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para la  
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y la  
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## COMMITTEE ON COMMODITY PROBLEMS

### INTERGOVERNMENTAL GROUP ON BANANAS AND TROPICAL FRUITS

#### Fourth Session

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### MARKET PROFILE ON TROPICAL FRUITS IN INDIA

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## I. INTRODUCTION

1. At its Fourth Session, the Sub-Group on Tropical Fruits recommended that the Secretariat carry out a market update on India, and a market overview of the Near East. The Secretariat was not able to carry out a market overview of the Near East due to resource constraints. An attempt at a desk research also proved futile due to a paucity of information on the markets for tropical fruits in the region. Therefore, this document is devoted entirely to the major developments in supply, demand and trade of tropical fruits in India and the likely future prospects.

## II. PRODUCTION

2. India is one of the most important fruit producing nations in the world, accounting for about 10.4 percent of all fruits and nearly 40 percent of tropical fruits produced globally. Fruit production in India increased at an average annual growth rate of 3 percent between 1995 and 2004, while harvested area and yields increased by 2.4 and 1.5 percent, respectively. Fruit production increased steadily from 36 to 47 million tonnes, between 1995 and 2004, largely as a result of supply side policy incentives. It contributes 10 percent on average to the gross value of total agricultural output in India, and about 13 percent of the total export earnings from major agricultural products. The major fruit growing states include, Uttar Pradesh, Karnataka, Tamil Nadu, Maharashtra, and Gujarat.

3. The main tropical fruits produced in India include banana, mango, guava, pineapple, papaya, lychee (or litchi), and to a lesser extent sapota, jackfruit, phalsa, annona and ber. The 3 major tropical fruits (mango, pineapple, and guava) accounted for 33 percent of total fruit production in 2004. Mango output was 10.8 million tonnes in 2004, a 6.2 percent increase over 1998/2000, while production of papaya and pineapple was 700 000 and 1.3 million tonnes, respectively, in 2004. Papaya grew by 4.3 percent over the 1995/2004 period, while pineapple production increased by 2.3 percent over the same period. India is the largest producer of mango in the world, accounting for about 41 percent of world output in 2004, and the second amongst papaya producing countries.

4. Tropical fruit production could be further developed by *inter alia*:

- improving productivity and quality from the existing crop areas,
- developing infrastructure for post-harvest marketing,
- increasing the availability of quality seed/planting material,
- stimulating transfer of technology,
- improving product harvesting and handling, and
- promoting export into existing and new markets.

**Table 1: Production of selected Fruits in India**

	Average (1992/1994)	2002	2003	2004
	('000 tonnes)			
<b>Bananas</b>	9718	16820	16820	16820
<b>Mangoes</b>	10108	10640	10780	10800
<b>Oranges</b>	1743	3120	3070	3070
<b>Apples</b>	1205	1160	1470	1470
<b>Lemons and Limes</b>	863	1440	1420	1420
<b>Pineapples</b>	956	1180	1310	1300
<b>Grapes</b>	684	1210	1150	1200

<b>Papayas</b>	470	700	700	700
<b>Pears</b>	127	200	200	200
<b>Peaches and Nectarines</b>	83	150	150	150
<b>Grapefruit and Pomelos</b>	83	140	142	142
<b>Plums</b>	55	80	80	80
<b>Figs</b>	6	11	11	11
<b>Apricots</b>	7	10	10	10
<b>Cherries</b>	4	8	8	8

Source: FAOSTAT

### III. TRADE

5. Although India is one of the world's largest fruit producers, current export volumes remain small. Most of the fruit produced in India is consumed domestically. Export volumes represent less than 1 percent of total domestic output, as well as less than 1 percent of world exports. More than 80 percent of fruit exports from India are tropical fruits, including mangoes, guava, pineapples, and papayas. India was the second largest exporter of mangoes in the world in 2004, after Mexico, shipping 180 000 tonnes or 21 percent of the world total. Exports of papaya and pineapple amounted to 3 550 tonnes and 1 624 tonnes, respectively. India also imports a sizable quantity of fresh fruits, but these are mainly temperate fruits such as apples and pears, and a large volume of dried fruits such as dates and raisin. Total imports of both fresh and dried fruits reached 216 400 tonnes in 2003 (the latest year for which a complete set of data on the value of trade exists), and were valued at US\$ 47.1 million.

6. Foreign exchange earnings from fresh and processed fruits (including dried and canned fruit as well as pulps and juices) amounted to US\$ 140 million in 2003, an almost twofold increase (185 percent) over the 1996 - 1998 average. Mango is the main fruit exported from India. Export earnings from fresh mangoes totalled US\$ 80 million in 2003, which was 61 percent of India's total fruit exports. About 50 percent of processed fruit exports were mango-based products, such as mango pulp for juice mixes, and condiments including pickles and chutneys. However, on a comparative basis globally, only 2 percent of the fruit production in India is processed compared to 70 percent in Brazil, and 83 percent in Malaysia. It is estimated that about 25 to 30 percent of fruit production is wasted due to a lack of post-harvest infrastructure.

7. The Near East, the Far East and Europe are the main export destinations for fresh tropical fruits and processed products from India. Processed products such as fruit juice, fruit pulp and pickles are mostly exported to the Russian Federation and the Near East. Other markets for processed fruit are the United Kingdom, United Arab Emirates, Saudi Arabia, Kuwait, Germany, United States, the Netherlands and Switzerland. India also exports dried mango slices, puree, paste and juice to many of the same markets. In 2003, the major destinations for fresh mangos from India were Bangladesh (42 700 tonnes), Saudi Arabia (38 382 tonnes), the United Arab Emirates (28 621 tonnes), Yemen (11 189 tonnes), Netherlands (9 106 tonnes), Kuwait (7 150 tonnes), Nepal (5 405 tonnes), and the United Kingdom (4 890 tonnes).

### IV. APPARENT CONSUMPTION

8. Favourable growing conditions permit the production and supply of a large variety of tropical fruits throughout the year. These are consumed not only in the regions where they are grown but throughout India. Terminal markets in major Indian cities receive large quantities of tropical fruits, which are then sold through retail dealers in the other cities and towns. Statistics on

consumption of tropical fruits are not available, so estimates need to be derived based on other information available on production and trade.

9. Total apparent consumption of fruits in India was estimated at 39 million tonnes in 2002 (the latest year for which consumption data is available), about 8 million tonnes larger than in 1995, with consumption of fresh tropical fruits estimated at 16.3 million tonnes. Annual per capita consumption of fruit was evaluated at 37 kilograms (kg) in 2002, a 12 percent increase over 1995, with major tropical fruits at 13.3 kg (bananas at 7.7 kg), temperate fruits at 4.2 kg and other fruits at 5.9 kg. According to the National Sample Survey Organization, 64 percent of rural households reported fresh fruit consumption in 1999 compared to 84 percent of households in urban areas.

10. Research studies into the consumption of tropical fruits in India showed that among major states, Kerala, Tamil Nadu in the South and Goa in the West have the highest level of consumption of fruits both for rural and urban areas. These states are followed by Punjab, Haryana, Delhi, and Union Territories of Chandigarh in the North. Bihar and Orissa in the east and Rajasthan and Madhya Pradesh in central India have much lower levels of consumption.

## **V. FACTORS AFFECTING DEMAND IN INDIA**

### **A. POPULATION**

11. Population growth in India was estimated at 1.67 percent per year between 1995 and 2004. According to official statistics, population growth is expected to decline to 1.3 percent per year by 2015 when the total population of India is expected to reach 1.2 billion. Research studies revealed a sizable potential to expand fruit consumption in rural areas, states with currently low per capita consumption rates and growing urban areas.

### **B. INCOME AND PRICES**

12. Indian economic development has been strong recently with GDP growth averaging 5.6 percent between 1990 and 2003, largely as a result of robust domestic demand. Inflation has been contained and exports have been strong. These facts contributed to a 3.75 percent rise in per capita income between 1990 and 2003, with household expenditure for fruits and vegetables estimated to have increased about 5 percent per year over the same period. Annual per caput fruit consumption also increased, from 30 kg in 1992 to 37.7 kg in 2002.

13. The consumption of tropical and other fruits is largely correlated with per capita income. Research conducted by the Indian Agriculture Research Institute indicated that the proportion of the population that make up the highest income group consumes about six times more fruits than the lowest income group, in both rural and urban areas. Urban households spend 2.25 percent of their income on fresh and dried fruits, while rural households spend 1.8 percent of their income on the same items. For rural areas, income elasticity of fruit demand for the highest income group was evaluated at 0.283, while that of the lowest income bracket was 0.826. Similarly for urban areas, the income elasticities were 0.293 for the highest bracket, and 0.782 for the lowest. Lower income groups are, therefore, more likely to account for most of the future growth of the market in India.

14. Prices of fruit have increased more than the General Price Index between 1999/2000 and 2003/2004: the All Commodities Wholesale Price rose by 21 percent, while the Fruits wholesale price increased by 39 percent. A substantial price differential exists between wholesale and retail prices. This might be due to rising costs in processing, distribution, and marketing, or due to a non-competitive market structure. High retail prices constitute a major constraint for increasing consumption, particularly among the middle to low income household groups.

### C. CONSUMPTION HABITS AND PREFERENCES

15. Upon further analysis it became apparent that the trend toward healthier food consumption in India reflected in growing interest in the nutritive attributes of tropical fruits, particularly as household incomes grow. The interest in healthier diets has led to an expansion in the consumption of all fruits, of which a large share has been that of tropical fruits. Temperate fruits are found to be consumed mostly by the high income group, while tropical fruits consumption is more wide-spread among all income groups. Large quantities of fresh unripe mangoes are used in household preparation of pickles and chutneys. Consumption of lychee and sapota is mainly concentrated among the middle and high income group. The tourism industry is also contributing significantly to the rise in tropical fruit consumption. The growth in air travel and tourism in India has enabled foreigners to experience the taste of a large variety of tropical fruits. This contributes positively to a rising market demand for tropical fruits in Asia, Europe, and North America. Another factor contributing to rising consumption is domestic promotional activities. The Government of India has recently carried out various nutritional education programmes to raise awareness on the importance of a varied diet, and the benefit of fruit consumption. In addition, promotional programmes carried out by the fruit juice processing industry through television, newspapers and in-store promotional activities encouraged overall demand for fruits.

16. Prior to 1997, imports of fresh and dried fruits, with the exception of dates and figs, were prohibited. Following the liberalisation of trade in agricultural commodities, imports of all fresh fruit (except citrus, grapes and lychees) have been permitted generally on Open General License (OGL) bases. In the case of South Asian Association for Regional Cooperation (SAARC) countries<sup>1</sup>, an import tax of 44 percent ad valorem is levied, while for other countries it is set at 45.6 percent. There are no reported export duties on fruits from India.

### VI. CONCLUDING REMARKS

17. Domestic demand for fresh fruits in India has been on the increase in line with rising incomes, population growth, and increased health consciousness among consumers. Fruit consumption in India is anticipated to increase by about 4 percent per year according to projected growth rates for income, population, and trends in food preferences. In addition, growth in demand for Indian fresh and processed tropical fruits has been strong in recent years and this trend is likely to continue in the medium term.

18. This holds considerable potential for domestic producers and suppliers of tropical fruits in India, and in the case of the Indian market, for the overseas suppliers that are able to compete effectively with domestic supplies. Growth in the fruit production and processing sub-sectors provides employment opportunities and income generation, and contributes positively to food security. Furthermore, tropical fruit production provides an alternative option for crop diversification, as well as support to rural entrepreneurs engaged in the supply of inputs for production and purchasing of fruit for marketing. However, to fully realise this potential requires changes in the value chain, particularly to compete in the quality sensitive international markets. Development of efficient post-harvest handling infrastructure, transportation facilities and the quality of the produce must be priorities, especially for fruits that are grown for the lucrative export market. Improvement to the existing system is challenging and requires considerable support from Government, research institutions, and technology suppliers to develop appropriate facilities and practices at all stages of the value chain.

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<sup>1</sup> Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.