870**	**1976**	**2099**	**2122**	**2128**
Total South India	**68247**	**74301**	**73787**	**75265**	**87832**	**113460**	**114693**
Total All India	**316840**	**331229**	**356516**	**41269**	**427065**	**504366**	**509770**

(d) New District formed since 1969 out of Kozhikode District.,

(e) New District formed since 1972 out of Kottayam & Ernakulam District.

\+ Break up by district are not available,

* Provisional

Note: Since 1998 figures are inclusive of Small Growers operating in different tea producing District/States

ANNEXURE - I {Continued)

iii) Production of tea - a) North India

(in million kg.)

Districts/State	1951(+)	1961	1971	1990	1995	2000	2001
Darrang	26909	31194	41283	79632	80538	77030	78224
Goalpara	1616	1717	2428	5027	5779	6297	6223
Kamrup	1157	1668	2557	4702	4766	4302	4585
Lakhimpur	5996	73339	91949	8257	8678	9068	9113
Dibrugarh	*	*	*	140047	143931	163426	166504
Nowgong	3691	5643	7423	11690	13846	11788	11793
Sibsagar (a)	41174	48569	55289	92331	98186	119978	119626
Cachar	19827	20181	22736	40174	40180	49206	50296
North Cachar	—	—	—	4873	5115	6179	5643
Karbi Anglong	—	—	—	1048	1598	1945	1929
Total Assam	**150370**	**182311**	**223665**	**388181**	**402617**	**449219**	**453936**
Darjeeling	7838	10107	10293	14499	11298	9281	9742
Dooars	63944	66898	80840	114124	121420	128964	130739
Terai (b)	6376	9253	12954	21130	24804	43291	46395
Total West Bengal	**78158**	**86258**	**104087**	**149753**	**157522**	**181536**	**186876**
Tripura	1873	2689	2960	5205	5679	6431	6506
Bihar	1098	55	41	76	130	538	543
Uttar Pradesh	901	804	690	534	341	264	327
Himachal Pradesh	1125	1188	888	1180	1359	1247	1022
Manipur	—	—	—	18	102	96	101
Sikkim	—	—	—	90	83	105	110
Arunachal Pradesh	—	—	—	38	707	993	1047
Nagaland	—	—	—	—	74	43	45
Orissa	—	—	—	31	17	105	105
Meghalaya	—	—	—	—	—	140	148
Mizoram	—	—	—	—	—	39	41
North India Total	**233525**	**273305**	**332331**	**545106**	**568631**	**640756**	**650807**

(a) Including Karbi Anglong & North Cachar upto 1989,

(b) Including West Dinajpur,

(c) Including Cooch Behar,

\+ Break up by district are not available

* Provisional

ANNEXURE - I (Continued)

iii) Production of tea - b) South India

(in million kg.)

Districts/State	1951	1961	1971	1990	1995	2000	2001
Kanyakumari		267	247	182	120	137	117
Tirunelveli		444	858	2262	2447	990	1779
Madurai		1062	1738	3397	2906	2660	3152
Coimbatore		13913	18434	28210	28168	32831	31261
Nilgiris		24082	36254	76525	84274	95194	96092
Total Tamil Nadu	**25225**	**39768**	**57531**	**110576**	**117915**	**131812**	**132401**
Cannanore		1175	1441	—	—	—	—
Palghat		720	975	1697	1999	2267	1898
Kozhikode		4827	6140	—	—	—	—
Malapuram (d)		—	138	97	NA	NA	NA
Trichur		669	674	1503	1553	1896	1668
Trivandrum		1058	940	744	433	399	124
Quilon		1878	1648	423	438	364	364
Ernakulam		46	67	—	—	—	—
Kottayam		29172	30706	324	140	308	245
Idukki (e)		—	—	46697	49473	51406	46439
Wynaad (+)		—	—	9180	10742	12307	14413
Total Kerala	**25775**	**39545**	**42729**	**60665**	**64778**	**68947**	**65151**
Chikmagalur		1157	2022	2701	2993	3521	3606
Coorg		192	273	497	606	687	797
Hassan		430	582	793	1093	1199	1161
Total Karnataka	**874**	**1779**	**2877**	**3991**	**4692**	**5407**	**5564**
Total South India	**51874**	**81092**	**103137**	**175232**	**187385**	**206166**	**203116**
Total All India	**285399**	**354397**	**435468**	**720338**	**756016**	**846922**	**853923**

(d) New District formed since 1969 out of Kozhikode District.,

(e) New District formed since 1972 out of Kottayam & Ernakulam District.,

\+ Break up by district are not available

* Provisional

Note: Since 1998 figures are inclusive of Small Growers operating in different tea producing District/States

ANNEXURE - I (Continued)

iv) Average yield of tea - a) North India

(kg./ha.)

Districts/State	1951(+)	1961	1971	1990	1995	2000	2001
Darrang	1063	1177	1336	1991	1999	1877	1897
Goalpara	1102	1071	1157	1600	1820	1820	1802
Kamrup	615	804	942	1322	1582	1250	1334
Lakhimpur	1193	1460	1605	1960	1931	1883	1928
Dibrugarh	—	—	—	2059	2086	1756	1770
Nowgong	729	1012	1165	1503	1793	1475	1474
Sibsagar (a)	924	1046	1065	1458	1563	1604	1577
Cachar	651	674	733	1145	1341	1537	1559
North Cachar	—	—	—	1318	1200	1543	1394
Karbi Anglong	—	—	—	772	1031	1041	1032
Total Assam	966	1123	1227	1685	1779	1686	1688
Darjeeling	473	543	564	723	597	539	563
Dooars	1171	1222	1359	1684	1755	1850	1867
Terai (b)	759	990	1203	1583	1896	2107	2161
Total West Bengal	982	1043	1176	1480	1557	1689	1718
Tripura	392	532	54489	901	954	971	971
Bihar	668	103	380	3455	1711	399	376
Uttar Pradesh	346	386	212	610	319	247	306
Himachal Pradesh	261	284		572	588	536	440
Manipur	—	—	—	129	294	106	106
Sikkim	—	—	—	526	483	355	367
Arunachal Pradesh	—	—	—	195	519	456	465
Nagaland	—	—	—	0	289	35	35
Orissa	—	—	—	146	78	491	491
Meghalaya	—	—	—	—	—	399	400
Mizoram	—	—	—	—	—	100	103
North India Total	939	1064	1175	1599	1676	1639	1647

(a) Including Karbi Anglong & North Cachar upto 1989,

(b) Including West Dinajpur,

(c) Including Cooch Behar,

\+ Break up by district are not available,

@ Figures prior to 1981 included with Lakhimpur

* Provisional

ANNEXURE - I (Continued)

iv) Average yield of tea - b) South India

(kg./ha.)

Districts/State	1951	1961	1971	1990	1995	2000	2001
Kanyakumari		592	510	419	276	316	270
Tirunelveli		989	1686	2828	3059	1238	2224
Madurai		1447	1841	3595	3072	2734	3239
Coimbatore		1357	1833	2769	2506	2791	2653
Nilgiris		1156	1601	2917	2371	1575	1559
Total Tamil Nadu	**756**	**1215**	**1661**	**2864**	**2408**	**1772**	**1751**
Cannanore		811	957	—	—	—	—
Palghat		1254	1535	2492	2411	2667	2233
Kozhikode		1203	1585	—	—	—	—
Malapuram (d)		—	793	557	—	—	—
Trichur		1668	1468	3225	3131	3577	3147
Trivandrum		978	889	727	449	413	128
Quilon		625	617	311	325	270	270
Ernakulam		286	456	—	—	—	—
Kottayam		1003	1148	160	180	367	292
Idukki (e)		—	—	1980	1852	1922	1736
Wynaad (+)		—	—	1708	1962	2245	2629
Total Kerala	**776**	**994**	**1146**	**1749**	**1761**	**1866**	**1764**
Chikmagalur		991	1655	2046	2117	2466	2515
Coorg		1079	1332	1904	2090	2298	2666
Hassan		960	1314	2008	2767	3035	2939
Total Karnataka	**524**	**992**	**1539**	**2020**	**2235**	**2548**	**2615**
Total South India	**760**	**1091**	**1398**	**2328**	**2133**	**1817**	**1771**
Total All India	**901**	**1070**	**1221**	**1730**	**17770**	**1679**	**1675**

(d) New District formed since 1969 out of Kozhikode District.,

(e) New District formed since 1972 out of Kottayam & Ernakulam District.,

\+ Break up by district are not available

* Provisional

Note: Since 1998 figures are inclusive of Small Growers operating in different tea producing District/States

ANNEXURE - II

		Supply Sources												
Country	Market Profile	Sri Lanka	Kenya	China	India	Indonesia	Argentina	Malawi	Bangladesh	Tanzania	Viatnam	Uganda	Turkey	Zimbabwe
		20.14% Share in W. Exports	18.16% Share in W. Exports	16.67% Share in W. Exports	16.12% Share in W. Exports	8.59% Share in W. Exports	3.99% Share in W. Exports	3.43% Share in W. Exports	2.22% Share in W. Exports	1.67% Share in W. Exports	1.62% Share in W. Exports	1.12% Share in W. Exports	1.10% Share in W. Exports	0.92% Share in W. Exports
		UK Data												
UK 13.01% Share World Imports	145.99 mkg (Very Large) ROG: -0.24 PHD: 2.52 Kg/Year	6.16% Share -3.44 ROG 2.01 UVR Sri Lanka Data 5.12% Share -6.15 ROG 1.97 UVR	44.21% Share 0.03 ROG 1.54 UVR Kenya Data 34.32% Share -5.00 ROG 1.80 UVR	4.58% Share 0.81 ROG 1.73 UVR China Data 9.78% Share 4.63 ROG	15.92% Share 1.03 ROG 2.21 UVR India Data 13.50% Share -1.33 ROG 2.23 UVR	6.48% Share 2.74 ROG 1.48 UVR Indonesia Data 9.22% Share 5.35 ROG 1.16 UVR	2.07% Share 11.40 ROG 1.13 UVR Argentina Data 7.66% Share 6.67 ROG 0.69 UVR	6.47% Share -4.22 ROG 1.54 UVR Malawi Data 40.79% Share -1.15 ROG 0.97 UVR	0.56% Share -5.44 ROG 1.70 UVR Bangladesh Data 2.74% Share 8.77 ROG 1.34 UVR	1.99% Share -8.89 ROG 1.67 UVR Tanzania Data 32.58% Share 2.75 ROG 1.23 UVR	0.43% Share 21.76 ROG 1.19 UVR Vietnam Data	0.13% Share -16.64 ROG 1.72 UVR Uganda Data 6.05% Share -27.00 ROG 1.20 UVR	0.18% Share -7.56 ROG 1.75 UVR Turkey Data 1.76% Share 8.54 ROG	2.22% Share -7.26 ROG 1.63 UVR Zimbabwe Data 48.40% Share -10.33 ROG 1.29 UVR
		Russian Federation Data												
Russian Federation 12.87% Share in World Imports	145.23 mkg (Very Large) ROG: -1.70	18.69% Share -5.30 ROG Sri Lanka Data 1.48% Share 2.08 UVR	0.99% Share 154.79 ROG Kenya Data 0.37% Share 1.67 UVR	4.64% Share 0.88 ROG China Data 13.48% Share -4.31 ROG	55.46% Share 14.21 ROG India Data 44.12% Share -0.08 ROG 2.23 UVR	3.71% Share -34.43 ROG Indonesia Data 10.76% Share -18.43 ROG 1.45 UVR	1.18% Share -10.99 ROG Argentina Data 4.25% Share 0.94 UVR	Malawi Data	1.73% Share -85.45 ROG Bangladesh Data 11.48% Share 4.82 ROG 1.62 UVR	Tanzania Data	0.33% Share -43.37 ROG Vietnam Data	Uganda Data	Turkey Data 21.43% Share -6.51 ROG	Zimbabwe Data
		Pakistan Data												
Pakistan 9.82 Share in World Imports	110.03 mkg (Large) ROG: -1.01	5.71% Share -6.62 ROG 1.82 UVR Sri Lanka Data 0.02% Share 1.47 UVR	49.48% Share 5.25 ROG 1.94 UVR Kenya Data 25.85% Share -0.43 ROG 1.79 UVR	2.51% Share -20.79 ROG 1.20 UVR China Data 2.14% Share -10.72 ROG	1.01% Share 6.14 ROG 1.78 UVR India Data 0.49% Share 5.30 ROG 1.70 UVR	18.64% Share -3.67 ROG 1.42 UVR Indonesia Data 18.43% Share -2.83 ROG 1.28 UVR	0.35% Share 0.86 UVR Argentina Data 0.67% Share 0.55 UVR	2.74% Share -8.32 ROG 1.35 UVR Malawi Data 7.86% Share -8.20 ROG 0.90 UVR	5.69% Share -4.54 ROG 1.41 UVR Bangladesh Data 25.48% Share -2.83 ROG 1.33 UVR	5.44% Share -8.12 ROG 1.87 UVR Tanzania Data 30.68% Share -11.13 ROG 1.37 UVR	0.50% Share 34.72 ROG 1.03 UVR Vietnam Data	0.28% Share 4.64 ROG 1.55 UVR Uganda Data 1.01% Share 1.32 UVR	Turkey Data	0.35% Share 1.49 UVR Zimbabwe Data 3.16% Share
		USA Data												
USA 7.81% Share in World Imports	87.67 mkg (Large) ROG: 1.26	4.70% Share 1.06 ROG 2.35 UVR Sri Lanka Data 1.77% Share -0.31 ROG 2.24 UVR	4.51% Share 0.48 ROG 1.77 UVR Kenya Data 1.75% Share -2.97 ROG 1.86 UVR	19.15% Share -5.08 ROG 1.16 UVR China Data 20.23% Share -18.93 ROG	3.83% Share 3.58 ROG 2.56 UVR India Data 1.98% Share 8.41 ROG 2.29 UVR	13.21% Share 4.75 ROG 1.19 UVR Indonesia Data 9.69% Share -3.47 ROG 1.08 UVR	29.12% Share 7.60 ROG 0.90 UVR Argentina Data 53.78% Share 4.93 ROG 0.68 UVR	3.66% Share 11.04 ROG 1.46 UVR Malawi Data 6.56% Share -1.79 ROG 0.88 UVR	Bangladesh Data	0.57% Share 23.23 ROG 1.47 UVR Tanzania Data 2.36% Share 20.27 ROG 1.36 UVR	0.50% Share 34.72 ROG 1.03 UVR Vietnam Data	Uganda Data 0.46% Share 1.59 UVR	Turkey Data	0.11% Share 0.80 ROG 1.33 UVR Zimbabwe Data 0.88% Share 17.06 ROG 1.17 UVR

ANNEXURE - II (Continued)

Supply Sources														
Country	Market Profile	Sri Lanka	Kenya	China	India	Indonesia	Argentina	Malawi	Bangladesh	Tanzania	Viatnam	Uganda	Turkey	Zimbabwe
		20.14% Share in W. Exports	18.16% Share in W. Exports	16.67% Share in W. Exports	16.12% Share in W. Exports	8.59% Share in W. Exports	3.99% Share in W. Exports	3.43% Share in W. Exports	2.22% Share in W. Exports	1.67% Share in W. Exports	1.62% Share in W. Exports	1.12% Share in W. Exports	1.10% Share in W. Exports	0.92% Share in W. Exports
Egypt Data														
Egypt 6.52% Share in World Imports	73.02 mkg (Large) ROG: 1.21	20.34% Share -12.67 ROG 1.22 UVR	51.72% Share 13.52 ROG 1.49 UVR	0.54% Share 1.26 UVR	8.37% Share -9.50 ROG 1.77 UVR	10.26% Share -26.44 ROG 1.42 UVR		1.28% Share 1.39 UVR			0.36% Share 1.12 UVR	0.24% Share 1.33 UVR		
		Sri Lanka Data 6.54% Share -15.68 ROG 1.70 UVR	Kenya Data 16.22% Share 5.49 ROG 1.60 UVR	China Data 0.41% Share	India Data 3.47% Share -11.79 ROG 1.73 UVR	Indonesia Data 7.22% Share -23.47 ROG 1.14 UVR	Argentina Data	Malawi Data 0.94% Share 6.77 ROG 0.94 UVR	Bangladesh Data 2.16% Share	Tanzania Data	Vietnam Data	Uganda Data 0.37% Share 0.56 UVR	Turkey Data	Zimbabwe Data
Japan Data														
Japan 3.81% Share in World Imports	42.98 mkg (Med. Medium) ROG: 4.39	15.22% Share -0.01 ROG 3.60 UVR	1.61% Share 5.36 ROG 2.22 UVR	55.25% Share 3.16 UVR	7.47% Share 1.38 ROG 5.33 UVR	2.95% Share 8.58 ROG 2.53 UVR		0.34% Share -0.45 ROG 1.84 UVR	0.31% Share 5.26 ROG 1.54 UVR		1.47% Share 26.16 ROG 2.30 UVR			
		Sri Lanka Data 2.75% Share 0.50 ROG 2.83 UVR	Kenya Data 0.27% Share -1.20 ROG 1.91 UVR	China Data 1.67% Share 15.26 ROG	India Data 1.40% Share 2.14 ROG 4.08 UVR	Indonesia Data 0.84% Share 12.84 ROG 1.68 UVR	Argentina Data	Malawi Data	Bangladesh Data 0.61% Share 110.6 ROG 1.41 UVR	Tanzania Data	Vietnam Data	Uganda Data	Turkey Data	Zimbabwe Data
Iran Data														
Iran 3.69% Share in World Imports	41.12 mkg (Med. Medium) ROG: -6.84	29.05% Share -8.85 ROG	5.29% Share	1.17% Share	15.42% Share -12.58 ROG	2.22% Share 13.22 ROG								
		Sri Lanka Data 6.16% Share -17.85 ROG 2.32 UVR	Kenya Data 1.86 UVR	China Data 0.55% Share	India Data 3.81% Share -20.29 ROG 2.39 UVR	Indonesia Data 1.01% Share 11.14 ROG 1.52 UVR	Argentina Data	Malawi Data	Bangladesh Data 7.39% Share	Tanzania Data	Vietnam Data	Uganda Data	Turkey Data 8.15% Share	Zimbabwe Data
Morocco Data														
Morocco 2.85% Share in World Imports	32.07 mkg (Med. Medium) ROG: 4.02	1.07% Share -17.46 ROG 3.27 UVR		93.09% Share 0.55 ROG 2.24 UVR	2.40% Share 3.76 UVR	2.75% Share -2.13 ROG 1.63 UVR								
		Sri Lanka Data	Kenya Data	China Data 1.08% Share -2.72 ROG	India Data 0.28% Share 2.07 UVR	Indonesia Data 0.87% Share 0.87 UVR	Argentina Data	Malawi Data	Bangladesh Data	Tanzania Data	Vietnam Data	Uganda Data	Turkey Data	Zimbabwe Data

ANNEXURE - II (Continued)

Supply Sources														
Country	Market Profile	Sri Lanka	Kenya	China	India	Indonesia	Argentina	Malawi	Bangladesh	Tanzania	Viatnam	Uganda	Turkey	Zimbabwe
		20.14% Share in W. Exports	18.16% Share in W. Exports	16.67% Share in W. Exports	16.12% Share in W. Exports	8.59% Share in W. Exports	3.99% Share in W. Exports	3.43% Share in W. Exports	2.22% Share in W. Exports	1.67% Share in W. Exports	1.62% Share in W. Exports	1.12% Share in W. Exports	1.10% Share in W. Exports	0.92% Share in W. Exports
Poland Data														
Poland 2.47% Share in World Imports	27.82 mkg (Med. Medium) ROG: -6.84	6.49% Share 9.92 ROG 2.01 UVR	2.87% Share 174.94 ROG	7.09% Share 21.96 ROG	43.22% Share -2.67 ROG	5.22% Share 4.27 ROG	1.78% Share -25.84 ROG	3.55% Share 113.16 ROG	21.60% Share 10.35 ROG		0.41% Share -6.70 ROG		1.92% Share	
		Sri Lanka Data 0.56% Share 14.00 ROG 3.70 UVR	Kenya Data 0.26% Share 1.78 UVR	China Data 3.12% Share 35.32 ROG	India Data 6.96% Share 0.62 ROG 3.16 UVR	Indonesia Data 1.41% Share 15.42 ROG 1.24 UVR	Argentina Data 1.05% Share -25.92 ROG 0.79 UVR	Malawi Data 1.27% Share 0.79 UVR	Bangladesh Data 26.15% Share 19.17 ROG 1.36 UVR	Tanzania Data	Vietnam Data	Uganda Data 0.51% Share 1.67 UVR	Turkey Data 4.03% Share	Zimbabwe Data
Germany Fed Rep Data														
Germany Fed Rep 1.68% Share in World Imports	19.02 mkg (Med. Small) ROG: 4.97	16.26% Share -0.96 ROG 3.27 UVR	1.12% Share -3.03 ROG 2.96 UVR	15.91% Share 8.83 ROG 3.34 UVR	3.14% Share 2.28 ROG 4.46 UVR	10.37% Share 8.21 ROG 2.86 UVR	5.03% Share -6.78 ROG 1.90 UVR	3.82% Share 8.16 ROG 1.84 UVR	0.28% Share 1.94 UVR	0.92% Share 1.89 ROG 2.03 UVR	3.03% Share 13.64 ROG 2.19 UVR		1.86% Share 6.00 ROG 2.27 UVR	0.98% Share 1.52 ROG 1.85 UVR
		Sri Lanka Data 7.64% Share 0.79 ROG 1.96 UVR	Kenya Data 0.47% Share -15.62 ROG 2.62 UVR	China Data 5.381% Share 4.47 ROG	India Data 3.14% Share 2.28 ROG 4.46 UVR	Indonesia Data 3.45% Share 1.51 ROG 1.21 UVR	Argentina Data 4.64% Share -14.18 ROG 0.83 UVR	Malawi Data 2.50% Share -7.26 ROG 1.01 UVR	Bangladesh Data 1.10% Share -27.44 ROG 0.50 UVR	Tanzania Data 2.09% Share 0.92 ROG 1.28 UVR	Vietnam Data	Uganda Data	Turkey Data 12.53% Share 21.31 ROG	Zimbabwe Data 1.18% Share
Australia Data														
Australia 1.47% Share in World Imports	16.51 mkg (Med. Small)	19.61% Share -0.93 ROG ROG: -0.95	6.52% Share -0.70 ROG 4.59 UVR	6.80% Share -17.00 ROG 1.64 UVR	7.20% Share -0.02 ROG 3.72 UVR	32.18% Share -0.41 ROG 4.92 UVR	0.06% Share 1.47 UVR	2.68% Share -2.31 ROG	1.59 UVR					
		Sri Lanka Data 1.27% Share -3.60 ROG 3.68 UVR	Kenya Data 0.52% Share 3.87 ROG 1.59 UVR	China Data 1.15% Share -15.93 ROG 1.59 UVR	India Data 0.44% Share 5.56 ROG 1.91 UVR	Indonesia Data 4.27% Share -2.56 ROG 1.39 UVR	Argentina Data 0.04% Share 0.69 UVR	Malawi Data 1.14% Share -4.43 ROG 1.13 UVR	Bangladesh Data 0.35% Share	Tanzania Data 1.13 UVR	Vietnam Data	Uganda Data	Turkey Data	Zimbabwe Data
Libya Data														
Libya 1.35% Share in World Imports	15.07 mkg (Med. Small) ROG: 5.02	64.64% Share 6.23 ROG		20.06% Share	15.00% Share 53.46 ROG	32.18% Share 0.41 ROG								
		Sri Lanka Data 4.00% Share -3.58 ROG 2.25 UVR	Kenya Data	China Data 2.22% Share	India Data 1.15% Share 1.87 UVR	Indonesia Data	Argentina Data	Malawi Data	Bangladesh Data	Tanzania Data	Vietnam Data	Uganda Data	Turkey Data	Zimbabwe Data

ANNEXURE - III

(1997-99 average)

Importer	Rank	Exporter
United Kingdom 11.99% Share in World Imports	1 2 3 4 5	Kenya (43.82%) India (16.67%) Indonesia (6.57%) Sri Lanka (4.96%) South Africa (2.75%)
Russian Fed 12.28% Share in World Imports	1 2 3 4 5	India (66.66%) Sri Lanka (19.61%) China (4.66%) Georgia (3.33%) Indonesia (1.67%)
Pakistan 8.45% Share in World Imports	1 2 3 4 5	Kenya (58.44%) Indonesia (14.60%) Bangladesh (5.21%) Sri Lanka (4.12%) Tanzania (3.75)
USA 7.47% Share in World Imports	1 2 3 4 5	Argantina (37.44%) China (15.57%) Indonesia (10.2%) Kenya (4.87%) Germany (3.61%)
Egypt 5.99% Share in World Imports	1 2 3 4 5	Kenya (69.16%) Sri Lanka (12.30%) India (5.68%) Malawi (4.25%) Indonesia (3.29%)
Japan 4.06% Share in World Imports	1 2 3 4 5	China (60.14%) Sri Lanka (15.91%) India (8.52%) Indonesia (3.92%) Taiwan (2.93%)
Morocco 3.06% Share in World Imports	1 2 3 4	China (98.35%) Indonesia (1.02%) UK (0.15%) Sri Lanka (0.12%)
Iran 2.85% Shares in World Imports	1 2 3 4 5	Persian Gulf States (32.65%) Sri Lanka (20.71%) Kenya (13.41%) India (9.38%) Indonesia (2.11%)

ANNEXURE - III (Continued)

(1997-99 average)

Importer	Rank	Exporter
Poland	1	India (34.90%)
2.39% Share in World Imports	2	Bangladesh (22.26%)
	3	China (10.63%)
	4	Sri Lanka (6.99%)
	5	Indonesia (5.48%)
Germany	1	India (22.92%)
1.80% Share in World Imports	2	China (19.68%)
	3	Sri Lanka (13.33%)
	4	Indonesia (11.56%)
	5	Vietnam (5.39%)
Australia	1	Indonesia (31.222%)
1.29% Share in World Imports	2	Sri Lanka (19.32%)
	3	Papua New Guinea (16.06%)
	4	Kenya (7.23%)
	5	India (6.76%)
Canada	1	UK (30.52%)
1.45% Share in World Imports	2	Kenya (12.25%)
	3	Sri Lanka (9.92%)
	4	USA (9.72%)
	5	India (5.80%)
Libya	1	Sri Lanka (71.78%)
1.16% Share in World Imports	2	India (16.75%)
	3	China (9.69%)
France	1	Sri Lanka (71.78%)
1.14% Share in World Imports	2	UK (13.58%)
	3	China (11.96%)
	4	Belgium & Luxemburg (8.58%)
	5	Indonesia (1.96%)
Ireland (Rep.)	1	Kenya (54.46%)
0.85% Share in World Imports	2	India (15.16%)
	3	Indonesia (6.64%)
	4	Zimbabwe (5.91%)
	5	UK (5.49%)
Netherlands	1	Indonesia (22.94%)
0.65% Share in World Imports	2	Sri Lanka (14.06%)
	3	Malawi (9.99%)
	4	Turkey (7.28%)
	5	China (7.22%)

Source : Based on the basic data from various issues of ITC Bulletin, London.

ANNEXURE - IV

QUANTITY AND VALUE OF TEA EXPORTS FROM INDIA [EXCLUDING INSTANT TEA]

Year	Quan-tity Th. Kgs	Value Th. Rs	Unit Price Rs./Kg	Year	Quan-tity Th. Kgs	Value Th. Rs	Unit Price Rs./Kg
1954-55	208462	1482316	7.11	1954	203195	1307523	6.43
1955-56	183769	1096448	5.97	1955	166708	1136132	6.82
1956-57	233088	1451344	6.23	1956	237484	1428249	6.01
1957-58	191755	1436435	7.49	1957	200786	1233859	6.15
1958-59	217322	1296953	5.97	1958	229503	1365859	5.95
1959-60	215459	1290846	5.99	1959	213680	1260135	5.9
1960-61	196473	1222549	6.22	1960	193063	1199883	6.21
1961-62	205329	1221680	5.95	1961	206292	1242513	6.02
1962-63	220800	1296000	5.87	1962	211826	1235339	5.83
1963-64	209328	1231885	5.88	1963	223542	1323710	5.92
1964-65	212325	1246657	5.87	1964	210523	1249012	5.93
1965-66	197385	1148374	5.82	1965	199365	1149747	5.77
1966-67	190383	1562189	8.21	1966	179205	1565921	8.74
1967-68	203333	1801974	8.86	1967	213676	1890384	8.85
1968-69	200824	1565092	7.79	1968	208440	1664825	7.99
1969-70	174112	1245029	7.15	1969	168709	1205371	7.14
1970-71	199139	1842470	9.25	1970	202016	1487533	7.36
1971-72	214317	1609204	7.51	1971	202052	1536678	7.61
1972-73	193228	1472935	7.62	1972	198195	1511439	7.63
1973-74	190268	1448490	7.61	1973	188192	1427072	7.58
1974-75	225057	2235355	9.93	1974	210583	1927972	9.16
1975-76	211409	2382948	11.27	1975	218128	2446592	11.22
1976-77	242418	2954777	12.19	1976	233611	2731364	11.69
1977-78	221522	5637117	25.45	1977	229637	5416157	23.59
1978-79	177327	3591193	20.25	1978	176051	3628916	20.61
1979-80	208448	3768961	18.08	1979	199639	3618401	18.12
1980-81	231736	4352730	18.78	1980	224026	4290277	19.15
1981-82	224200	4068252	18.15	1981	241246	4342541	18
1982-83	194090	3694482	19.03	1982	189933	3555525	18.72
1983-84	202312	5575549	27.56	1983	208476	5168145	24.79

ANNEXURE - IV (Continued)

QUANTITY AND VALUE OF TEA EXPORTS FROM INDIA [EXCLUDING INSTANT TEA]

Year	Quantity Th. Kgs	Value Th. Rs	Unit Price Rs./Kg	Year	Quantity Th. Kgs	Value Th. Rs	Unit Price Rs./Kg
1984-85	217401	7713889	35.48	1984	217040	7404551	34.12
1985-86	214234	6479796	30.25	1985	214021	6952966	32.49
1986-87	196232	5794783	29.53	1986	203149	5808510	28.59
1987-88	201830	6277688	31.1	1987	201891	6392466	31.66
1988-89	204075	6352799	31.13	1988	200956	6126937	30.49
1989-90	210615	9047231	42.96	1989	211622	8400923	39.7
1990-91	198240	10620939	53.58	1990	209085	11041507	52.81
1991-92	215166	11964625	55.61	1991	201720	11203136	55.54
1992-93	178950	10316425	57.65	1992	173358	9717402	56.05
1993-94	153427	10398935	67.78	1993	173726	11325271	65.19
1994-95	150836	9635458	63.88	1994	149317	9652334	64.64
1995-96	166239	12184298	73.3	1995	167143	11908077	71.24
1996-97	167172	12568167	75.18	1996	160004	12070978	75.44
1997-98	208773	19453207	93.18	1997	200713	17218472	85.79
1998-99	203431	21288720	104.65	1998	207640	22383087	107.8
1999-2000	189837	18672822	98.36	1999	189092	19024369	100.61
2000-2001	200770	18066853	89.99	2000	204353	18270324	89.41
2001-2002	187407	16215897	86.53	2001	179857	16022060	89.08

Source : Tea Statistics 2000-2001 issued by Tea Board of India, Kolkata