CHAPTER IV

RESULTS AND DISCUSSION

This chapter deals with the presentation of results and discussion thereof. The results are discussed in four sections. India’s agricultural trade policies are discussed in the first section. The second section describes the trade performance of agricultural commodities. The trade performance of horticultural commodities has been dealt in the third section. The fourth section deals with the trade performance of Indian onion. The trade performance of Indian mango has been dealt in fifth section. Finally in the sixth section the trade performance of Indian tea has been dealt with.

4.1 India’s agricultural trade policies: 1950-2006

India achieved independence in 1947. At that time, India’s trade with other nation was typical of a colonial and primarily agricultural economy. India’s trade was essentially confined to Britain and members of the Commonwealth. In the decade preceding independence, around 54 per cent of India’s total exports were to the Commonwealth countries with the United Kingdom accounted for 31 per cent of the total exports. Imports from the United Kingdom accounted for 31 per cent of India’s total imports. While imports included some industrial goods, exports chiefly comprised raw materials. This was largely on outcome of the colonial policy of exploiting the country for supporting home industries in the United Kingdom. Trade was a major instrument of exploitation as the British developed trade policies that promoted the exports of food stuffs and raw materials and imports of manufactured articles.

During the past six decades after independence, India’s trade with the other countries of the world has increased tremendously. During most of this period, trade was largely controlled by the Government through a series of mandatory and discretionary regulations. Trade policies formulated and implemented by the country aimed to protect domestic producers and develop domestic industries. Till 1990, India followed highly protective trade policies with most agricultural commodities being subject to quantitative restrictions, canalization, quotas and high tariffs. However, prompted by changes taking place globally in economic and trade policies, the felt need to integrate with the world economy, and the signing of the agreement leading to the formation of the WTO, India undertook a series of economic policy and trade
reforms that have had a significant impact on our trade in general and in agricultural commodities in particular.

After independence, and particularly in the more recent period of planned development, the composition of India’s trade has undergone a substantial change and now non-primary commodities are being exported on a considerable large scale. As may be seen from Tables 4.1, 4.2 and 4.3 there have been significant changes in India’s trade policy affecting value, composition and direction of its foreign trade.

4.1.1. An overview of trade policy

Trade policy relates to both import and export policies. While the former tries to reduce the expenditure and volume of imports, the latter aims at increasing the export earnings, so that the balance of payments problem, if any, can be solved. The trade policy of India in the immediate post-independence period was, in general, liberal and was aimed at meeting the pent-up demand released in the aftermath of the II world war. However, these imports soon resulted in a heavy deficit in balance of trade and government had to impose restrictions on imports from hard currency areas.

During the first plan period food grains production was comfortable and industrialization was not yet a priority area for the planners. As the government was not called on to provide for imports of capital goods and machinery on a large-scale, it adopted a lenient approach towards imports of these items. It was only in 1956-57, when balance of payments crisis struck the country that the Government resorted to several quota restrictions on imports. The second plan contemplated a large-scale program of industrialization for the country and as a result it was necessary to restrict imports of all non-essential goods. The axe also fell on imports of consumer goods to enable the country to go ahead with the ambitious industrialization program. Imports were categorized as banned items, restricted canalized items and items under Open General License (OGL).

The government of India devalued the rupee in June 1966 and as a result imports were somewhat liberalized. Such liberalization was offered to 59 priority industries including export industries, capital building industries and industries catering to the needs of common usage like sugar and cotton textiles.
The year 1966 also saw the advent of “Green Revolution”, which necessitated the large-scale imports of fertilizers, seeds, pesticides and insecticides to implement the new-strategy.

During the Third plan the import restrictions were to a certain extent removed and remained so till 1977-78. Export encouragements began in 1962 and exports registered marked improvements to 1965-66. The years 1977-78 saw a new era of import liberalization in the country. This process of liberalization was carried forward to the eighties as well. During 1980-85, the import policies announced annually were aimed at providing necessary imported inputs for the industrial sector. However, the real thrust to the process of import liberalization was given from 1985 onwards when the planners began formulating export-import policies for three years. The first 3-years EXIM policy covered the period 1985-89 and the second covered the period 1988-91. Due to unforeseen political changes, the second policy was terminated one year earlier and the government on March 30, 1990 announced the third policy, covering the period April 1, 1990 to March 31, 1993.

4.1.2 Export promotion and import liberalization measures since the nineties

A serious move towards liberalization of trade in India in late eighties with incorporation of recommendations of three committees, the Alexander Committee (1978), Dagli Committee (1979) and Tandon Committee (1980) Sen, 2000). The recommendations offered by these three official committees were incorporated in the subsequent long-term import and export policy of 1985-86 to 1990-91. During March 1990, there were some changes in this EXIM policy framework due to changes in political regimes. But the general theme of liberalization of imports, especially of capital goods and raw materials, continues to be one of the components. Export encouragement on one side and import relation on the other formed the main theme of policy changes. Further, the trade policy that was earlier characterized only by short-term policies to combat exigencies was turned into a long-term consistent policy (Deshpande and Thippaiah, 2000). Many steps were introduced to promote exports, input prices, freight credit for working capital, direct cash assistance to exporters and lastly the duty drawbacks which exempted the exporting units from the payment of indirect taxes. While these measures can be described as direct methods to promote exports, there were also other indirect measures like the exemption from MRTP devaluation of rupee, reduction in cash
margins of imports, introduction of EXIM scrip’s, relaxation in export control marked important steps.

In case of imports, Long term Import Export (LTMX) policy measures from early nineties sought to liberalize on a priority basis imports of capital goods and raw materials by shifting these to OGL list and also through tariff reduction. With gradual dismantling of import barriers, the emphasis on export promotion during the nineties received relatively a greater attention than in earlier LTMX announcements. Nevertheless, for imports, trade policy in India has also been subject to short run adjustments to combat critical external payments situation. Measures to tackle foreign exchange crisis included cut in the value of free foreign exchange component of supplementary licenses issued to major industries, changing of higher cash margins and higher interest rated for financing imports of capital goods. Special import licenses, permitting imports from restricted list and of 18 selected durables from the negative list, were allowed to certain categories of privileged export houses. Moves to strengthen liberalization measures in economy were included in budget of 1992-93 which introduced simplification of import licensing procedures and customs duties were slashed in 1993-94, which reduced the peak average duty from 110 per cent to 85 per cent. Pressures from both domestic and external sources have initiated the short run deviations from the LTMX policy of 1992-97. Thus indigenous inputs were excluded from the computation of value addition obligations of the EOUs/EPZs units, a step devised to encourage the use of indigenous inputs by the latter. Later in June 1993, countervailing duties were imposed on a range of products, on the grounds that it would create a level playing field for both the importer and the domestic manufacturer of such goods (Sen and Das, 1992). The conclusion of Uruguay round of GATT in 1994 leading to WTO forced extensive liberalization of trade in goods and services. Export promotion became inevitable with anticipation of forced liberalization. Export processing zones were created. Removal of quantitative restrictions in the three consecutive years from 1999 covered large number of items including from agriculture sector thus forcing in for liberalization through easing of licensing system. Promotion of agricultural exports also took a centre stage.
4.1.3 Liberalization of agricultural trade

The peculiarities associated with agricultural sector kept the policy makers away from liberalizing agricultural sector as much as other sectors. In the earlier phase of liberalization i.e., shifting of commodities to OGL, agriculture commodities had hardly appeared in the list. The policy of extension of EXIM scrips to agriculture in 1991 included only traditional agricultural export items. For agriculture specifically, some notable liberalization attempts were made from mid-nineties.

The granting of EOU status to units in agriculture and allied products in 1992-97 EXIM policy. Decentralization, shifting of commodities from restricted, prohibited lists to free lists in different phases from 1994, etc., are prominent ones to mention specifically for agricultural commodities. The amendments of EXIM policy made during April 2001 gave importance to agricultural sector through creating of Agricultural Exports Zones wherein the state governments could identify product specific zones. The EXIM policy schemes like Duty Exemption Scheme and Export Promotion capital Goods scheme were being made applicable to the agricultural sector. Import duties on capital goods to be used in agriculture were lowered and credit availability for exports was increased. The measures liberalizing exports included reduction in products subject to state trading, relation of export quotas, the abolition of Minimum Export Policies (MEPs) and income tax exemption for profits from agricultural exports.

Agricultural policy in India is guided by a number of goals; food self-sufficiency, ensuring remunerative policy for farmers and stable price for consumers. Numbers of measures have been taken to achieve these goals including provisions of direct subsidies, input subsidies, and price control. The first national agriculture policy, announced in July 2000, aims to raise annual growth in agriculture over the next two decades to over four per cent, based on efficient use of resources, while conserving India’s soil, water and biodiversity and equity across regions. Accordingly, a number of programs have been introduced like Bharat Nirman, the Horticulture Mission, and initiatives to improve agriculture credit, micro-irrigation and agriculture market reforms.
The EXIM POLICY 2002-2007, has given more importance to agriculture, especially for exports. With sluggish growth in exports and rising imports, liberalization of agricultural exports was an inevitable outcome. Export restrictions like registration and packaging requirements were removed on butter, pulses, wheat and wheat products, groundnut oil, cashew and coarse grains. Restrictions on export of all cultivated varieties of seed, except jute and onion were also removed. For the identified potential sectors, indicative sector wise strategies were laid down based on detailed strategy paper by Export Promotion Councils, Commodity Boards and other Industry associations. The policy empowered state governments with new schemes like ASIDEW (Assistance to States for Infrastructure Development and Exports) and State Level Export Promotion Committee (SLEPC). Thus, importance of agriculture has been increasing with recent EXIM policies. The felt need for infrastructure development and entrusting of state governments with decision-making powers on issues relating to external trade is a positive step towards development of agricultural trade sector in India.

4.1.4. Changes in quantitative restrictions on agricultural imports and exports

Most of the restrictions on trade in agricultural commodities in India till recently have been through imposition of Quantitative Restrictions (ARs). There were some instances of removal of QRs on agricultural commodities as a part of reform process starting from early nineties. It was done only on a few commodities to begin with. But it turned out to be obligatory with WTO panel’s ruling that India should remove QRs before March 2001 non those set of commodities on which QRs were retained as protection towards consumer goods.

The changes in the licensing for agricultural commodities from mid-nineties show that most of the agricultural commodities were put under the list in recent EXIM policy amendments. The percentage of free items increased from 22 per cent in 1995-96 to 58 per cent in 2000 and further to 75 per cent in April 2002 (Table 4.1). In case of licensing of imports, a majority of the commodities were freed in the years 2000 to 2001 as per the obligations under the WTO. Quantitative restrictions on 416 agricultural goods at HS six-digit level were removed in order to implement a WTO panel decision. The authorities noted that in order to protect the interest of farmers, appropriate tariff protection would be provided. Consequently, Government of India undertook several measures to safeguard against imports. These include restricting the
imports of agricultural commodities like wheat, rice, maize and urea through designated state trading enterprises, and granting of import permits by the Ministry of Agriculture after an import risk analysis based on scientific principles and in accordance with WTO agreement on sanitary and phytosanitary measures for import of all primary products of plant and animal origin.

Other than items like live animals, fish meat of bovine animals, products of animal origin, live trees and plants which are either prohibited or restricted for health, hygiene or other reasons, most of the agricultural commodities are now freely importable. Thus, India met the WTO requirement of phasing out of QRs on imports, other than on some items where the QRs are maintained through prohibitions or restrictions as consumer goods on health, hygiene, or food security reasons, as allowed under the WTO.

Table 4.2 and 4.3 present the trade policy changes and current policy status of export and imports of selected major traded agricultural commodities in India. Looking into changes in policy status in some major traded agricultural commodities, notable ones are the removal of QRs on exports of rice in 1994, decanalisation of sugar and milk in 1991 and 1992. In the later stages freeing of exports of all edible oilseeds in 1995 and edible oils in 1998 was prominent. For imports freeing of edible oils in 1994/95 through decanalising was quite prominent. For imports there were some policy changes in pulses, sugar, rubber, and cotton in the initial stages. Rest of eth commodities was liberalized in the later years with the removal of QRs under the WTO obligations.

Table 4.1 Changes in licensing of agricultural commodities (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Free</th>
<th>Prohibited</th>
<th>Restricted</th>
<th>Canalised</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995-96</td>
<td>20</td>
<td>5</td>
<td>65</td>
<td>10</td>
</tr>
<tr>
<td>1997-98</td>
<td>27</td>
<td>3</td>
<td>60</td>
<td>10</td>
</tr>
<tr>
<td>1998-99</td>
<td>31</td>
<td>3</td>
<td>54</td>
<td>12</td>
</tr>
<tr>
<td>2000-01</td>
<td>58</td>
<td>3</td>
<td>37</td>
<td>2</td>
</tr>
<tr>
<td>2002-03</td>
<td>75</td>
<td>1</td>
<td>22</td>
<td>2</td>
</tr>
</tbody>
</table>


The review of export and import policies shows that most of the major traded agricultural commodities are now freed in terms of licensing. But the secretary Report of India’s Trade Policy Review by the WTO (2002) shows that inspire of many liberalization measures India’s
agricultural exports face several constraints that arise from conflicting domestic policies relating to production, storage, distribution, food security, and pricing concerns. Some of the commodities like rice, wheat other food crops, sugar and cotton are subject to controls under the Essential Commodities Act.

Table 4.2 Trade policy changes and current status (of import policy) of major traded agricultural commodities

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Year of policy change</th>
<th>Policy change</th>
<th>Current status (with EXIM policy 2002-07)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulses</td>
<td>1980</td>
<td>Delicensed</td>
<td>Free</td>
</tr>
<tr>
<td>Rubber</td>
<td>1991</td>
<td>Decanalised</td>
<td>Delicensed</td>
</tr>
<tr>
<td>Cotton</td>
<td>1991</td>
<td>Decanalised</td>
<td>Delicensed</td>
</tr>
<tr>
<td>Sugar</td>
<td>1994</td>
<td>Delicensed</td>
<td>Free</td>
</tr>
<tr>
<td>Oil of palm</td>
<td>1994</td>
<td>Decanalised</td>
<td>Delicensed</td>
</tr>
<tr>
<td>Oil of castor bean</td>
<td>1995</td>
<td>Decanalised</td>
<td>Delicensed</td>
</tr>
<tr>
<td>Other edible oils</td>
<td>1995</td>
<td>Decanalised</td>
<td>Delicensed</td>
</tr>
<tr>
<td>Skimmed milk powder &amp; butter oil</td>
<td>1995</td>
<td>Decanalised</td>
<td>Delicensed</td>
</tr>
<tr>
<td>Castor bean</td>
<td>1999</td>
<td>Decanalised</td>
<td>Delicensed</td>
</tr>
<tr>
<td>Edible oilseeds</td>
<td>1999</td>
<td>Decanalised</td>
<td>Delicensed</td>
</tr>
<tr>
<td>Rice</td>
<td>2000</td>
<td>Tariff rates levied</td>
<td>STE (Import through FCI)</td>
</tr>
<tr>
<td>Wheat</td>
<td>2000</td>
<td>Tariff rates levied</td>
<td>STE (Import through FCI)</td>
</tr>
<tr>
<td>Whole milk</td>
<td>2000</td>
<td>Delicensed</td>
<td>Free</td>
</tr>
<tr>
<td>Tobacco</td>
<td>2000</td>
<td>Delicensed</td>
<td>Free</td>
</tr>
<tr>
<td>Coffee and tea</td>
<td>2001</td>
<td>Delicensed</td>
<td>Free</td>
</tr>
<tr>
<td>Coconut and oil of coconut</td>
<td>2001</td>
<td>Delicensed</td>
<td>Free</td>
</tr>
<tr>
<td>Cashew nuts in shell</td>
<td>2001</td>
<td>Delicensed</td>
<td>Free</td>
</tr>
<tr>
<td>Silk</td>
<td>2001</td>
<td>Delicensed</td>
<td>Free</td>
</tr>
</tbody>
</table>

Note: Edible oils and oilseeds decanalised from State Trading Corporation (STC) AND Hindustan Vegetable Oils Corporation, Cotton decanalised from Cotton Corporation of India (CCI), skimmed milk powder from National Dairy Development Board (NDDB), Rubber from STC
In addition there is lack of adequate post-harvest infrastructure like refrigerated transport, storage and packaging, and of adequate facilities at airports, seaports, etc. The policies pertaining to exports of agricultural goods as compared to their import policies seem to be more adhoc in nature. The Ministry of Commerce, through the Director-General of Foreign Trade, notifies the imposition or elimination of these restrictions when pertinent (which can be changed several times in a year). These measures are put in place (or removed) with a view to maximize agricultural export earnings, while ensuring an adequate supply of essential commodities (particularly for mass consumption) to the domestic consumers at reasonable prices.

Table 4.3 Trade policy changes and current status (of export policy_ of major traded agricultural commodities

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Year of policy change</th>
<th>Policy change</th>
<th>Current status (with EXIM policy 2002-07)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar</td>
<td>1991</td>
<td>Decanalised</td>
<td>Free for skimmed milk quantitative ceilings as may be notified by the DGFT, Registration cum allocation from APEDA</td>
</tr>
<tr>
<td>Milk and milk products</td>
<td>1992</td>
<td>Decanalised</td>
<td>Free registration with APEDA</td>
</tr>
<tr>
<td>Rice</td>
<td>1994</td>
<td>Free registration with APEDA</td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>1994 and 2002</td>
<td>Free</td>
<td>Free registration with APEDA</td>
</tr>
<tr>
<td>Rapeseed</td>
<td>1995</td>
<td>Delicensed</td>
<td>Free registration with APEDA</td>
</tr>
<tr>
<td>Oil of castor bean</td>
<td>1998</td>
<td>Delicensed</td>
<td>Free registration with APEDA</td>
</tr>
<tr>
<td>Oil of soy bean</td>
<td>1998</td>
<td>Delicensed</td>
<td>Free registration with APEDA</td>
</tr>
<tr>
<td>Oil of sunflower</td>
<td>1998</td>
<td>Delicensed</td>
<td>Free registration with APEDA</td>
</tr>
<tr>
<td>Oil of rapeseed</td>
<td>1998</td>
<td>Delicensed</td>
<td>Free registration with APEDA</td>
</tr>
<tr>
<td>Oil of palm</td>
<td>1998</td>
<td>Delicensed</td>
<td>Free registration with APEDA</td>
</tr>
<tr>
<td>Groundnut oil</td>
<td>1998, 2002</td>
<td>Delicensed</td>
<td>Free registration with APEDA</td>
</tr>
<tr>
<td>Oil of coconut</td>
<td>1998</td>
<td>Delicensed</td>
<td>Free registration with APEDA</td>
</tr>
<tr>
<td>Soybean</td>
<td>2002</td>
<td>Delicensed</td>
<td>Free registration with APEDA</td>
</tr>
<tr>
<td>Castor bean</td>
<td>2002</td>
<td>Delicensed</td>
<td>Free registration with APEDA</td>
</tr>
<tr>
<td>Palm kernel</td>
<td>No change</td>
<td>Free</td>
<td>Free regulated by the Coffee board</td>
</tr>
<tr>
<td>Ground nut</td>
<td>No change</td>
<td>Free</td>
<td>Free regulated by the tea board</td>
</tr>
<tr>
<td>Coffee</td>
<td>No change</td>
<td>Free</td>
<td>Free regulated by the tea board</td>
</tr>
<tr>
<td>Tea</td>
<td>No change</td>
<td>Free</td>
<td>Free regulated by the tea board</td>
</tr>
<tr>
<td>Cashew nuts</td>
<td>No change</td>
<td>Free</td>
<td>Free controlled by the textile commissioner on registration, allocation, quantity and quality</td>
</tr>
<tr>
<td>Raw cotton</td>
<td>No change</td>
<td>Free</td>
<td>Free controlled by the textile commissioner on registration, allocation, quantity and quality</td>
</tr>
<tr>
<td>Tobacco</td>
<td>No change</td>
<td>Free</td>
<td>Free Regulated by the tobacco board</td>
</tr>
<tr>
<td>Spices</td>
<td>No change</td>
<td>Free</td>
<td>Free cess of 0.5 %</td>
</tr>
</tbody>
</table>

4.1.5. Changes in tariff rates on agriculture

Table 4.4 shows that there has been a drastic reduction in the tariff rates for agricultural commodities in the year 1996, which were slightly raised in the year 2000 and again reduced in the year 2002. These were further reduced in 2004 with the tariff on maximum lines being reduced to 20 percent. This reduction in tariff rates is a part of internal reforms programmed and not an obligation under the WTO. There has also been a reduction in the maximum tariff for sensitive items. Anyhow in the process of tariffication under the WTO the non-tariff barriers are to be first converted into tariffs and then reduced by 24 per cent. The conversion of non-tariff barriers to tariffs is to be done through the representative domestic and world price differences. A study conducted earlier by Gulati, et al (1994) shows that the product specific support calculated through the representative domestic and world price differences is negative, hence our reduction in scheduled tariffs has been much more than required even if India would have committed the tariffication program of tariff reduction.

Tariffs (standard and auxiliary a) are considered for commodities at 6 digit level. The auxiliary duty was at 50 per cent of the value of the commodity in the years 1986 and 1992. Auxiliary duty did not exist in the years 1996, 2000 and 2002. There was a surcharge on basic duty for the year 2000 at 10 per cent of the basic duty.

Table 4.4 Average tariff on agricultural commodities (%)

<table>
<thead>
<tr>
<th>year</th>
<th>1986 Basic +auxiliary duty</th>
<th>1992 Basic +auxiliary duty</th>
<th>1996 Basic duty</th>
<th>2000 Basic +surcharge on basic duty 10 %</th>
<th>2002 Basic duty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple average (unweighted)</td>
<td>148.58</td>
<td>114.73</td>
<td>37.2</td>
<td>43.72</td>
<td>37.43</td>
</tr>
<tr>
<td>Peak tariff</td>
<td>150</td>
<td>115</td>
<td>50</td>
<td>38.5</td>
<td>30</td>
</tr>
</tbody>
</table>


As a result of additional bindings taken by India in the WTO, share of tariff lines that are bound has increased to 72 per cent, new bindings were made primarily in textiles and clothing; India also renegotiated bindings in some of the agricultural items. The average (final) bound rate is 50.6 per cent, higher than the applied MFN rate; this gap provided ample scope for applied rates to be raised recently on a few agricultural products. Tariffs on agricultural products are ad valorem with two exceptions, and range from 0-210 per cent, with
the highest tariffs (i.e., tariffs above 50 per cent) borne by beverages and spirits, oil seeds, fats, edible oils and their products, and grains.

4.1.6. Agriculture in EXIM policy 2003-04

With a view to boost exports from the agriculture and allied sector, the EXIM policy 2001-02 has introduced the Agri-Export Zones (AEZ) scheme for development of specific products from a geographically contiguous area. The concept of AEZ is centered on a cluster approach of identifying the potential products, the geographical region in which these are grown and adopting an end to end approach of integrating the entire process, right from the stage of production till it reaches the export market. Reflecting the tremendous response to the scheme from the states and rural community, as many as 45 AEZs have been notified so far in different parts of the country. The agriculture and allied sectors is India’s core competence and the post-WTO era presents tremendous potential to enhance India’s exports. Not only is the sector diversified with a large variety of crops, fruits and vegetables and flourishing dairy sector, India is also among the world leaders in output of many products. To build upon the core competency, improve productivity and thereby boost exports from the sector, the Government of India, in the EXIM policy announced on March 31, 2003, included the following schemes/incentives to boost agricultural exports from India.

Corporate sector with proven credentials will be encouraged to sponsor Agri-Export Zones boosting agro-exports. In view of this, it is proposed to facilitate and promote association of corporate with proven credentials in the implementation of AEZs in order to give a boost to productivity and quality of specified agro-products leading to accelerated exports. Appropriate incentives would be provided to enable investments by these corporate infrastructures, agricultural extension, processing, packing, storage, R& D and other facilities relating to exports in the approved AEZs.

Duty entitlement pass book (DEPB) rate for select agro products to factor in the cost of pre-production inputs such as fertilizer, pesticides and seeds. This would ensure that the Indian farmer uses the required inputs in a scientific manner to boost productivity and quality.

Import of 69 items covering animal products, vegetables and spices, antibiotics and films removed from restricted list.
Export of 5 items namely paddy except basmati, cotton linters, rare earth, and silk cocoons removed from restricted list.

Agriculture/ horticulture processing SEZ units will now be allowed to provide inputs and equipment to contract farmers in Domestic Tariff Area (DTA) to promote production of goods as per the requirement of importing countries. This is expected to integrated the production and processing and help in promoting SEZs specializing in agro-exports

4.1.7. Agriculture in foreign trade policy (2004-09)

The FTP has also outlined following major initiatives to augment exports of agriculture products from India:

A new scheme called the Vishesh Krishi Upaj Yojna (Special Agricultural Produce Scheme) has been introduced for promoting exports of fruits, vegetables, flowers, minor forest produce, and their value added products. New towns of export excellence with a threshold limit of Rs 250 crore are to be notified.

Exports of agricultural products should qualify for duty free credit entitlement equivalent to 5 per cent of Free on Board (FOB) value of exports. The entitlement is freely transferable and could be used for import of a variety of inputs and goods.

Capital goods imported under Export Promotion Capital Goods (EPCG) scheme for agriculture should be duty free, and permitted to be installed anywhere in the Agri-Export Zone.

Assistance to states for Developing EXPORT Infrastructure and Allied Activities (ASIDE) funds could also be utilized for the development of Agri-Export Zone.

Import of seeds, bulbs, tubers, and planting materials has been liberalized to help in increasing yields and improvement of breeds. The export of plant portions, derivatives and extracts has also been liberalized with a view to promote export of medicinal plants and herbal products.

4.1.8. Agriculture in foreign trade policy, 2005

The dynamics of global trade and the opportunities provided by the multilateral trading platform necessitates a continuous realignment of India’s international trade strategies and
priorities. Towards this end, with a view to incorporate additional policy initiatives and to simplify procedures, thereby facilitating and enhancing India’s international trade, the Annual Supplement 2005 to the Foreign Trade Policy (FTP), 2004-09 includes the following additional policy measures to boost agricultural and food products exports:

Removal of export cess on exports of all agricultural and plantation commodities levied under various Commodity Board Acts.

Setting up of Inter-STATE Trade Council to engage State governments in providing an enabling environment for promotion of international trade, including agricultural trade.

Under the Export Promotion Capital Goods (EPCG) scheme, the concessional duty imports made by agriculture-based units shall be allowed to fulfill export obligation i.e., six times the duty saved over a 12 year period instead of the normal window of eight times the duty saved in 8 years.

In order to give a boost to rural areas, benefits under the ‘Vishesh Krishi Upaj Yojana’ Shall be extended to exports of poultry and dairy products an addition to export of flowers, fruits, vegetables, minor forest produce and their value added products.

Reduction in bank guarantee threshold for units in Agri-Export Zones (AEZ).

To promote export of “Minor Forest Produce Products, Shellac Export Promotion Council has been designated as a nodal Export Promotion Council (EPC) for minor forest produce.

In order to maintain quality and retain the brand equity of Indian teas, all teas, whether imported or exported, would be required to conform to specific quality norms. The new order (Tea Distribution and Export Order, 2005) also prescribes a minimum value addition norm of 50 per cent on export of all imported tea and stipulated a time period of 6 months from the date of import for the export of imported tea.

On account of tsunami tragedy, Government of India has announced a special package for marine sector, which includes:
Duty free import of specified specialized inputs/ chemicals, and flavouring oils (As ingredients for seafood processing) as per a defined list shall be allowed to the extent of one per cent of FOB value of preceding financial years export.

Allowing import of mono-filament long line system for tuna fishing at concessional duty, to encourage existing mechanized vessels and deep sea trawlers to adopt modern technology for scientific exploration of marine resources.

Establishment of a self-removal procedure for clearance of waste of perishable commodities, subject to prescribed wastage norms.

Annual supplement 2006 to the foreign trade policy 2004-09; focus on agri and rural sectors

The highlights of the annual supplement 2006 to the foreign trade policy; 2004-09 announced on April 7, 2006, focusing on agri and rural sectors are as under;

Twin scheme of “Focus Product” and Focus Market” have been introduced to provide additional stimulus to:

Promote export of products having large employment potential, and

Penetration of strategic markets by Indian products, especially markets in which India’s exports are comparatively low.

4.2 TRADE PERFORMANCE OF AGRICULTURAL TRADE

4.2.1. Composition of agricultural exports

The major agricultural commodities exported from the country have been given in Table 4.5. There has been impressive increase in value of exports which grew to $9349. Million by 2003 from a meager level of $1829.7 million in 1975. The export basket has diversified over the years. It is evident from the fact in the year 1975 only three commodities i.e., sugar & honey, coffee, tea, cocoa & spices and beverages & tobacco account for more than 60 per cent of share of total agricultural exports. Whereas, in the year 2003 more than six products i.e., cereals & cereal preparations, fruits and vegetables, coffee, tea, cocoa & spices and fish and fishery products account for more than 60 per cent of total agricultural exports. The diversification has taken place due to both supply and demand side factors. Concerted efforts have been made to improve infrastructure and setting up of AEZ, which have influenced the
supply. The demand is influenced by greater access to global markets for agricultural goods under the liberalized trade regime.

Table 4.5: Value of exports of agricultural commodities and their share in total value of exports of agricultural sector, 1975-2003

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<td>Total agricultural sector</td>
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</table>

Note: Figures in bold are percentages to the total
Source: FAOSTAT, FAO

4.2.2. India’s share in world agri-trade

India’s share in the total agricultural export of world is given in Table 4.6. It appears that the country has not gained from this growth as 90 per cent of tobacco export from India is in the form of unmanufactured tobacco. Keeping in view the nature of demand, a shift is needed from export of unmanufactured tobacco to manufactured tobacco. Export of Vegetable and fruits offer opportunities due to rising demand in the world market. National Horticultural
Mission has been created to augment production, post-harvest management and marketing of horticultural crops. To promote export of fruits, vegetables, flowers, minor forest products and their value added production VisheshKrishiUpajYojana has also been initiated. However, the horticultural products will have global markets only if these products are properly graded, processed, labelled, packaged and transported under fast and modern transit system. The export of meat and meat preparations and fish, crustaceans and molluscks and preparations were significantly higher at the country and world level both. However, in recent years the concerns have been raised regarding rejection of consignments on food safety grounds. Effective implementation of HACCP, GMP, SPS standards should be attempted in order to maintain the competitiveness.

Table 4.6: Exports of agricultural commodities in the World

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<td>World</td>
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<td>Meat and meat preparations</td>
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<td>Fish, crustaceans and mollusks and</td>
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<td>Cereal and cereal preparations</td>
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<tr>
<td>Leather, leather manufactures and dress</td>
<td>1047</td>
<td>2380</td>
<td>5967</td>
<td>6444</td>
<td>13226</td>
<td>21706</td>
<td>24440</td>
<td>25269</td>
<td>9.46</td>
</tr>
<tr>
<td>ed for skins</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>5.49</td>
</tr>
<tr>
<td>Textile yarn, fabrics made up articles</td>
<td>4.05</td>
<td>2.52</td>
<td>2.34</td>
<td>2.15</td>
<td>2.07</td>
<td>2.85</td>
<td>3.58</td>
<td>3.60</td>
<td></td>
</tr>
</tbody>
</table>

Note: 1) Figures in bold are India’s share in world export; 2) CGAR refers to compound annual growth rate

Source: GOI (2004)
4.2.3. Composition of agricultural imports

The imports of agricultural products have recorded a substantial increase from $1750 million to $4904 million. The import of animal and vegetable oils has increased from $24 million in the year 1975 to $2662.3 million by the year 2003. Thus raising its level to 47 per cent of total agricultural sector imports.

Table 4.7: Value of imports of agricultural commodities and their share in total value of imports of agricultural sector, 1975-2003.

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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Agricultural products</td>
<td>1749.6</td>
<td>1455.1</td>
<td>1650.3</td>
<td>1084.7</td>
<td>2223.6</td>
<td>2877.4</td>
<td>4903.9</td>
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<td></td>
<td></td>
<td>68.0</td>
<td>64.2</td>
<td>57.1</td>
<td>54.0</td>
<td>57.0</td>
<td>60.9</td>
<td>86.5</td>
</tr>
<tr>
<td>1.1</td>
<td>Food and animals</td>
<td>1631.4</td>
<td>475.8</td>
<td>664.1</td>
<td>576.8</td>
<td>785.3</td>
<td>724.9</td>
<td>1315.3</td>
</tr>
<tr>
<td>a</td>
<td>Live animals</td>
<td>63.44</td>
<td>21.0</td>
<td>23.0</td>
<td>28.7</td>
<td>20.1</td>
<td>15.3</td>
<td>23.2</td>
</tr>
<tr>
<td>b</td>
<td>Meat &amp; meat products</td>
<td>32.8</td>
<td>135.6</td>
<td>65.5</td>
<td>99.0</td>
<td>25.0</td>
<td>10.7</td>
<td>28.1</td>
</tr>
<tr>
<td>c</td>
<td>Dairy products &amp; eggs</td>
<td>1.3</td>
<td>6.0</td>
<td>2.3</td>
<td>0.1</td>
<td>0.5</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td>d</td>
<td>Cereals &amp; preparations</td>
<td>59.3</td>
<td>6.3</td>
<td>2.6</td>
<td>4.9</td>
<td>0.6</td>
<td>0.3</td>
<td>3.6</td>
</tr>
<tr>
<td>e</td>
<td>Fruits &amp; vegetables</td>
<td>69.2</td>
<td>61.7</td>
<td>181.3</td>
<td>438.6</td>
<td>559.7</td>
<td>518.0</td>
<td>1049.5</td>
</tr>
<tr>
<td>f</td>
<td>Sugar &amp; honey</td>
<td>0.8</td>
<td>107.5</td>
<td>297.0</td>
<td>9.1</td>
<td>72.5</td>
<td>17.4</td>
<td>31.6</td>
</tr>
<tr>
<td>g</td>
<td>Coffee, tea, cocoa &amp; spices</td>
<td>2.5</td>
<td>21.5</td>
<td>27.9</td>
<td>11.4</td>
<td>26.8</td>
<td>67.9</td>
<td>126.0</td>
</tr>
<tr>
<td>h</td>
<td>Feeding stuffs</td>
<td>1.1</td>
<td>1.2</td>
<td>3.8</td>
<td>3.0</td>
<td>25.4</td>
<td>25.8</td>
<td>40.9</td>
</tr>
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<td>i</td>
<td>Miscellaneous food</td>
<td>0.4</td>
<td>5.3</td>
<td>5.0</td>
<td>10.6</td>
<td>55.3</td>
<td>56.1</td>
<td>18.7</td>
</tr>
<tr>
<td>1.2</td>
<td>Beverages &amp; tobacco</td>
<td>1.2</td>
<td>0.9</td>
<td>2.9</td>
<td>6.4</td>
<td>17.4</td>
<td>15.9</td>
<td>36.9</td>
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<tr>
<td>1.3</td>
<td>Crude materials</td>
<td>93.2</td>
<td>86.5</td>
<td>173.0</td>
<td>305.7</td>
<td>639.4</td>
<td>629.6</td>
<td>889.4</td>
</tr>
<tr>
<td>1.4</td>
<td>Animal vegetable oils</td>
<td>23.8</td>
<td>892.0</td>
<td>810.3</td>
<td>195.8</td>
<td>781.6</td>
<td>1507.0</td>
<td>2662.3</td>
</tr>
<tr>
<td>2</td>
<td>Fish &amp; fishery products</td>
<td>1.5</td>
<td>5.8</td>
<td>0.0</td>
<td>0.6</td>
<td>14.1</td>
<td>16.7</td>
<td>8.0</td>
</tr>
<tr>
<td>3</td>
<td>Forest products</td>
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<td>0.0</td>
<td>0.0</td>
<td>1028.1</td>
<td>0.0</td>
</tr>
<tr>
<td>4</td>
<td>Agricultural requisites</td>
<td>820.4</td>
<td>806.8</td>
<td>1237.3</td>
<td>923.5</td>
<td>1661.4</td>
<td>802.1</td>
<td>757.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31.9</td>
<td>35.6</td>
<td>42.8</td>
<td>46.0</td>
<td>42.6</td>
<td>17.0</td>
<td>13.4</td>
</tr>
<tr>
<td></td>
<td>Total agricultural sector</td>
<td>2571.5</td>
<td>2267.8</td>
<td>2887.7</td>
<td>2008.8</td>
<td>3899.2</td>
<td>4724.2</td>
<td>5668.8</td>
</tr>
</tbody>
</table>

Note: Figures in bold are percentages to the total
Source: FAOSTAT, FAO
The low productivity levels in three major oilseeds-groundnuts, mustard and soybean and the limitation to raising productivity levels have made the countries dependent on imports to meet almost half of its requirement. Encouraging palm oil production is viewed as an alternative to meet the long term domestic demand of edible oils. Fruits and vegetables also showed persistent increase raising its share to 19 per cent of total agricultural sector imports. Removal of non-tariff barriers from a high of 49 per cent of tariff lines as on 1.4.1996 to 5 per cent by 1.4.2001 was expected to surge Indian markets with agricultural imports. However, such a phenomena is not experienced, moreover the country has considerable flexibility to counter flooding of Indian markets by cheap agri-imports through imposition of tariffs (bound rate) under WTO, countervailing duties, and resorting to safeguards provisions.

4.2.4. Growth and instability in agricultural trade

All the products and product groups were considered for the analysis of growth and instability. The annual growth rates range from -9.6 per cent to 20.66 per cent; and the instability index varied between 0.01 and 0.56. This implies that the degree of instability is very high in case of a few commodities and hence may lead to serious decision making problems in them on a long term basis.

Based on the degree of growth and instability the export commodities have been classified into four groups and are presented in Table 5.

a) High growth/high volatility (HG/HV) products whose growth rate and variability are greater than 5 and 0.15 respectively. These are high priority products having bright future in the Indian export basket, and therefore should be encouraged. However, due care is taken to ensure creation of additional markets and developing them. The reason for high volatility may need to be assessed in order to know whether it is supply driven factor such as, production instability or due to non-compliance to quality.

b) High growth/Low volatility (HG/LV) products whose growth rate is greater than 5 but instability index is less than 0.15. These hold great promise for the future and therefore need to be actively promoted. In a number of cases the impediments to capacity creation and production increases need to be removed. These steps should be taken up on a priority basis so as to retain our share in world trade and rather strive to increase our share. A word of caution needs to be added however, since these are products of the future, great care needs to be taken that the major importers are convinced about the quality and dependability of supply from India. Therefore, strict quality control and schedule maintenance must be imposed on the Indian suppliers of these goods.
Table 4.8 Commodity wise growth rate and instability indices of the Indian exports and imports 1961-2003.

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<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>Total merchandise trade</td>
<td>Exports</td>
</tr>
<tr>
<td></td>
<td>Agricultural products total</td>
<td>Agricultural products total</td>
</tr>
<tr>
<td></td>
<td>Food and animal products</td>
<td>Food and animal products</td>
</tr>
<tr>
<td></td>
<td>Live animals</td>
<td>Live animals</td>
</tr>
<tr>
<td></td>
<td>Meat and meat preparations</td>
<td>Meat and meat preparations</td>
</tr>
<tr>
<td></td>
<td>Dairy and eggs</td>
<td>Dairy and eggs</td>
</tr>
<tr>
<td></td>
<td>Cereal and cereal preparations</td>
<td>Cereal and cereal preparations</td>
</tr>
<tr>
<td></td>
<td>Fruits and vegetables</td>
<td>Fruits and vegetables</td>
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<tr>
<td></td>
<td>Sugar and honey</td>
<td>Sugar and honey</td>
</tr>
<tr>
<td></td>
<td>Coffee, tea, cocoa and spices</td>
<td>Coffee, tea, cocoa and spices</td>
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<tr>
<td></td>
<td>Feeding stuffs</td>
<td>Feeding stuffs</td>
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<tr>
<td></td>
<td>Miscellaneous foods</td>
<td>Miscellaneous foods</td>
</tr>
<tr>
<td></td>
<td>Beverages and tobacco</td>
<td>Beverages and tobacco</td>
</tr>
<tr>
<td></td>
<td>Beverage</td>
<td>Beverage</td>
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<tr>
<td></td>
<td>Tobacco</td>
<td>Tobacco</td>
</tr>
<tr>
<td></td>
<td>Crude materials</td>
<td>Crude materials</td>
</tr>
<tr>
<td></td>
<td>Hides and skins</td>
<td>Hides and skins</td>
</tr>
<tr>
<td></td>
<td>Oilseeds</td>
<td>Oilseeds</td>
</tr>
<tr>
<td></td>
<td>Natural rubbers</td>
<td>Natural rubbers</td>
</tr>
<tr>
<td></td>
<td>Textile fibres</td>
<td>Textile fibres</td>
</tr>
<tr>
<td></td>
<td>Crude materials</td>
<td>Crude materials</td>
</tr>
<tr>
<td></td>
<td>Animal and vegetable oils</td>
<td>Animal and vegetable oils</td>
</tr>
<tr>
<td></td>
<td>Animal fats</td>
<td>Animal fats</td>
</tr>
<tr>
<td></td>
<td>Fixed vegetable oils</td>
<td>Fixed vegetable oils</td>
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<tr>
<td></td>
<td>Processed oils</td>
<td>Processed oils</td>
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<tr>
<td></td>
<td>Fish and fishery products</td>
<td>Fish and fishery products</td>
</tr>
<tr>
<td></td>
<td>Agricultural requisites</td>
<td>Agricultural requisites</td>
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</tbody>
</table>
c) Low growth/Low variability products with growth rates and instability index less than 5 per cent and 0.15 respectively. The commodities coming in this group are those, which are our traditional export commodities. The low growth rate of these commodities is a major issue. There is a need to examine these commodities more closely in order to identify the cause of low growth. If the cause is on supply side, then steps need to be taken to obviate the same. If however, the cause is on the demand side than an increased marketing effort, both through official channels and through private promotion, may pay rich dividends.

d) Low growth/High volatility (LG/HV) products with growth rate below 5 per cent instability indices more than 0.1. There is only one commodity which falls in this category i.e., hides and skins. His government can enter into bilateral negotiations with major importing country in order to reduce the cost of high instability. The export performance could be further improved through greater marketing efforts.

The imports of agricultural products recorded a growth rate of 3.5 per cent per annum. However, a very high growth rate in imports was observed in case of sugar and honey, animal and vegetable oils, fixed vegetable oils, processed oil, hides and skins, feeding stuffs, coffee, tea, cocoa, and spices. The fruits and vegetables recorded higher growth rate, despite the fact that the commodity shows high growth in exports as well.

Table 4.9.: Classification of export commodities by growth performance and instability

<table>
<thead>
<tr>
<th>Growth</th>
<th>Volatility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High (HV)</td>
</tr>
<tr>
<td>Low (LG)</td>
<td>Hides &amp; skins</td>
</tr>
<tr>
<td></td>
<td>Sugar &amp; honey</td>
</tr>
<tr>
<td></td>
<td>Coffee, tea, cocoa, &amp; spices</td>
</tr>
<tr>
<td></td>
<td>Beverages &amp; tobacco</td>
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<tr>
<td></td>
<td>Tobacco</td>
</tr>
<tr>
<td></td>
<td>Textile fibers</td>
</tr>
<tr>
<td>High (HG)</td>
<td>Live animals</td>
</tr>
<tr>
<td>Dairy &amp; eggs</td>
<td>Food &amp; animal products</td>
</tr>
<tr>
<td>Cereals &amp; cereal preparations</td>
<td>Fruits &amp; vegetables</td>
</tr>
<tr>
<td>Miscellaneous foods</td>
<td>Feeding stuffs</td>
</tr>
<tr>
<td>Beverages</td>
<td>Crude materials</td>
</tr>
<tr>
<td>Natural rubbers</td>
<td>Crude materials</td>
</tr>
<tr>
<td>Animal fats</td>
<td>Animal &amp; vegetable oils</td>
</tr>
<tr>
<td>Processed oils</td>
<td>Total merchandise trade</td>
</tr>
<tr>
<td></td>
<td>Meat &amp; meat preparations</td>
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<td></td>
<td>Oilseeds</td>
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<tr>
<td></td>
<td>Fixed vegetable oils</td>
</tr>
<tr>
<td></td>
<td>Agricultural requisites</td>
</tr>
</tbody>
</table>

*Note: Commodities in bold are commodity groups*
Tea is being imported mainly to be used as blending material. If the import is re-export with value addition, as in the case of cashew nuts, then the country needs to ensure the efficiency of such a process. The market intelligence network need to be developed so that the imported raw material is at the cheapest rate possible and is exported with maximum value addition. However, such a process should give maximum scope to the farmers to change their cropping pattern to the one having maximum comparative advantage.

4.2.5. Competitiveness of agricultural trade

The relative unit value realization for India’s major agricultural export commodities was computed and is shown in Table 4.10. The commodities were classified into two groups based on the value of relative unit value realization during the post liberalization period. Commodity group A consists of commodities receiving relative unit value more than one; natural rubbers, oilseeds, cashewnuts, tea, processed oil, fixed vegetable oils and rice. Commodity group B consists of commodities receiving relative unit value less than one; Groundnut shell, sugar total, wheat flour+equivalent, total meat, tobacco, coffee (green + roasted), coffee green, coffee roasted and cotton lint.

Table 4.10: Relative unit price of major export commodities of India

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</thead>
<tbody>
<tr>
<td>Groundnut shelled</td>
<td>1.3</td>
<td>1.0</td>
<td>1.3</td>
<td>1.1</td>
<td>0.9</td>
<td>0.8</td>
<td>0.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Cashew nut shelled</td>
<td>1.0</td>
<td>1.1</td>
<td>1.2</td>
<td>1.1</td>
<td>1.4</td>
<td>1.2</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Feeding stuffs</td>
<td>1.0</td>
<td>0.7</td>
<td>0.5</td>
<td>0.7</td>
<td>0.7</td>
<td>0.8</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Natural rubber dry</td>
<td>1.7</td>
<td>-</td>
<td>0.9</td>
<td>0.7</td>
<td>3.2</td>
<td>1.5</td>
<td>1.2</td>
<td>1.2</td>
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<tr>
<td>Oilseeds</td>
<td>2.5</td>
<td>2.1</td>
<td>3.2</td>
<td>2.3</td>
<td>2.4</td>
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<td>2.0</td>
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<td>Rice</td>
<td>1.5</td>
<td>1.8</td>
<td>0.9</td>
<td>2.1</td>
<td>1.5</td>
<td>0.9</td>
<td>1.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Sugar total</td>
<td>0.8</td>
<td>0.9</td>
<td>0.7</td>
<td>0.7</td>
<td>1.0</td>
<td>0.8</td>
<td>1.2</td>
<td>0.8</td>
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<tr>
<td>Wheat flour + equivalent</td>
<td>1.6</td>
<td>2.8</td>
<td>0.9</td>
<td>1.1</td>
<td>0.8</td>
<td>1.0</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>Total meat</td>
<td>2.2</td>
<td>1.0</td>
<td>0.6</td>
<td>0.7</td>
<td>0.4</td>
<td>0.5</td>
<td>0.6</td>
<td>0.5</td>
</tr>
<tr>
<td>Tobacco</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
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<td>Tea</td>
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<td>1.1</td>
<td>1.2</td>
<td>1.2</td>
<td>1.3</td>
<td>1.2</td>
<td>1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Processed oil</td>
<td>2.0</td>
<td>2.0</td>
<td>2.9</td>
<td>1.3</td>
<td>2.0</td>
<td>1.9</td>
<td>2.1</td>
<td>1.7</td>
</tr>
<tr>
<td>Fixed vegetable oil</td>
<td>1.0</td>
<td>1.1</td>
<td>1.6</td>
<td>1.5</td>
<td>1.8</td>
<td>1.1</td>
<td>1.7</td>
<td>1.6</td>
</tr>
<tr>
<td>Coffee green _ roasted</td>
<td>1.1</td>
<td>1.0</td>
<td>1.0</td>
<td>0.8</td>
<td>1.0</td>
<td>0.8</td>
<td>0.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Coffee green</td>
<td>1.1</td>
<td>1.0</td>
<td>1.0</td>
<td>0.8</td>
<td>1.0</td>
<td>0.9</td>
<td>0.7</td>
<td>0.9</td>
</tr>
<tr>
<td>Coffee roasted</td>
<td>0.8</td>
<td>0.6</td>
<td>1.4</td>
<td>0.2</td>
<td>0.6</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
</tr>
<tr>
<td>Cotton lint</td>
<td>0.9</td>
<td>0.8</td>
<td>0.9</td>
<td>0.8</td>
<td>0.8</td>
<td>1.1</td>
<td>0.9</td>
<td>0.9</td>
</tr>
</tbody>
</table>
The group A commodities are priority items for the country. The group A commodities are priority items for the country. The group B commodities need to be thoroughly studies to know the underlying problem. The problem may be of not meeting the desired quality demanded in the international market. The country needs to increase the marketing efficiency through improved brand creation and advertising to increase demand. The agri-business enterprises and the relevant trade missions in the countries of exports need to be sensitized on the performance of individual export items for possible solution to the underlying problems.

The performance of major agricultural imports was also analysed using the concept of unit value payment (Table 4.11)

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</tr>
</thead>
<tbody>
<tr>
<td>Animal and vegetable oil</td>
<td>1.0</td>
<td>1.0</td>
<td>0.8</td>
<td>0.9</td>
<td>0.7</td>
<td>0.8</td>
<td>0.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Beverages</td>
<td>6.5</td>
<td>5.9</td>
<td>5.9</td>
<td>3.0</td>
<td>6.5</td>
<td>5.0</td>
<td>1.8</td>
<td>0.8</td>
</tr>
<tr>
<td>Beverages dist. Alcoholic</td>
<td>1.2</td>
<td>1.5</td>
<td>1.3</td>
<td>1.3</td>
<td>1.3</td>
<td>1.2</td>
<td>0.8</td>
<td>0.7</td>
</tr>
<tr>
<td>Beverages non-Alcoholic</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.3</td>
<td>0.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Bovine meat</td>
<td>1.6</td>
<td>0.7</td>
<td>1.0</td>
<td>1.4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Butter</td>
<td>1.0</td>
<td>0.4</td>
<td>1.9</td>
<td>1.1</td>
<td>1.0</td>
<td>0.7</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Cashew nut</td>
<td>0.6</td>
<td>0.5</td>
<td>0.1</td>
<td>0.6</td>
<td>0.8</td>
<td>0.8</td>
<td>0.9</td>
<td>1.0</td>
</tr>
<tr>
<td>Cereals</td>
<td>1.1</td>
<td>1.1</td>
<td>1.5</td>
<td>1.7</td>
<td>1.5</td>
<td>1.8</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Coffee greens</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.4</td>
<td>0.8</td>
<td>0.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Cotton lint</td>
<td>1.4</td>
<td>0.9</td>
<td>1.3</td>
<td>0.7</td>
<td>1.1</td>
<td>1.2</td>
<td>1.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Feeding stuffs</td>
<td>0.7</td>
<td>0.5</td>
<td>0.5</td>
<td>0.6</td>
<td>0.4</td>
<td>2.0</td>
<td>1.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Fixed vegetable oils</td>
<td>1.2</td>
<td>0.9</td>
<td>0.7</td>
<td>0.9</td>
<td>0.6</td>
<td>0.8</td>
<td>0.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Natural rubber</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.7</td>
<td>1.5</td>
<td>1.9</td>
<td>1.7</td>
</tr>
<tr>
<td>Oilseders</td>
<td>1.8</td>
<td>1.4</td>
<td>1.5</td>
<td>1.2</td>
<td>2.0</td>
<td>1.1</td>
<td>2.3</td>
<td>2.0</td>
</tr>
<tr>
<td>Potatoes</td>
<td>0.9</td>
<td>0.7</td>
<td>1.1</td>
<td>-</td>
<td>-</td>
<td>0.1</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Processed oils</td>
<td>1.7</td>
<td>1.5</td>
<td>1.7</td>
<td>0.6</td>
<td>0.9</td>
<td>0.7</td>
<td>0.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Pulses</td>
<td>0.6</td>
<td>0.3</td>
<td>0.6</td>
<td>0.9</td>
<td>0.8</td>
<td>1.1</td>
<td>0.9</td>
<td>0.8</td>
</tr>
<tr>
<td>Rapeseed &amp; mustard</td>
<td>1.8</td>
<td>1.5</td>
<td>0.9</td>
<td>1.1</td>
<td>1.3</td>
<td>1.0</td>
<td>0.9</td>
<td>0.8</td>
</tr>
<tr>
<td>Rapeseed and mustard seed</td>
<td>1.4</td>
<td>1.2</td>
<td>1.3</td>
<td>-</td>
<td>-</td>
<td>0.6</td>
<td>2.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Rice, paddy</td>
<td>1.0</td>
<td>0.9</td>
<td>0.8</td>
<td>-</td>
<td>-</td>
<td>0.9</td>
<td>0.0</td>
<td>6.4</td>
</tr>
<tr>
<td>Rice</td>
<td>0.9</td>
<td>0.7</td>
<td>0.7</td>
<td>0.8</td>
<td>0.9</td>
<td>0.8</td>
<td>1.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Rubber natural dry</td>
<td>1.1</td>
<td>1.8</td>
<td>1.1</td>
<td>1.3</td>
<td>0.9</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Indian sugar total</td>
<td>-</td>
<td>-</td>
<td>0.9</td>
<td>0.5</td>
<td>0.8</td>
<td>1.0</td>
<td>0.9</td>
<td>0.7</td>
</tr>
<tr>
<td>Tobacco</td>
<td>0.4</td>
<td>0.6</td>
<td>0.5</td>
<td>1.2</td>
<td>1.3</td>
<td>0.6</td>
<td>0.5</td>
<td>1.2</td>
</tr>
<tr>
<td>Total meat</td>
<td>1.6</td>
<td>1.4</td>
<td>4.1</td>
<td>1.4</td>
<td>-</td>
<td>-</td>
<td>4.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Wheat</td>
<td>1.0</td>
<td>1.0</td>
<td>1.5</td>
<td>1.9</td>
<td>1.1</td>
<td>2.1</td>
<td>1.1</td>
<td>0.7</td>
</tr>
<tr>
<td>Wheat + flour equivalent</td>
<td>1.0</td>
<td>1.0</td>
<td>1.4</td>
<td>1.8</td>
<td>1.1</td>
<td>1.9</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Sugar + honey</td>
<td>2.7</td>
<td>1.1</td>
<td>1.0</td>
<td>0.6</td>
<td>1.1</td>
<td>1.0</td>
<td>0.8</td>
<td>0.7</td>
</tr>
</tbody>
</table>
The relative unit value higher than one indicates a lower bargaining power. The import commodities could be classified into two those receiving unit price more than one as Group A and those receiving unit price less than one as Group B. The commodities coming under Group A were; cereals, cotton lint, cashew nut, feeding stuffs, natural rubber, oilseeds, rapeseed and mustard seed, rubber natural dry, total meat, wheat, wheat+ flour equivalent. The commodities coming under Group B were; Animal and vegetable oil, beverages, beverages dist Alcoholic, Butter, coffee green, fixed vegetable oil, potatoes, processed oils, rapeseed and mustard oils, rice, Indian sugar total, sugar+honey. The Group B commodities are most favoured items from India’s point of view. The Group A commodities needs to be closely monitored as we are paying higher prices in the world market. Relative higher prices were paid for a considerable proportion of agricultural imports which is contrary to our expectation from the “free trade regime” set in during the WTO regime. The market intelligence network need to be well developed both at domestic and international level to ensure that we import raw materials at the cheapest possible rate, if at all necessary and sell them in the world market after maximum value addition.

4.3 TRADE PERFORMANCE OF HORTICULTURAL EXPORTS

4.3.1 Changes in composition of horticultural exports

Indian agri-export basket contains 87 items that are primary in nature whereas 96 items are processed products involving different levels of value addition. Out of a total of 87 primary horti- commodities, 66 commodities experienced increase both in quantity and value terms, whereas 12 of them experienced decline in terms of quantity and value both (Table 4.12).

Table 4.12: Changes in Quantity and value of fresh and processed fruits and vegetables exported from India in terms of number of exportable

<table>
<thead>
<tr>
<th>VC</th>
<th>QC</th>
<th>Increase</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh fruits and vegetables</td>
<td></td>
<td>66</td>
<td>5</td>
</tr>
<tr>
<td>Increase</td>
<td></td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Processed fruits and vegetables</td>
<td>66</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Increase</td>
<td></td>
<td>3</td>
<td>11</td>
</tr>
</tbody>
</table>
In the case of processed products, 66 products out of a total of 96 commodities registered an increase in both value and quantity terms. It can be seen that the export of a large number of horti-commodities, both primary and processed, have shown increase in the post-WTO period.

The changes in share of different commodity-groups in horticultural exports are depicted in Table 4.13. It can be seen that the commodity-groups registering increase in value and quantity terms both increased to 31 per cent in the case of fresh fruits & vegetables during post-WTO period compared to 23 per cent during the pre-WTO period. Similarly, the share of processed fruits & vegetables increased to 52 per cent in the post-WTO period from a level of 44 per cent in the earlier period. The export promotion efforts need to be focused on these identified commodities, i.e., commodities which show increase in quantity and value both, in order to exploit the export potential of Indian agriculture.

Table 4.13: Share in Indian Trade of Different Categories of Horticultural Exports

<table>
<thead>
<tr>
<th>Commodity</th>
<th>% Share in value of horti-exports of</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fresh fruits and vegetables</td>
<td>Period I</td>
<td>Period II</td>
</tr>
<tr>
<td>Increase in quantity and value</td>
<td>22.86</td>
<td>31.27</td>
<td>44.35</td>
</tr>
<tr>
<td>both</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase in value and</td>
<td>0.69</td>
<td>0.35</td>
<td>3.20</td>
</tr>
<tr>
<td>decrease in quantity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decrease in value and</td>
<td>23.55</td>
<td>13.18</td>
<td>-</td>
</tr>
<tr>
<td>increase in quantity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decrease in both value and</td>
<td>2.50</td>
<td>0.22</td>
<td>2.85</td>
</tr>
<tr>
<td>quantity</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: (-) means negligible share.*

Further, value elasticites (EV) of commodities which showed increase in quantity and value both were computed for prioritizing them according to their responsiveness to export efforts (Table 4.14& 4.15). It can be observed that out of 66 primary horti-commodities contained in the group, 49 items recorded EV greater than one (Table 4.14). This indicates that these commodities should be declared high priority commodities as one per cent increase in the export of these commodities would lead to more than one per cent increase in export earnings from these commodities. Similarly, 47 processed products showed EV greater than unity indicating their potential in the horti-export basket and emphasizing the need for export promotion.
Table 4.14: List of Horti-commodities under high priority group (EV>1)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>ITC(HS code)</th>
<th>Commodity</th>
<th>EV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>07019000</td>
<td>Potatoes fresh</td>
<td>1.8</td>
</tr>
<tr>
<td>2</td>
<td>07020000</td>
<td>Tomatoes</td>
<td>1.8</td>
</tr>
<tr>
<td>3</td>
<td>07039000</td>
<td>Leeks</td>
<td>3.5</td>
</tr>
<tr>
<td>4</td>
<td>07051100</td>
<td>Cabbage lettuce</td>
<td>48.2</td>
</tr>
<tr>
<td>5</td>
<td>07051900</td>
<td>Other lettuce fresh</td>
<td>2.7</td>
</tr>
<tr>
<td>6</td>
<td>07061000</td>
<td>Carrots and turnips</td>
<td>4.8</td>
</tr>
<tr>
<td>7</td>
<td>07069001</td>
<td>Radishes</td>
<td>1.5</td>
</tr>
<tr>
<td>8</td>
<td>07069009</td>
<td>Other root fresh</td>
<td>2.9</td>
</tr>
<tr>
<td>9</td>
<td>07070000</td>
<td>Cucumber &amp; gherkins fresh</td>
<td>1.1</td>
</tr>
<tr>
<td>10</td>
<td>07081000</td>
<td>Peas</td>
<td>1.4</td>
</tr>
<tr>
<td>11</td>
<td>07082000</td>
<td>Beans</td>
<td>5.9</td>
</tr>
<tr>
<td>12</td>
<td>07089000</td>
<td>Other leguminous vegetables (Shelled &amp; unshelled)</td>
<td>3.3</td>
</tr>
<tr>
<td>13</td>
<td>07091000</td>
<td>Globe artichokes fresh</td>
<td>1.8</td>
</tr>
<tr>
<td>14</td>
<td>07092000</td>
<td>Asparagus (fresh)</td>
<td>7.4</td>
</tr>
<tr>
<td>15</td>
<td>07093000</td>
<td>Egg plants fresh</td>
<td>1.2</td>
</tr>
<tr>
<td>16</td>
<td>07096001</td>
<td>Green chilly</td>
<td>1.7</td>
</tr>
<tr>
<td>17</td>
<td>07096009</td>
<td>Other chilly</td>
<td>1.9</td>
</tr>
<tr>
<td>18</td>
<td>07099001</td>
<td>Olives fresh</td>
<td>2.3</td>
</tr>
<tr>
<td>19</td>
<td>07099003</td>
<td>Mixed vegetables</td>
<td>1.6</td>
</tr>
<tr>
<td>20</td>
<td>07099004</td>
<td>Green pepper</td>
<td>3.4</td>
</tr>
<tr>
<td>21</td>
<td>07099005</td>
<td>Pumpkins</td>
<td>14.4</td>
</tr>
<tr>
<td>22</td>
<td>07099009</td>
<td>Other vegetables fresh/chilled</td>
<td>1.9</td>
</tr>
<tr>
<td>23</td>
<td>07101000</td>
<td>Frozen potatoes</td>
<td>1.2</td>
</tr>
<tr>
<td>24</td>
<td>07102200</td>
<td>Beans shelled/unshelled</td>
<td>2.8</td>
</tr>
<tr>
<td>25</td>
<td>07102900</td>
<td>Other leguminous vegetables frozen</td>
<td>5.9</td>
</tr>
<tr>
<td>26</td>
<td>07104000</td>
<td>Sweet corn</td>
<td>7.9</td>
</tr>
<tr>
<td>27</td>
<td>07108009</td>
<td>Other vegetable frozen</td>
<td>2.7</td>
</tr>
<tr>
<td>28</td>
<td>07109000</td>
<td>Mixed vegetable frozen</td>
<td>4.1</td>
</tr>
<tr>
<td>29</td>
<td>07141000</td>
<td>Manioc (Cassava)</td>
<td>5.6</td>
</tr>
<tr>
<td>30</td>
<td>07142000</td>
<td>Sweet potatoes</td>
<td>2.1</td>
</tr>
<tr>
<td>31</td>
<td>07149001</td>
<td>Sago pith</td>
<td>1.2</td>
</tr>
<tr>
<td>32</td>
<td>07149009</td>
<td>Other edible roots &amp; tubers</td>
<td>1.6</td>
</tr>
<tr>
<td>33</td>
<td>08023100</td>
<td>Walnut in shell</td>
<td>26.4</td>
</tr>
<tr>
<td>34</td>
<td>08023200</td>
<td>Walnut kernels</td>
<td>3.2</td>
</tr>
<tr>
<td>35</td>
<td>08045002</td>
<td>Mangoes</td>
<td>1.2</td>
</tr>
<tr>
<td>36</td>
<td>08061000</td>
<td>Grapes fresh</td>
<td>4.1</td>
</tr>
<tr>
<td>37</td>
<td>08062009</td>
<td>Sultanas and other dried grapes</td>
<td>4.7</td>
</tr>
<tr>
<td>38</td>
<td>08030000</td>
<td>Bananas fresh</td>
<td>1.9</td>
</tr>
<tr>
<td>39</td>
<td>08043000</td>
<td>Pineapples fresh</td>
<td>1.9</td>
</tr>
<tr>
<td>40</td>
<td>08045003</td>
<td>Mangoes sliced &amp; dried</td>
<td>3.2</td>
</tr>
<tr>
<td>41</td>
<td>08051000</td>
<td>Oranges fresh</td>
<td>2.3</td>
</tr>
<tr>
<td>42</td>
<td>08053000</td>
<td>Lemons</td>
<td>2.3</td>
</tr>
<tr>
<td>43</td>
<td>08054000</td>
<td>Grapefruit fresh</td>
<td>1.9</td>
</tr>
<tr>
<td>44</td>
<td>08109001</td>
<td>Pomegranates</td>
<td>3.9</td>
</tr>
<tr>
<td>45</td>
<td>08109005</td>
<td>Custard apple</td>
<td>2.3</td>
</tr>
<tr>
<td>46</td>
<td>08042001</td>
<td>Figs fresh</td>
<td>5.9</td>
</tr>
<tr>
<td>47</td>
<td>08045009</td>
<td>Mangoes teens</td>
<td>3.1</td>
</tr>
<tr>
<td>48</td>
<td>08109009</td>
<td>Other fresh fruits</td>
<td>1.5</td>
</tr>
<tr>
<td>49</td>
<td>08094000</td>
<td>Plums &amp; sloes</td>
<td>1.1</td>
</tr>
</tbody>
</table>
Some of the commodities which showed very high EV are cabbage lettuce (48.2), Walnuts in shell (26.4), pumpkin (14.4), sweet corn (7.9), asparagus fresh (7.4) and beans (5.9) in case of fresh fruits & vegetables and gram dal (24.8), roasted/fried foods of vegetable products
(23.8), preserved onion (17.7), other orange juice (6.7) and tur (6.4) in case of processed fruits & vegetables. Horti- commodities with EV less than one are given in Table 4.15.

**Table 4.15: List of Horticultural Commodities with EV<1**

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>ITC (HS code)</th>
<th>Commodity</th>
<th>EV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fresh fruits and vegetables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>07108001</td>
<td>Terragon</td>
<td>0.2</td>
</tr>
<tr>
<td>2</td>
<td>07102100</td>
<td>Frozen peas</td>
<td>0.8</td>
</tr>
<tr>
<td>3</td>
<td>070099002</td>
<td>Plantain (curry banana)</td>
<td>0.6</td>
</tr>
<tr>
<td>4</td>
<td>07095100</td>
<td>Mushrooms fresh</td>
<td>0.7</td>
</tr>
<tr>
<td>5</td>
<td>08062001</td>
<td>Raisins</td>
<td>0.6</td>
</tr>
<tr>
<td>6</td>
<td>08041001</td>
<td>Dates fresh</td>
<td>0.9</td>
</tr>
<tr>
<td>7</td>
<td>08045001</td>
<td>Guava</td>
<td>0.7</td>
</tr>
<tr>
<td>8</td>
<td>08072000</td>
<td>Papaya</td>
<td>0.4</td>
</tr>
<tr>
<td>9</td>
<td>08081000</td>
<td>Apples</td>
<td>0.8</td>
</tr>
<tr>
<td>10</td>
<td>08092000</td>
<td>Cherries</td>
<td>0.4</td>
</tr>
<tr>
<td>11</td>
<td>08042002</td>
<td>Figs dried</td>
<td>0.4</td>
</tr>
<tr>
<td>12</td>
<td>08101000</td>
<td>Strawberries (fresh)</td>
<td>0.9</td>
</tr>
<tr>
<td>13</td>
<td>08103000</td>
<td>Black, white and red gooseberries</td>
<td>0.1</td>
</tr>
<tr>
<td>14</td>
<td>08109006</td>
<td>Bore</td>
<td>0.9</td>
</tr>
<tr>
<td>15</td>
<td>08109007</td>
<td>Litchi</td>
<td>0.9</td>
</tr>
<tr>
<td>16</td>
<td>08140000</td>
<td>Peel of citrus fruit or melons</td>
<td>0.5</td>
</tr>
<tr>
<td>17</td>
<td>08093000</td>
<td>Peaches</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Processed fruits and vegetables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>07112000</td>
<td>Preserved olives</td>
<td>0.9</td>
</tr>
<tr>
<td>2</td>
<td>07123001</td>
<td>Dried mushrooms (incl. Morels)</td>
<td>0.1</td>
</tr>
<tr>
<td>3</td>
<td>07133300</td>
<td>Kidney beans including white pea beans</td>
<td>0.9</td>
</tr>
<tr>
<td>4</td>
<td>08129002</td>
<td>Mango pulp</td>
<td>0.22</td>
</tr>
<tr>
<td>5</td>
<td>08112002</td>
<td>Raspberries cook or uncooked not sugarated</td>
<td>0.3</td>
</tr>
<tr>
<td>6</td>
<td>20021000</td>
<td>Tomatoes prepared or preserved</td>
<td>0.9</td>
</tr>
<tr>
<td>7</td>
<td>08131000</td>
<td>Dried apricots</td>
<td>0.3</td>
</tr>
<tr>
<td>8</td>
<td>08135002</td>
<td>Mixture of dried fruits</td>
<td>0.4</td>
</tr>
<tr>
<td>9</td>
<td>20041009</td>
<td>Other potato preparation frozen</td>
<td>0.8</td>
</tr>
<tr>
<td>10</td>
<td>20079901</td>
<td>Jams and jellies of mangoes</td>
<td>0.9</td>
</tr>
<tr>
<td>11</td>
<td>20079904</td>
<td>Jams and jellies of apple</td>
<td>0.8</td>
</tr>
<tr>
<td>12</td>
<td>20081901</td>
<td>Cashew nut roasted / salted</td>
<td>0.2</td>
</tr>
<tr>
<td>13</td>
<td>20081902</td>
<td>Nut otherwise prepared/ preserved</td>
<td>0.7</td>
</tr>
<tr>
<td>14</td>
<td>20082000</td>
<td>Pineapple prepared/ preserved</td>
<td>0.1</td>
</tr>
<tr>
<td>15</td>
<td>20088000</td>
<td>Strawberries prepared /preserved</td>
<td>0.7</td>
</tr>
<tr>
<td>16</td>
<td>20089903</td>
<td>Orange squash</td>
<td>0.1</td>
</tr>
<tr>
<td>17</td>
<td>20089914</td>
<td>Guava prepared/ preserved</td>
<td>0.7</td>
</tr>
<tr>
<td>18</td>
<td>20092000</td>
<td>Grape fruit juice</td>
<td>0.3</td>
</tr>
<tr>
<td>19</td>
<td>20097000</td>
<td>Apple juice</td>
<td>0.6</td>
</tr>
</tbody>
</table>

**4.3.2. Competitiveness of horticultural commodities**

The share of major horticultural commodities exported from the country during periods I and II in value terms are presented in Table 4.16.
Table 4.16: Horticultural products exported from the country

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>ITC (HS code)</th>
<th>Value (Rs mn) 1992-95</th>
<th>Value (Rs mn) 2000-03</th>
<th>Share in 1992-95</th>
<th>Share in 2000-03</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Fresh fruits and vegetables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Fresh vegetables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>07031001</td>
<td>Fresh onions</td>
<td>1867.55</td>
<td>2710.88</td>
<td>23.3</td>
</tr>
<tr>
<td>2.</td>
<td>07070000</td>
<td>Potatoes fresh</td>
<td>33.41</td>
<td>89.22</td>
<td>0.4</td>
</tr>
<tr>
<td>3.</td>
<td>07095100</td>
<td>Mushrooms fresh</td>
<td>6.64</td>
<td>303.56</td>
<td>0.1</td>
</tr>
<tr>
<td>4.</td>
<td>07099003</td>
<td>Mixed vegetables</td>
<td>50.82</td>
<td>485.78</td>
<td>0.6</td>
</tr>
<tr>
<td>5.</td>
<td>07099009</td>
<td>Other vegetables fresh/ chilled</td>
<td>33.59</td>
<td>419.66</td>
<td>0.4</td>
</tr>
<tr>
<td>6.</td>
<td>07109000</td>
<td>Mixed vegetable frozen</td>
<td>97.37</td>
<td>357.99</td>
<td>1.2</td>
</tr>
<tr>
<td>(b) Fresh fruits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>08023100</td>
<td>Walnut in shell</td>
<td>68.44</td>
<td>89.61</td>
<td>0.9</td>
</tr>
<tr>
<td>2.</td>
<td>08023200</td>
<td>Walnut kernels</td>
<td>505.21</td>
<td>871.06</td>
<td>6.3</td>
</tr>
<tr>
<td>3.</td>
<td>08046002</td>
<td>Mangoes</td>
<td>449.64</td>
<td>648.75</td>
<td>5.6</td>
</tr>
<tr>
<td>4.</td>
<td>08061000</td>
<td>Grapes</td>
<td>320.15</td>
<td>611.27</td>
<td>4.0</td>
</tr>
<tr>
<td>5.</td>
<td>08051000</td>
<td>Oranges fresh</td>
<td>47.89</td>
<td>219.68</td>
<td>0.6</td>
</tr>
<tr>
<td>6.</td>
<td>08071000</td>
<td>Water melons</td>
<td>162.19</td>
<td>27.38</td>
<td>2.0</td>
</tr>
<tr>
<td>7.</td>
<td>08081000</td>
<td>Apples</td>
<td>69.49</td>
<td>81.15</td>
<td>0.9</td>
</tr>
<tr>
<td>8.</td>
<td>08109002</td>
<td>Tamarind fresh</td>
<td>25.61</td>
<td>25.99</td>
<td>0.3</td>
</tr>
<tr>
<td>9.</td>
<td>08109009</td>
<td>Other fresh fruits</td>
<td>27.74</td>
<td>245.99</td>
<td>0.3</td>
</tr>
<tr>
<td>B. Processed fruits and vegetables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>07111000</td>
<td>Preserved onion</td>
<td>80.21</td>
<td>165.68</td>
<td>1.0</td>
</tr>
<tr>
<td>2.</td>
<td>07114000</td>
<td>Preserved cucumbers &amp; gherkins</td>
<td>53.19</td>
<td>426.53</td>
<td>0.7</td>
</tr>
<tr>
<td>3.</td>
<td>07119001</td>
<td>Green pepper in brine</td>
<td>19.67</td>
<td>36.03</td>
<td>0.2</td>
</tr>
<tr>
<td>4.</td>
<td>07122000</td>
<td>Dehydrated onion flakes/power</td>
<td>54.22</td>
<td>257.76</td>
<td>0.7</td>
</tr>
<tr>
<td>5.</td>
<td>07134000</td>
<td>Lentils (Mosur) Dried</td>
<td>218.96</td>
<td>2218.22</td>
<td>2.7</td>
</tr>
<tr>
<td>6.</td>
<td>07139002</td>
<td>Gram dal</td>
<td>102.92</td>
<td>202.88</td>
<td>1.3</td>
</tr>
<tr>
<td>7.</td>
<td>07139003</td>
<td>Moong</td>
<td>141.77</td>
<td>170.15</td>
<td>1.8</td>
</tr>
<tr>
<td>8.</td>
<td>07139004</td>
<td>Tur</td>
<td>88.71</td>
<td>172.49</td>
<td>1.1</td>
</tr>
<tr>
<td>9.</td>
<td>07139005</td>
<td>Urad</td>
<td>90.56</td>
<td>169.33</td>
<td>1.1</td>
</tr>
<tr>
<td>10.</td>
<td>07139009</td>
<td>Other pulses</td>
<td>44.42</td>
<td>340.83</td>
<td>0.6</td>
</tr>
<tr>
<td>11.</td>
<td>08129002</td>
<td>Mango pulp</td>
<td>197.30</td>
<td>1953.01</td>
<td>24.5</td>
</tr>
<tr>
<td>12.</td>
<td>20011000</td>
<td>Cucumbers/ gherkins prepared/preserved</td>
<td>23.94</td>
<td>346.05</td>
<td>0.3</td>
</tr>
<tr>
<td>13.</td>
<td>20019003</td>
<td>Mango pickles</td>
<td>72.77</td>
<td>92.09</td>
<td>0.9</td>
</tr>
<tr>
<td>14.</td>
<td>20019004</td>
<td>Mango chutney</td>
<td>112.67</td>
<td>219.84</td>
<td>1.4</td>
</tr>
<tr>
<td>15.</td>
<td>20019009</td>
<td>Other chutneys</td>
<td>109.14</td>
<td>241.07</td>
<td>1.4</td>
</tr>
<tr>
<td>16.</td>
<td>08129001</td>
<td>Mango slice in brine</td>
<td>24.64</td>
<td>71.15</td>
<td>0.3</td>
</tr>
<tr>
<td>17.</td>
<td>08129009</td>
<td>Other Fruits &amp; Nuts Prov. Pres.</td>
<td>61.33</td>
<td>82.82</td>
<td>0.8</td>
</tr>
<tr>
<td>18.</td>
<td>08134001</td>
<td>Dried tamarind</td>
<td>51.41</td>
<td>107.51</td>
<td>0.6</td>
</tr>
<tr>
<td>19.</td>
<td>08134009</td>
<td>Other dried fruits</td>
<td>5.99</td>
<td>7.24</td>
<td>0.1</td>
</tr>
<tr>
<td>20.</td>
<td>20031000</td>
<td>Mushrooms prepared or preserved</td>
<td>165.51</td>
<td>234.79</td>
<td>2.1</td>
</tr>
<tr>
<td>21.</td>
<td>20079001</td>
<td>Jam jellies of mangoes</td>
<td>40.72</td>
<td>168.80</td>
<td>0.5</td>
</tr>
<tr>
<td>22.</td>
<td>20079009</td>
<td>Jam jellies of other fruits</td>
<td>55.17</td>
<td>58.31</td>
<td>0.7</td>
</tr>
<tr>
<td>23.</td>
<td>20081903</td>
<td>Roasted/fried foods of vegetables products</td>
<td>22.08</td>
<td>27.00</td>
<td>0.3</td>
</tr>
<tr>
<td>24.</td>
<td>20098001</td>
<td>Mango juice</td>
<td>24.93</td>
<td>48.27</td>
<td>0.3</td>
</tr>
<tr>
<td>25.</td>
<td>20098009</td>
<td>Other fruit juice</td>
<td>11.98</td>
<td>37.53</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Source: Export Statistics for Agro & Food Products, APEDA.
An increase in the share of commodities, namely cucumbers & gherkins fresh, mushrooms fresh, mixed vegetables, other vegetables fresh/chilled, mixed vegetables frozen, oranges fresh, other fresh fruits, preserved cucumbers & gherkins and lentils was observed. However, a sharp decline in shares of fresh onions, walnuts in kernels, mangoes, grapes, watermelons, mango pulp, mushrooms preserved/prepared were observed during period II. Non-traditional horticultural commodities especially fresh and processed vegetables have gained importance over the period. The cumulative share of fresh onions and mango pulp declined to 26 per cent during period II from that of 46 per cent during the period I.

The performance of India’s horticultural exports in relation to their revealed comparative advantage was evaluated with the help of Export Performance Ratios (EPRs). Horticultural commodities can be classified into four groups based on their EPRs (Table 4.17):

Group I: EPR>1 in period I and period II:

Canned mushrooms; fruits dried n.e.s; Cashewnut shelled; dried mushrooms; fruits freshness; ginger; mangoes; onions dry; walnuts shelled; watermelons.

Group II: EPR<1 in period I and >1 in period II:

Cashewnut; papayas; fruit preparation n.e.s.

Group III: EPR>1 in period I and <1 in period II:

Citrus fruit n.e.s; grapes.

Group IV: EPR<1 in period I and period II:

Bananas, bananas & pamelos, chilly & pepper green; cucumber & gherkins; fruits juice n.e.s; lemons & limes; oranges; oranges, tang & clem; pineapples; potatoes; walnuts; peas dry, apples; cassava equivalent; chickpeas; other citrus fruits; peas.

The country possess comparative advantage in exports of commodities of groups I and II which includes mushrooms, other dried and canned, mangoes, walnuts shelled, watermelons, etc. A large number of horti-export commodities which have been placed under Groups III and IV recorded an EPR of less than unity revealing that the country does not possess comparative advantage in these commodities.
The erosion of comparative advantage observed in case of group III and group IV commodities could be attributed to high cost of production, inefficient post-harvest management and poor infrastructural facilities.

Table 4.17: Export performance ratio (EPR) of major fruits and vegetables exported from India

<table>
<thead>
<tr>
<th>Commodities</th>
<th>1992-95 (Average)</th>
<th>2000-03 (Average)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group I: EPR &gt;1 in period I and Period II</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canned mushrooms</td>
<td>1.26</td>
<td>1.22</td>
</tr>
<tr>
<td>Fruits dried n.e.s.</td>
<td>1.60</td>
<td>1.28</td>
</tr>
<tr>
<td>Cashew nut shelled</td>
<td>97.99</td>
<td>65.24</td>
</tr>
<tr>
<td>Dried mushrooms</td>
<td>2.10</td>
<td>4.20</td>
</tr>
<tr>
<td>Fruits fresh n.e.s.</td>
<td>2.55</td>
<td>3.04</td>
</tr>
<tr>
<td>Ginger</td>
<td>13.32</td>
<td>5.35</td>
</tr>
<tr>
<td>Mangoes</td>
<td>11.25</td>
<td>6.11</td>
</tr>
<tr>
<td>Onions dry</td>
<td>14.58</td>
<td>13.28</td>
</tr>
<tr>
<td>Walnut shelled</td>
<td>3.18</td>
<td>1.82</td>
</tr>
<tr>
<td>Watermelon</td>
<td>15.86</td>
<td>11.88</td>
</tr>
<tr>
<td><strong>Group II: EPR&lt;1 in Period and &gt;1 in Period II</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cashewnut</td>
<td>0.00</td>
<td>16.10</td>
</tr>
<tr>
<td>Papayas</td>
<td>0.67</td>
<td>2.05</td>
</tr>
<tr>
<td>Fruit preparation n.e.s.</td>
<td>0.32</td>
<td>2.17</td>
</tr>
<tr>
<td><strong>Group III: ER &gt;1 in Period 1 and &lt;1 Period II</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus fruits n.e.s.</td>
<td>1.38</td>
<td>0.23</td>
</tr>
<tr>
<td>Grapes</td>
<td>1.05</td>
<td>0.93</td>
</tr>
<tr>
<td><strong>Group IV: EPR &lt; 1 in Period I and Period II</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apples</td>
<td>0.17</td>
<td>0.12</td>
</tr>
<tr>
<td>Bananas</td>
<td>0.02</td>
<td>0.11</td>
</tr>
<tr>
<td>Bananas +pamelos</td>
<td>0.02</td>
<td>0.10</td>
</tr>
<tr>
<td>Cassava equivalent</td>
<td>0.34</td>
<td>0.15</td>
</tr>
<tr>
<td>Chick peas</td>
<td>0.65</td>
<td>0.30</td>
</tr>
<tr>
<td>Chilly&amp; pepper green</td>
<td>0.01</td>
<td>0.15</td>
</tr>
<tr>
<td>Cucumber &amp; gherkins</td>
<td>0.04</td>
<td>0.97</td>
</tr>
<tr>
<td>Fruits juice n.e.s</td>
<td>0.14</td>
<td>0.35</td>
</tr>
<tr>
<td>Lemon and limes</td>
<td>0.02</td>
<td>0.22</td>
</tr>
<tr>
<td>Oranges</td>
<td>0.15</td>
<td>0.46</td>
</tr>
<tr>
<td>Oranges + tang+ clem</td>
<td>0.09</td>
<td>0.26</td>
</tr>
<tr>
<td>Other citrus fruits</td>
<td>0.15</td>
<td>0.13</td>
</tr>
<tr>
<td>Pears</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Peas, dry</td>
<td>0.07</td>
<td>0.12</td>
</tr>
<tr>
<td>Pineapples</td>
<td>0.03</td>
<td>0.09</td>
</tr>
<tr>
<td>Potatoes</td>
<td>0.18</td>
<td>0.21</td>
</tr>
<tr>
<td>Walnuts</td>
<td>0.01</td>
<td>0.04</td>
</tr>
</tbody>
</table>

*Source: Computed from FAOSTAT*
4.3.3. Direction of Trade

The changing direction of horticultural exports is presented in Table 7. The exports of fresh mangoes are mainly destined to the Gulf countries and European nations. The export of mango pulp has, however, diversified market with substantial portion going to developed nations like UK, US and Germany. Walnuts are mainly exported to developed nations, whereas fresh grapes are being exported to the Gulf countries, SAARC nations, European nations and the US. The major export destinations of fresh onions are the SAARC countries, ASEAN nations and the Gulf countries. A review shows that France and the Netherlands are the two European nations which are emerging as major export destinations for major horticultural products. The export destinations for dried & preserved vegetables and other processed fruits & vegetables are developed nations and any export promotion effort must encourage adherence to quality standards by following good manufacturing practices (GMP), HACCP and SPS standards.

### Table 4.18: Direction of export of horticultural commodities from India

<table>
<thead>
<tr>
<th>Commodities</th>
<th>Top ten countries of export during 1992-93</th>
<th>Countries gaining in ranking by 2002-03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh mango</td>
<td>UAE, Saudi Arabia, Kuwait, UK, Bangladesh, Bahrain, <em>Qatar</em>, Netherlands, Singapore, <em>Malaysia</em></td>
<td>France, Oman</td>
</tr>
<tr>
<td>Other fresh fruits</td>
<td>Bangladesh, UAE, Russia, Saudi Arabia, <em>Pakistan</em>, <em>Bahrain</em>, United States of America, Qatar, Kuwait, Germany</td>
<td>Nepal, Oman, France, Netherlands</td>
</tr>
<tr>
<td>Walnuts</td>
<td>France, UK, Germany, Netherlands, Spain, <em>Jordan</em>, Greece, Egypt, USA&amp; Denmark</td>
<td>Australia, Kuwait</td>
</tr>
<tr>
<td>Fresh grapes</td>
<td>Bangladesh, UAE, Russia, Saudi Arabia, <em>Pakistan</em>, <em>Bahrain</em>, UK, <em>Qatar</em>, Kuwait, <em>Germany</em></td>
<td>Nepal, Oman, France, USA, Netherlands</td>
</tr>
<tr>
<td>Fresh onions</td>
<td>UAE, Malaysia, Singapore, Sri Lanka, Bangladesh, Saudi Arabia, Bahrain, Nepal, Mauritius, <em>Maldives</em></td>
<td>Pakistan</td>
</tr>
<tr>
<td>Dried &amp; preserved vegetables</td>
<td>UAE, UK, Germany, USA, <em>Saudi Arabia</em>, <em>Switzerland</em>, Kuwait, France, Singapore, Canada</td>
<td>Bangladesh, Sri Lanka, Spain</td>
</tr>
<tr>
<td>Mango pulp</td>
<td>Saudi Arabia, Kuwait, Netherlands, UAE, <em>Hong Kong</em>, UK, UAE, <em>Russia</em>, USA, <em>Germany</em></td>
<td>France, Lebanon, Japan</td>
</tr>
<tr>
<td>Other processed fruits and</td>
<td>USA, <em>Russia</em>, UAE, UK, Saudi Arabia, <em>Germany</em>, Singapore, Japan, Kuwait, Canada</td>
<td>Netherlands, Netherland Antilla, Indonesia, Yemen Arab Republic</td>
</tr>
<tr>
<td>vegetables</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Countries in Italics have lost ranking*

*Source: Export Statistics for Agro & Food Products, APEDA*
4.4 TRADE PERFORMANCE OF INDIAN ONION

4.4.1. Changing Composition of Onion Exports
Onion is exported in four forms i.e., onions fresh, onions preserved/prepared, onions dehydrated/dried and onions provisionally prepared. Substantial change in composition of onion and its products has taken place over the years, with the share of onions fresh in onion exports falling to 83 per cent in TE 2002 from 99 per cent in 1980. During the decade of 1980s onion fresh grew at the rate of 3 per cent per annum and onion dehydrated/dried grew at the rate of 2 per cent per annum.

Table 4.19: Composition of onion and its products exported from India.

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity ('000 tonnes)</th>
<th>Commodity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Onions fresh</td>
<td>Onions preserved/prepared</td>
</tr>
<tr>
<td>1980</td>
<td>193.66</td>
<td>0</td>
<td>0.19</td>
</tr>
<tr>
<td>TE 1985</td>
<td>221.34</td>
<td>0</td>
<td>0.80</td>
</tr>
<tr>
<td>TE 1990</td>
<td>257.25</td>
<td>0.65</td>
<td>0.53</td>
</tr>
<tr>
<td>TE 1995</td>
<td>369.80</td>
<td>0.56</td>
<td>2.21</td>
</tr>
<tr>
<td>TE 2002</td>
<td>457.94</td>
<td>0.65</td>
<td>9.25</td>
</tr>
<tr>
<td>CAGR (%)</td>
<td>1980-90: 3.01</td>
<td></td>
<td>1.89</td>
</tr>
<tr>
<td></td>
<td>1991-2002: 0.72</td>
<td>-0.75</td>
<td>22.65</td>
</tr>
<tr>
<td></td>
<td>1980 to 2002: 4.15</td>
<td></td>
<td>16.16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Value (Lakh $)</th>
<th>Unit value ($ / Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>349.89 (99.15)</td>
<td>0.18 (0)</td>
</tr>
<tr>
<td>TE1985</td>
<td>377.60 (97.38)</td>
<td>0.17 (0)</td>
</tr>
<tr>
<td>TE 1990</td>
<td>474.87 (92.68)</td>
<td>0.19 (0)</td>
</tr>
<tr>
<td>TE1995</td>
<td>641.47 (86.61)</td>
<td>0.17 (0)</td>
</tr>
<tr>
<td>TE2002</td>
<td>684.85 (82.63)</td>
<td>0.16 (0)</td>
</tr>
<tr>
<td>CAGR (%)</td>
<td>1980 to 1990: 3.66</td>
<td>-2.76 (0)</td>
</tr>
<tr>
<td></td>
<td>1991 to 2002: 0.36</td>
<td>-1.28 (0)</td>
</tr>
<tr>
<td></td>
<td>1980 to 2002: 3.43</td>
<td>14.88 (4.5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit value ($ / Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
</tr>
<tr>
<td>TE1985</td>
</tr>
<tr>
<td>TE 1990</td>
</tr>
<tr>
<td>TE1995</td>
</tr>
<tr>
<td>TE2002</td>
</tr>
<tr>
<td>CAGR (%) 1980 to 1990</td>
</tr>
<tr>
<td>1990 to 2002</td>
</tr>
<tr>
<td>1980-2002</td>
</tr>
</tbody>
</table>

Note: Figures in parentheses are percent to the total.
While in the decade of 1990s onion fresh recorded a marginal growth in volume terms were as onions dehydrated/dried and onions provisionally prepared recorded a very high growth of 23 per cent and 7 per cent respectively. Similar trend was also observed in value terms for all the commodities except in case of onions provisionally prepared. This reveals that growth in value terms is actually dependent on the growth in quantity exported since the growth in unit value has been marginal. The marginal growth in unit value earnings for onion fresh exports and substantially high growth for processed products means that the focus in future should be to produce and export processed products of onion i.e., onions dehydrated dried and onion provisionally prepared for accelerated foreign exchange earnings.

4.4.2. Structure of Onion Exports

The changes in directions of fresh onion exports were analyzed and the results are presented in Table 4.20. The total exports increased from 1.94 lakh tones in 1980 to 4.58 lakh tones in TE 2002, recording a moderate growth rate of 4 per cent per annum.

<table>
<thead>
<tr>
<th>Year</th>
<th>Malaysia</th>
<th>Sri Lanka</th>
<th>UAE</th>
<th>Bangladesh</th>
<th>Singaapore</th>
<th>Bahrain</th>
<th>Saudi Arabia</th>
<th>Mauritius</th>
<th>Pakistan</th>
<th>Nepal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity (%)</td>
<td>Lakh tone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>10.1</td>
<td>6.1</td>
<td>29.8</td>
<td>2.0</td>
<td>15.8</td>
<td>0.5</td>
<td>2.4</td>
<td>0.3</td>
<td>0.0</td>
<td>0.8</td>
<td>1.94</td>
</tr>
<tr>
<td>TE 1985</td>
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<td>17.9</td>
<td>34.3</td>
<td>2.6</td>
<td>9.1</td>
<td>0.9</td>
<td>1.8</td>
<td>0.5</td>
<td>3.9</td>
<td>0.6</td>
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</tr>
<tr>
<td>TE 1990</td>
<td>17.5</td>
<td>8.8</td>
<td>21.2</td>
<td>2.7</td>
<td>14.1</td>
<td>1.0</td>
<td>4.5</td>
<td>0.4</td>
<td>0.1</td>
<td>0.3</td>
<td>2.57</td>
</tr>
<tr>
<td>TE 1995</td>
<td>21.1</td>
<td>14.1</td>
<td>32.2</td>
<td>11.3</td>
<td>10.8</td>
<td>1.1</td>
<td>4.6</td>
<td>1.5</td>
<td>1.7</td>
<td>0.0</td>
<td>3.70</td>
</tr>
<tr>
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<td>27.2</td>
<td>20.6</td>
<td>19.2</td>
<td>17.1</td>
<td>4.0</td>
<td>3.0</td>
<td>1.9</td>
<td>1.8</td>
<td>0.7</td>
<td>0.6</td>
<td>4.58</td>
</tr>
<tr>
<td>CAGR (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980-90</td>
<td>5.29</td>
<td>10.67</td>
<td>-3.21</td>
<td>47.7</td>
<td>7.57</td>
<td>14.28</td>
<td>12.53</td>
<td>-0.36</td>
<td>-3.99</td>
<td>3.01</td>
<td></td>
</tr>
<tr>
<td>1990-2002</td>
<td>6.05</td>
<td>7.51</td>
<td>-4.1</td>
<td>1.68</td>
<td>-9.55</td>
<td>3.55</td>
<td>-14.94</td>
<td>10.57</td>
<td>-18.52</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>Value (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>9.7</td>
<td>7.9</td>
<td>27.8</td>
<td>2.0</td>
<td>17.6</td>
<td>0.5</td>
<td>2.7</td>
<td>0.4</td>
<td>0.0</td>
<td>0.4</td>
<td>352.9</td>
</tr>
<tr>
<td>TE 1985</td>
<td>24.2</td>
<td>20.8</td>
<td>29.3</td>
<td>3.0</td>
<td>10.3</td>
<td>0.7</td>
<td>1.4</td>
<td>0.5</td>
<td>5.3</td>
<td>0.4</td>
<td>387.8</td>
</tr>
<tr>
<td>TE 1990</td>
<td>18.8</td>
<td>11.5</td>
<td>25.6</td>
<td>16.7</td>
<td>25.6</td>
<td>0.9</td>
<td>3.0</td>
<td>0.3</td>
<td>1.5</td>
<td>0.2</td>
<td>500.3</td>
</tr>
<tr>
<td>TE 1995</td>
<td>23.8</td>
<td>14.2</td>
<td>26.8</td>
<td>9.6</td>
<td>16.0</td>
<td>1.0</td>
<td>3.8</td>
<td>1.5</td>
<td>1.5</td>
<td>0.0</td>
<td>738.7</td>
</tr>
<tr>
<td>TE 2002</td>
<td>31.9</td>
<td>18.7</td>
<td>17.7</td>
<td>16.2</td>
<td>3.9</td>
<td>2.6</td>
<td>1.5</td>
<td>1.8</td>
<td>0.6</td>
<td>0.4</td>
<td>828.7</td>
</tr>
<tr>
<td>CAGR (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980-2002</td>
<td>5.82</td>
<td>7.90</td>
<td>1.46</td>
<td>18.51</td>
<td>-0.51</td>
<td>9.54</td>
<td>2.67</td>
<td>13.20</td>
<td>-12.94</td>
<td>4.53</td>
<td></td>
</tr>
</tbody>
</table>

The phenomenal performance of onion export is attributed to the institutional support the commodity received through National Agricultural Marketing Federation Limited (NAFED) the sole canalizing
agencies (at present 12 more canalizing agencies have been recognized) responsible for procurement from the market, export, evolving technologies and extension (Mathur, 2001). There has been substantial change in the direction of fresh onion exports from the country. The Malaysia (27.2), Sri Lanka (20.6), UAE (19.2), and Bangladesh (17.1) emerged to be the major markets for Indian fresh onion. Singapore has been inconsistent and has also lost its market shares over the years from a high of 16 per cent in 1980 to as low as 4 per cent in TE 2002. In the decade of 1990s Mauritius, Sri Lanka and Malaysia and Bahrain have recorded higher growth rate in volume terms. Whereas, Saudi Arabia, Singapore, Nepal and UAE have recorded negative growth rate in quantity of onion exported. Malaysia (32 per cent), Sri Lanka (19 per cent), UAE (18 per cent), and Bangladesh (16 per cent) emerged as major importing nations of Indian onion in terms of value. The country is getting very high unit value price for its onion exports in Malaysia and Mauritius (Table 4.21). The countries that concern us are Nepal, Pakistan, Saudi Arabia and Bahrain, where the unit value of onion was far lower than the average unit value. The period of 1980-2002 has recorded a decline in the unit value realization for its fresh onion exports in most of the major markets.

Table 4.21: Unit value of Indian fresh onion exports from major importing countries

<table>
<thead>
<tr>
<th>Year</th>
<th>Malaysia</th>
<th>Sri Lanka</th>
<th>UAE</th>
<th>Bangladesh</th>
<th>Singapore</th>
<th>Bahrain</th>
<th>Saudi Arabia</th>
<th>Mauritius</th>
<th>Pakistan</th>
<th>Nepal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>0.17</td>
<td>0.23</td>
<td>0.17</td>
<td>0.18</td>
<td>0.20</td>
<td>0.19</td>
<td>0.20</td>
<td>0.15</td>
<td>0.11</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>TE 1985</td>
<td>0.19</td>
<td>0.19</td>
<td>0.15</td>
<td>0.19</td>
<td>0.19</td>
<td>0.14</td>
<td>0.14</td>
<td>0.15</td>
<td>0.11</td>
<td>0.17</td>
<td></td>
</tr>
<tr>
<td>TE 1990</td>
<td>0.20</td>
<td>0.24</td>
<td>0.17</td>
<td>0.17</td>
<td>0.22</td>
<td>0.16</td>
<td>0.12</td>
<td>0.14</td>
<td>0.13</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>TE 1995</td>
<td>0.20</td>
<td>0.17</td>
<td>0.14</td>
<td>0.15</td>
<td>0.26</td>
<td>0.16</td>
<td>0.14</td>
<td>0.17</td>
<td>0.13</td>
<td>0.17</td>
<td></td>
</tr>
<tr>
<td>TE 2002</td>
<td>0.18</td>
<td>0.14</td>
<td>0.14</td>
<td>0.14</td>
<td>0.15</td>
<td>0.13</td>
<td>0.12</td>
<td>0.15</td>
<td>0.09</td>
<td>0.15</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAGR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980-1990</td>
</tr>
<tr>
<td>1991-2002</td>
</tr>
<tr>
<td>1980-2002</td>
</tr>
</tbody>
</table>

The UAE and Singapore, the two major markets, are loosing the market share in terms of both value and volume, which was also reflected through insignificant growth rate of onion export recorded by these nations. This requires an in depth and comprehensive study to understand the reasons of this loss of market for taking adequate steps. The slow growth in unit value of onion during the decade of 1990s is another source of concern for the country. One reason for the poor performance of onion exports during the period of 1990s could be due to the fact that in 1997-98, onion was brought under the Essential Commodity Act and the quota system of
export was introduced. This hampered export very badly during the period 1998-01. Despite normal production during the period 1998-01, the ad-hoc policy adopted by the Government of India hampered the exports. Countries like Netherlands, Thailand, Philippines, Australia, and Pakistan exploited this situation to their advantage and succeeded in carving out a larger share in the traditional overseas markets, which were once the monopoly of India (Lawande, 2003).

### 4.2.3 Transitional probability

The structural change in direction of trade were quantified using Markov Chain analysis and the results are presented in Table 4.22. The diagonal element of the transitional probability matrix measures the probability that the export share of a country will be retained. The elements (e.g., $P_{ij}$ of $i^{th}$ row and $j^{th}$ column) of the transitional probability matrix shows the probability “$P$” that the share would shift from $i^{th}$ country to $j^{th}$ country.

Malaysia and United Arab Emirates are highly stable market for Indian onion export with the probability of retention of 1.0 and 0.59. Bangladesh (0.36) and other countries (0.44) have emerged as moderately stable markets. Sri Lanka, Singapore and Bahrain are unstable markets for Indian onion.

The Malaysian market for Indian onion is further getting reinforced by shift in share from Bahrain (1.0), Bangladesh (0.18) and UAE (0.14). It has, therefore, come up as a very stable and reliable market for Indian onion exports. United Arab Emirates the other stable market for Indian onion is also getting reinforced with a high probability of shift of the shares from Bangladesh (0.46) and other country (0.29).

**Table 4.22: Transitional probability matrix of Onion exports (1980-2002).**

<table>
<thead>
<tr>
<th></th>
<th>Singapore</th>
<th>Bahrain</th>
<th>Bangladesh</th>
<th>UAE</th>
<th>Sri Lanka</th>
<th>Malaysia</th>
<th>Other country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.14696</td>
<td>0.0</td>
<td>0.0</td>
<td>0.13557</td>
</tr>
<tr>
<td>Bahrain</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.05264</td>
<td>0.0</td>
<td>0.01961</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.35969</td>
<td>0.0</td>
<td>0.51597</td>
<td>0.0</td>
<td>0.0374</td>
</tr>
<tr>
<td>UAE</td>
<td>0.0</td>
<td>0.0</td>
<td>0.45596</td>
<td>0.58613</td>
<td>0.0</td>
<td>0.0</td>
<td>0.29081</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>1.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.1253</td>
<td>0.045</td>
<td>0.0</td>
<td>0.07296</td>
</tr>
<tr>
<td>Malaysia</td>
<td>0.0</td>
<td>1.0</td>
<td>0.18436</td>
<td>0.14159</td>
<td>0.0</td>
<td>1.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Other country</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.38638</td>
<td>0.0</td>
<td>0.44364</td>
</tr>
</tbody>
</table>
Bangladesh, the moderately stable, market is getting reinforced with the shift in share from Sri Lanka to the extent of (0.52). Sri Lanka though an unstable market is getting reinforced with almost all the share of Singapore (1.0) and to a little extent from UAE (0.13) and other country (0.07). Sri Lanka has preferential trade agreement with Pakistan, Indian competitor for onion exports, which must have been the cause for the unstable nature of the market. The emergence of Sri Lanka, Bahrain and Singapore as unstable markets calls for greater effort on the part of policy makers to develop the other markets for Indian onion especially the South East Asian countries and the Gulf countries.

4.2.4. Forecasting onion exports to major export destinations
The transition probabilities of major importing countries were used to project the market shares of Indian onion for 2007AD. The actual and estimated values of exports to major importing countries are presented in Table 4.23.

The onion export to UAE increased from 598 lakh tones with a share of 33 per cent in 1982 to 878 lakh tones by 2002 in actual terms. It is projected that the export would increase to 990 lakh tones by 2007 recording a decline in share of 22 per cent. Bahrain the other country of the region has emerged as a growing market for Indian onion with an increase in export from 8 lakh tones in 1982 to 139 lakh tones in 2002 in real terms. The export is projected to be 58 lakh tones by 2007 AD. The export to the region could be accelerated through focus on quality of onion demanded and through price competitiveness. It could be achieved through development of technology/ varieties suitable to export to these regions and extensive production planning.

Malaysia with a market share of 17 per cent of total Indian exports was the next largest market for Indian exports in the year 1982. The total exports to Malaysia increased from 304 lakh tones in 1982 to 1246 lakh tones by 2002 showing a consistent increase. It is projected that the volume of exports would be 1653 lakh tones by year 2007 recording a market share of 36 per cent. Singapore, with total import of 207tonnes by the year 1982, was the third largest country importing Indian onions. In actual terms the export decreased from to 184 lakh tonnes by 2002. An export target of 185 lakh tones accounting for 4 per cent share was projected for the year 2007 A.D. It was evident that the lack of proper and favourable policy during the 1997-2001 periods had serious impact on export to Singapore.
### Table 4.23: Indian onion exports to major importing countries

(Lakh tones)

<table>
<thead>
<tr>
<th>Year</th>
<th>UAE</th>
<th>Malaysia</th>
<th>Singapore</th>
<th>Sri Lanka</th>
<th>Bangladesh</th>
<th>Bahrain</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>E</td>
<td>A</td>
<td>E</td>
<td>A</td>
<td>E</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>1982</td>
<td>598</td>
<td>304</td>
<td>207</td>
<td>80</td>
<td>34</td>
<td>7.7</td>
<td>586</td>
<td>1816</td>
</tr>
<tr>
<td></td>
<td>(32.9)</td>
<td>(16.7)</td>
<td>(11.4)</td>
<td>(4.4)</td>
<td>(1.9)</td>
<td>(0.4)</td>
<td>(32.2)</td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>537</td>
<td>402</td>
<td>261</td>
<td>76</td>
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<td>291</td>
<td>1909</td>
<td>1816</td>
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<tr>
<td></td>
<td>(28.1)</td>
<td>(22.2)</td>
<td>(13.7)</td>
<td>(4.0)</td>
<td>(0.8)</td>
<td>(0.9)</td>
<td>(15.2)</td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>860</td>
<td>569</td>
<td>391</td>
<td>767</td>
<td>58</td>
<td>23</td>
<td>1910</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(25.8)</td>
<td>(17.0)</td>
<td>(6.2)</td>
<td>(4.4)</td>
<td>(1.7)</td>
<td>(1.2)</td>
<td>(9.8)</td>
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</tr>
<tr>
<td>1997</td>
<td>985</td>
<td>890</td>
<td>368</td>
<td>476</td>
<td>26</td>
<td>286</td>
<td>3705</td>
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</tr>
<tr>
<td></td>
<td>(26.6)</td>
<td>(24.0)</td>
<td>(9.9)</td>
<td>(5.1)</td>
<td>(0.8)</td>
<td>(0.7)</td>
<td>(7.7)</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>878</td>
<td>1246</td>
<td>184</td>
<td>782</td>
<td>41</td>
<td>409</td>
<td>4579</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(19.2)</td>
<td>(30.8)</td>
<td>(5.0)</td>
<td>(14.6)</td>
<td>(3.0)</td>
<td>(1.1)</td>
<td>(8.9)</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>990</td>
<td>1653</td>
<td>185</td>
<td>783</td>
<td>58</td>
<td>546</td>
<td>4579</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(21.6)</td>
<td>(43.6)</td>
<td>(4.8)</td>
<td>(10.7)</td>
<td>(0.7)</td>
<td>(8.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>1096</td>
<td>1995</td>
<td>220</td>
<td>491</td>
<td>30</td>
<td>383</td>
<td>4579</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(23.9)</td>
<td>(43.6)</td>
<td>(4.8)</td>
<td>(8.0)</td>
<td>(0.7)</td>
<td>(8.4)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: A=Actual values; E= Estimated/Projected values; ‘*’ is actual value

Figures in parentheses are percentages to the respective total
Therefore, there is a need to have a long term policy oriented towards export of Indian onion. It is the better quality of onion and the price competitiveness that makes our product attractive in these markets (Awwal, 2003). Sri Lanka appears to be an unstable market for Indian onion exports. The volume of exports has increased from 80 lakh tonnes in 1982 to 942 lakh tones in the year 2002. The market share also increased from 4 per cent to 21 per cent during the similar periods. It is projected that the total exports would decline to 366 lakh tones accounting for market share of 8 per cent by the year 2007. There is need to check the declining trend. The enactment of free trade agreement between India and Sri Lanka, which aims at bringing down the duty from 35.2 per cent under the Most Favoured Nation (MFN) status to 4 per cent under the Free Trade Agreement (FTA), would provide the needed boost to Indian onion exports. The country enjoys the benefit of freight due to proximity to Sri Lanka which makes our product more competitive over that of Pakistan (Awwal, 2003). Bangladesh has shown a phenomenal growth in imports of Indian onion. It has emerged to be an important export destination of Indian onion accounting for 17 per cent share in 2002. It is projected that the onion exports would be to the tune of 783 lakh tonnes by the year 2007 accounting for 17 per cent of total exports. Most of the Bangladesh’s onion import requirements are met by India. In recent years Bangladesh and Myanmar have entered into a number of agreements to expand trade with each other. Moreover, due to increase in onion prices within India due to poor crop following heavy rains in the country has made Bangladesh to explore Myanmar market for onion. This would demand extra caution on the part of Indian traders and producers so that the Indian onion is more competitive to be able to export to Bangladesh, in view of its expanding market base to meet its demand.

The aggregate demand of onion in International market has grown over the period from 1816 lakh tonnes in 1982 to 4579 lakh tonnes in 2002 in actual terms. It is projected to be 4579 lakh tonnes by the year 2007. The post-harvest losses in onion are 20-50 per cent due to physiological weight loss (12-30 per cent), sprouting (4-10 per cent), and rotting (4-10 per cent). It is estimated that 20-30 per cent of post-harvest losses could be avoided through adoption of recommended storage structures. A total of 35 varities have been released so far, however the contribution of released verities in total production is not more than 20 per cent. The yield gap II in case of onion is to the extent of 50 per cent.
(Lawande, 2004). Thus, a mechanism needs to be evolved for multiplication of improved varieties and their supply to farmers at reasonable rates so as to increase the productivity and production. The supply of onion could be increased through increasing production and through minimization of post-harvest losses, which could be released for exports.

As demand for processed onion is increasing, policies favouring establishment of small processing plant need to be adopted. There is an urgent need to develop new markets and strengthen the existing international market for Indian onion. The type of onion needed for different markets vary from market to market, therefore it offers scope to develop suitable technologies, much production planning and exporting only those types of onion which have greater demand (Appendix 1). Consistency in the export policy is also essential so that we do not lose our traditional export markets for onion.

4.5 TRADE PERFORMANCE OF INDIAN MANGO

4.5.1. Transitional probability matrix

The transitional probability matrix computed through the method described in previous section is presented in Table 4.24. The Indian export markets, which are stable, are United States of America, United Arab Emirates, Others, and Bangladesh.

The United States of America is a growing market for Indian Mango. The high retention to this market is further reinforced by the high probability of transfer from the United Kingdom (0.892782) and Saudi Arabia (0.794531). It also shows sign of loss of share to Bangladesh (024668) and Saudi Arabia (0.010388).

The United Arab Emirates also has a fairly high retention of 0.813239 and has high probability of transfer of 0.205469 to Saudi Arabia, 0.062198 to United Kingdom and 0.032103 to others. It is receiving reinforcement to the extent of 0.186761from other countries.

The Other groups of countries were also consistent market with high retention probability of 0.967897 and its share is reinforced with a share of 0.032103 from United Arab Emirates. It however, exhibits a tendency to loose the share of market to United Arab Emirates (0.196761) and United Kingdom (0.045014).
Table 4.24: Transitional probability matrix of Indian mango exports (1980-2002)

<table>
<thead>
<tr>
<th></th>
<th>Bangladesh</th>
<th>United Arab Emirates</th>
<th>Saudi Arabia</th>
<th>United Kingdom</th>
<th>United States of America</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>0.400805</td>
<td>0</td>
<td>0.366750</td>
<td>0</td>
<td>0.232445</td>
<td>0</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>0</td>
<td>0.813239</td>
<td>0</td>
<td>0</td>
<td>0.794531</td>
<td>0.186761</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>0</td>
<td>0.205469</td>
<td>0</td>
<td>0</td>
<td>0.892788</td>
<td>0</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0</td>
<td>0.062198</td>
<td>0.010388</td>
<td>0</td>
<td>0.964944</td>
<td>0.045014</td>
</tr>
<tr>
<td>United States of America</td>
<td>0.024668</td>
<td>0</td>
<td>0.032103</td>
<td>0</td>
<td>0.967897</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>0.032103</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Bangladesh has a moderate probability of retention of 0.400805 which is reinforced by the probability of transfer of 0.36675 from Saudi Arabia and 0.232445 from United States of America. It however bears a probability of loss of share of 0.024668 to the United States of America.

The United Kingdom and Saudi Arabia both are not a stable market for Indian mango as reflected by the poor retention probability. However, both countries exhibit a tendency to gain substantially large market share of United States of America (0.892788) and from United Arab Emirates (0.062198).

4.5.2. Estimation of Indian mango exports to major importing countries

Using the transitional probability matrix, market shares of Indian mango exports to major importing countries were projected upto 2010 A.D. Table 4.25 presents the actual and estimated quantities and percentage changes of Indian mango exported to major importing countries. The actual export to Bangladesh has recorded an increase in share from 5.65 to 46.83 per cent during the period 1980-82 to 2000-02. The estimated share for 2000-02 is 15 per cent. It is forecasted that the share would increase to 28 per cent by 2005 and 18 per cent by 2010. Therefore, Bangladesh is an important export destination for the country. The free trade agreements under the BIMST-EC (Bangladesh, Indian, Myanmar, Sri Lanka, Bhutan, Nepal and Thailand) and SAARC would encourage greater cooperation and trade between the two countries. The recent agreement between the India
and Bangladesh to free trade barriers is another significant step towards increasing market access.

The United Arab Emirates is recording a consistent decline in the share of total Indian mango exports from 53 per cent in 1980 to 28 per cent in 2000. It is forecasted that the share would decline, reaching 44 per cent by 2000-02. However it is projected to decline up to 34 per cent by 2005 and 32 per cent by 2010. In absolute terms the Indian mango export to UAE is projected to increase to 10,22mt by 2005 and would be 8496 mt by 2010.

The United Kingdom the actual share of Indian mango exports shows decline from 3.69 per cent in 1980-82 to 2.88 per cent by 2000-02. However the estimated share reveals an increase in share to 5.66 per cent by 2000-02. It was also forecasted to increase to 6.29 per cent by 2010. A clear trend in the quantity of mango exported over the period is not evident making it an unstable market.

Table 4.25: Indian fresh mango exports to major importing countries (tones)

<table>
<thead>
<tr>
<th>Year</th>
<th>Bangladesh</th>
<th>United Arab Emirates</th>
<th>Saudi Arabia</th>
<th>United Kingdom</th>
<th>United States of America</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>E</td>
<td>A</td>
<td>E</td>
<td>A</td>
<td>E</td>
<td>A</td>
</tr>
<tr>
<td>1980-82</td>
<td>514 (5.65)</td>
<td>514** (5.65)</td>
<td>4824 (53.00)</td>
<td>4824** (53.00)</td>
<td>851 (9.34)</td>
<td>851** (9.34)</td>
<td>336 (3.69)</td>
</tr>
<tr>
<td>1985-87</td>
<td>5184 (2.88)</td>
<td>519 (5.76)</td>
<td>10915 (60.58)</td>
<td>4404 (48.89)</td>
<td>2963 (16.44)</td>
<td>994 (11.04)</td>
<td>617 (3.42)</td>
</tr>
<tr>
<td>1990-92</td>
<td>1300 (5.71)</td>
<td>1300 (5.79)</td>
<td>11582 (50.88)</td>
<td>9433 (55.06)</td>
<td>5201 (22.85)</td>
<td>2263 (13.21)</td>
<td>835 (3.67)</td>
</tr>
<tr>
<td>1995-96*</td>
<td>3161 (13.44)</td>
<td>2444 (12.14)</td>
<td>10124 (43.04)</td>
<td>10124 (50.29)</td>
<td>4629 (19.68)</td>
<td>2434 (12.09)</td>
<td>1203 (5.11)</td>
</tr>
<tr>
<td>2000-02</td>
<td>18618 (46.73)</td>
<td>3052 (15.05)</td>
<td>11233 (28.20)</td>
<td>8985 (44.31)</td>
<td>2379 (5.97)</td>
<td>2379 (11.74)</td>
<td>1148 (2.88)</td>
</tr>
<tr>
<td>2005-07</td>
<td>8483 (28.14)</td>
<td>10223 (33.91)</td>
<td>2815 (9.34)</td>
<td>1531 (5.08)</td>
<td>1099 (3.65)</td>
<td>5995 (19.89)</td>
<td>30147</td>
</tr>
<tr>
<td>2010-12</td>
<td>4688 (17.75)</td>
<td>8496 (32.16)</td>
<td>2974 (11.26)</td>
<td>1662 (6.29)</td>
<td>1299 (4.92)</td>
<td>6131 (23.21)</td>
<td>26414</td>
</tr>
</tbody>
</table>

Note: 1) **"** denotes actual quantity’s exported and their shares. 2) *"* The average Indian export of fresh mangoes of 1995-96 and 1996-97 have been taken as the year 1997 was an aberration to the normal trend.

Source: DGCIS (various issues); APEDA (various issues)

In case of Saudi Arabia the share of Indian mango export declined from 9 per cent in 1980 to 6 per cent by 2000. The estimated share for 2000 is 12 per cent and is expected to
be 9 per cent by 2005 and 11 per cent by 2010. It is forecasted that the export to increase to 2815 mt by 2005 and to 2974 mt by 2010. India and Pakistan account for 90-95 per cent of market share of mangoes in the gulf region. However the Indian mangoes are popular only in the early part of the season i.e. March - April after which Pakistan mangoes take over, as they are cheaper. The African and South American mangoes have lately entered this market. This could be the reason for dwindling market share in both United Arab Emirates and Saudi Arabia.

Both the actual and estimated share of mango exports has increased for USA and is forecasted that the share would increase up to 3.65 per cent by 2005 and 5 per cent by 2010. The export in absolute terms is increasing steadily and is emerging to be an important export market for Indian mango. The US market for mangoes is large the major suppliers to the US are Florida and Mexico. But India is at a logistical disadvantage as compared to the other nations in the Caribbean, Central America and Latin America. Nevertheless the large ethnic population in the USA is willing to pay a price for the quality and taste of the Indian mangoes. The Indian fresh vegetable and fruit does not confirm to their quarantine standards. So India should also act on this front to sustain the growing market share.

The share of exports to other countries is declining in actual and estimated terms from 28 per cent to 15 per cent. It is forecasted that by 2010 the share would decline to 23 per cent. The major import markets in recent years have shifted from the traditional markets; United Arab Emirates and United Kingdom.

The foregoing analysis provides a strong argument to explore and develop new markets. Efforts are also needed to improve the efficiency of production and quality.

4.6 TRADE PERFORMANCE OF INDIAN TEA

4.6.1. India’s status in global tea production

India is second in terms of both area (20 per cent) and production (25 per cent) of tea in the world (Table 4.26). Six countries i.e., India, china, Kenya, Sri Lanka, Turkey and Indonesia together account for 80 per cent of the world’s total tea production. The productivity of tea in India is less than that of Kenya (2.15 tones/ha), Japan (1.98 tones/ha), and Turkey (1.82 tones/ha). It is also observed that in the last decade and a half the country has not recorded any significant growth in
yield (0.23 per cent). Though tea production has increased over the years due to expansion in its area, further increase in production is possible only by way of increasing yield.

Table 4.26: Production of tea in the world

<table>
<thead>
<tr>
<th>Country</th>
<th>TE 1990</th>
<th>TE 2005</th>
<th>% to total</th>
<th>CAGR (%)</th>
<th>C.V. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>8.44</td>
<td>9.46</td>
<td>(37)</td>
<td>0.65</td>
<td>3.24</td>
</tr>
<tr>
<td>P</td>
<td>5.63</td>
<td>8.62</td>
<td>(26)</td>
<td>2.72</td>
<td>13.56</td>
</tr>
<tr>
<td>Y</td>
<td>0.67</td>
<td>0.91</td>
<td></td>
<td>2.06</td>
<td>10.47</td>
</tr>
<tr>
<td>India</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>4.15</td>
<td>5.00</td>
<td>(20)</td>
<td>1.34</td>
<td>7.21</td>
</tr>
<tr>
<td>P</td>
<td>6.88</td>
<td>8.42</td>
<td>(25)</td>
<td>1.56</td>
<td>7.59</td>
</tr>
<tr>
<td>Y</td>
<td>1.66</td>
<td>1.69</td>
<td></td>
<td>0.23</td>
<td>4.43</td>
</tr>
<tr>
<td>Indonesia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>0.91</td>
<td>1.16</td>
<td>(5)</td>
<td>1.72</td>
<td>8.67</td>
</tr>
<tr>
<td>P</td>
<td>1.44</td>
<td>1.69</td>
<td>(5)</td>
<td>0.98</td>
<td>4.76</td>
</tr>
<tr>
<td>Y</td>
<td>1.59</td>
<td>1.45</td>
<td></td>
<td>-0.72</td>
<td>5.19</td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>0.59</td>
<td>0.49</td>
<td>(2)</td>
<td>-1.43</td>
<td>7.04</td>
</tr>
<tr>
<td>P</td>
<td>0.90</td>
<td>0.98</td>
<td>(3)</td>
<td>0.03</td>
<td>3.55</td>
</tr>
<tr>
<td>Y</td>
<td>1.53</td>
<td>1.98</td>
<td></td>
<td>1.49</td>
<td>7.68</td>
</tr>
<tr>
<td>Kenya</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>0.90</td>
<td>1.37</td>
<td>(5)</td>
<td>2.52</td>
<td>11.84</td>
</tr>
<tr>
<td>P</td>
<td>1.81</td>
<td>2.95</td>
<td>(9)</td>
<td>3.38</td>
<td>15.72</td>
</tr>
<tr>
<td>Y</td>
<td>1.99</td>
<td>2.15</td>
<td></td>
<td>0.84</td>
<td>4.90</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>2.22</td>
<td>2.03</td>
<td>(8)</td>
<td>0.72</td>
<td>6.24</td>
</tr>
<tr>
<td>P</td>
<td>2.22</td>
<td>3.06</td>
<td>(9)</td>
<td>2.81</td>
<td>13.56</td>
</tr>
<tr>
<td>Y</td>
<td>1.00</td>
<td>1.51</td>
<td></td>
<td>3.56</td>
<td>16.97</td>
</tr>
<tr>
<td>Turkey</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>0.89</td>
<td>0.92</td>
<td>(4)</td>
<td>0.62</td>
<td>7.41</td>
</tr>
<tr>
<td>P</td>
<td>1.37</td>
<td>1.86</td>
<td>(6)</td>
<td>1.94</td>
<td>14.53</td>
</tr>
<tr>
<td>Y</td>
<td>1.55</td>
<td>1.82</td>
<td></td>
<td>2.55</td>
<td>15.93</td>
</tr>
<tr>
<td>Vietnam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>0.54</td>
<td>1.02</td>
<td>(4)</td>
<td>3.60</td>
<td>19.49</td>
</tr>
<tr>
<td>P</td>
<td>0.31</td>
<td>1.06</td>
<td>(3)</td>
<td>9.14</td>
<td>43.49</td>
</tr>
<tr>
<td>Y</td>
<td>0.57</td>
<td>1.04</td>
<td></td>
<td>5.31</td>
<td>25.62</td>
</tr>
<tr>
<td>World</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>22.40</td>
<td>25.29</td>
<td>(100)</td>
<td>0.69</td>
<td>3.67</td>
</tr>
<tr>
<td>P</td>
<td>24.82</td>
<td>33.23</td>
<td>(100)</td>
<td>2.06</td>
<td>9.95</td>
</tr>
<tr>
<td>Y</td>
<td>1.11</td>
<td>1.31</td>
<td></td>
<td>1.36</td>
<td>6.76</td>
</tr>
</tbody>
</table>

Note: A=Area (lakh Hectares); P= Production (lakh tones); and Y= Yield (tonnes/Ha).
Source: FAOSTAT Database, www.FAO.ORG.
Across the states Assam is the leading state with an area of 2.31 lakh hectares and production of 4.45 lakh tones followed by West Bengal, Tamil Nadu, Kerala and Tripura (Table 4.27). The productivity is higher in Southern states compared to that of northern states of the country. Tea is produced in almost all the North Eastern states. Assam is the world’s largest distinct tea-growing area and produces the instantly recognizable, rich, malty, full-bodied, bright teas that have established themselves as favourites around the world. In West Bengal Darjeeling is known as the ‘Champagne of teas’. Darjeeling tea, with its unique Muscatel flavour and exquisite bouquet, is the world’s most exclusive tea, fetching the highest prices across the world.

Table 4.27: State wise tea production in India

<table>
<thead>
<tr>
<th>States</th>
<th>Area (‘000 ha)</th>
<th>Production (‘000 tones)</th>
<th>Yield (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2004 TE</td>
<td>% to total</td>
<td>2004 TE</td>
</tr>
<tr>
<td>Assam</td>
<td>231.00</td>
<td>(44.54)</td>
<td>445.25</td>
</tr>
<tr>
<td>West Bengal</td>
<td>104.20</td>
<td>(20.09)</td>
<td>194.45</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>49.10</td>
<td>(9.47)</td>
<td>131.22</td>
</tr>
<tr>
<td>Kerala</td>
<td>36.80</td>
<td>(7.09)</td>
<td>53.15</td>
</tr>
<tr>
<td>Tripura</td>
<td>6.10</td>
<td>(1.18)</td>
<td>7.35</td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td>2.10</td>
<td>(0.40)</td>
<td>1.60</td>
</tr>
<tr>
<td>Karnataka</td>
<td>2.10</td>
<td>(0.40)</td>
<td>5.24</td>
</tr>
<tr>
<td>Arunachal Pradesh</td>
<td>2.00</td>
<td>(0.39)</td>
<td>0.90</td>
</tr>
<tr>
<td>Nagaland</td>
<td>0.50</td>
<td>(0.09)</td>
<td>0.25</td>
</tr>
<tr>
<td>Manipur</td>
<td>0.90</td>
<td>(0.08)</td>
<td>0.25</td>
</tr>
<tr>
<td>Orissa</td>
<td>0.05</td>
<td>(0.01)</td>
<td>0.10</td>
</tr>
<tr>
<td>Sikkim</td>
<td>0.05</td>
<td>(0.01)</td>
<td>0.10</td>
</tr>
<tr>
<td>North India</td>
<td>403.91</td>
<td>(77.87)</td>
<td>649.04</td>
</tr>
<tr>
<td>South India</td>
<td>114.78</td>
<td>(22.13)</td>
<td>189.60</td>
</tr>
<tr>
<td>Northeast region</td>
<td>240.05</td>
<td>(46.28)</td>
<td>454.09</td>
</tr>
<tr>
<td><strong>India</strong></td>
<td><strong>518.68</strong></td>
<td>(<strong>100.00</strong>)</td>
<td><strong>838.64</strong></td>
</tr>
</tbody>
</table>

Source: GOI (Various issues), Horticulture Production Yearbook, NHB, Ministry of Agriculture, New Delhi.
Tripura is categorized as a traditional tea-growing state producing about 7.5 million kg of tea. There is a considerable scope to increase the area under tea plantation as well as productivity. The tea currently produced in Tripura is recognized for its good blending qualities. In Nagaland most of the farmers have shifted towards exclusive tea cultivation instead of mixed crops, which was the tradition. The price received by the farmers, however, is not as satisfactory. People are actually new to this crop and do not know about the market dynamics or quality differences. There is an urgent need for extension support at every level of cultivation and processing.

4.6.2. Declining global prices affecting sustainability of tea industry
The fall in price of tea was observed both in India as well as world over. The tea prices recorded in Mombasa (Kenya) in 2005 were same as that recorded about a decade ago. Tea prices in India and all over the world have not shown an increasing trend. Nevertheless immense variability in prices was observed in the past decade. Moreover the Indian prices have always remained lower than (Mombasa) Kenya prices. This phenomenon has effect on the profitability of the industry.
Efforts have been made to arrest fall in prices by way of setting up of price stabilization fund, creating a separate fund for long term development and modernization of plantation sector, increasing the allowance under Sec 33 AB of income tax Act from 20 per cent to 40 per cent; introduction of price sharing formula for equitable sharing of the sale proceeds between the bought leaf factories and small tea growers; implementation of a credit relief package; and development of IT based Information dissemination plan for the tea industry (GOI, 2004). These efforts have had a positive impact on the health of Indian tea sector. However, to make Indian tea sector more competitive, the long term strategy should be to give emphasis on quality of the product; tea product and process diversification; and also on the market diversification.

4.6.3. Issues with small tea growers
Attempts to expand tea in non-traditional areas have not been met with much success since large plantations don’t seem interested in increasing their area (Bhowmick, 1991). Under such a situation promoting small scale tea cultivation appears to be most practical business proposition in the potential areas. These small tea estates could be located in the
periphery of existing big tea plantation that enables the growers to have a tie-up arrangement with the large estates for technical know-how and sale of green leaf. This would increase tea production on one hand and also alleviate the ever swelling unemployment problem on the other. However, the small scale tea sector faces a number of problems too: lack of capital, improper knowledge about the agro-techniques of tea cultivation, inadequate input availability and problem of marketing (Das, 1998). There is a need to strengthen the technical services in order to disseminate the technical know-how of tea cultivation. A new type of production organization and ownership structure may be promoted to look after the multi-pronged problems of production, marketing and supporting services for the small holder tea production. Such an organization would be able to take care of the interest of the tea growers by making the inputs available in right quantity at right price: can make arrangements for processing of green leaves and eventually, can undertake marketing of products to enhance profits. Such a body could be drawn on the lines of Kenyan Tea Development Agency (KTDA) of Kenya or the “Tea Small Holdings Development Authority, of Sri Lanka” to cater to the needs of small tea growers.

4.6.4. Tea exports and its composition

In the year 2004-05 a total of 162 million kg of tea was exported, earning a foreign exchange of $ 336 million (Table 3). Tea exports could be classified into three categories based on nature of processing as black, green and others tea. In volume terms black tea accounts for 97 per cent of total tea exports and is followed by others (2 per cent) and green tea (1 per cent). The unit value realization was found to be higher in case of others group of tea ($5/Kg) followed by green tea ($3/kg) and black tea ($2/kg). The export of black tea in volume terms declined from 199 million kg in TE 1990 to 157 million kg in TE 2004. Exports in value terms also revealed similar pattern, with export earnings falling from $ 519 million to $ 316 million. The major cause of concern, however, is fall in unit value realization of tea exports from $ 3/kg in TE 1990 to $ 2/kg in TE 2004. Out of the various grades of black tea exported from the country the largest share in total tea exports is of “tea black leaf in bulk” (57 per cent) followed by “Black tea in packets >25 gm but < 1 kg” (18 per cent) and Tea black dust in bulk (11 per cent).
Table 4.28: Changing composition of tea exports from India

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<tr>
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<tbody>
<tr>
<td>A.</td>
<td>Black tea aggregate</td>
<td>Q</td>
<td>V</td>
<td>UV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>199.06</td>
<td>519.11</td>
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<tr>
<td></td>
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<td>(97.58)</td>
<td>(97.61)</td>
<td>(94.09)</td>
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<td></td>
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<td>157.32</td>
<td>315.94</td>
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<td></td>
<td></td>
<td>(97.32)</td>
<td>(94.09)</td>
<td>(94.09)</td>
</tr>
<tr>
<td></td>
<td>i) Black tea in packets &gt;25 gm but &lt; 1 kg</td>
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<td>46.80</td>
<td>131.85</td>
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<tr>
<td></td>
<td></td>
<td>(22.94)</td>
<td>(24.79)</td>
<td>(17.81)</td>
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<td>28.79</td>
<td>58.22</td>
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<td>(17.81)</td>
<td>(17.34)</td>
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<td></td>
<td></td>
<td>2.82</td>
<td>2.02</td>
<td>(17.92)</td>
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<tr>
<td></td>
<td>ii) Tea black leaf in bulk</td>
<td>Q</td>
<td>V</td>
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<td></td>
<td>123.89</td>
<td>318.28</td>
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<td></td>
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<td>(60.73)</td>
<td>(59.85)</td>
<td>(56.30)</td>
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<td></td>
<td></td>
<td>91.33</td>
<td>189.06</td>
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<td>(56.50)</td>
<td>(56.30)</td>
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<td></td>
<td>2.57</td>
<td>2.07</td>
<td>(17.92)</td>
</tr>
<tr>
<td></td>
<td>iii) Tea black dust in bulk</td>
<td>Q</td>
<td>V</td>
<td>UV</td>
</tr>
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<td></td>
<td>21.32</td>
<td>48.67</td>
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<td></td>
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<td>(10.45)</td>
<td>(9.15)</td>
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<td></td>
<td>17.43</td>
<td>29.29</td>
<td>(10.78)</td>
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<td>(10.78)</td>
<td>(8.72)</td>
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<td>2.28</td>
<td>1.68</td>
<td>(10.72)</td>
</tr>
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<td>B.</td>
<td>Green tea aggregate</td>
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<td>V</td>
<td>UV</td>
</tr>
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<td>3.99</td>
<td>7.51</td>
<td>1.88</td>
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<td></td>
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<td>(1.96)</td>
<td>(1.41)</td>
<td>(1.41)</td>
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<td>1.08</td>
<td>2.79</td>
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<td>(0.67)</td>
<td>(0.83)</td>
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<td>2.08</td>
<td>2.58</td>
<td>(0.83)</td>
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<tr>
<td>C.</td>
<td>Others tea aggregate</td>
<td>Q</td>
<td>V</td>
<td>UV</td>
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<td></td>
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<td>5.54</td>
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<td>(0.46)</td>
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<td>(0.98)</td>
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<td>3.25</td>
<td>17.07</td>
<td>(2.01)</td>
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<td>(2.01)</td>
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<td>5.26</td>
<td>5.26</td>
<td>(2.01)</td>
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<td>(2.01)</td>
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<tr>
<td></td>
<td>Total tea</td>
<td>Q</td>
<td>V</td>
<td>UV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>203.99</td>
<td>531.85</td>
<td>2.61</td>
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<td></td>
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<td>161.65</td>
<td>335.80</td>
<td>2.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(97.99)</td>
<td>(94.09)</td>
<td>(94.09)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-0.99</td>
<td>-2.32</td>
<td>-1.35</td>
</tr>
</tbody>
</table>

Note: 1) Q is quantity in million kg, V is value in million $, UV is unit value in $/kg.
2) Figures in parentheses are percent to the total.
4.6.5. Market loyalties of Indian tea

The structural changes in direction of trade were quantified using Markov Chain analysis and the results are presented in Table 4.29. The diagonal element of the transitional probability matrix measures the probability that the export share of a country will be retained. The elements (e.g., Pij of i-th row and j-th column) of the transitional probability matrix show the probability “P” that the share would shift from i-th country to j-th country. Pakistan (1.00) and others group (0.70) of countries emerged to be highly stable markets, whereas Kazakhstan (0.43) and Russia (0.33) emerged as moderately stable markets. The other major importing countries i.e., Iraq, UAE, USA, UK, Iran and Japan proved to be unstable markets for Indian tea. UK reinforces the market shares of Kazakhstan, Russia and UAE. Similarly, other group of countries also reinforces the market share of Kazakhstan and Russia. The markets of USA, UK and Iran became unstable leading to loss of market share. This could be attributed to two reasons; firstly, the production in Kenya, Sri Lanka, China and Vietnam moved to a higher plane from the mid-1990s, prompting these countries to step up their export promotion on a substantial scale.

Table 4.29: Transitional probability matrix of Indian tea exports

<table>
<thead>
<tr>
<th></th>
<th>Kazakhstan</th>
<th>Russia</th>
<th>UK</th>
<th>Iraq</th>
<th>UAE</th>
<th>USA</th>
<th>Iran</th>
<th>Pakistan</th>
<th>Japan</th>
<th>Others</th>
</tr>
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<tbody>
<tr>
<td>Kazakhstan</td>
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<td>0.021</td>
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<tr>
<td>Russia</td>
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<td>0.556</td>
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<tr>
<td>Iraq</td>
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<td>USA</td>
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<td>0</td>
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<td>0</td>
<td>0.004</td>
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<tr>
<td>Japan</td>
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<td>0</td>
<td>0</td>
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<td>Others</td>
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<td>0</td>
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<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.701</td>
</tr>
</tbody>
</table>

Secondly, the Indian tea exports, faced complacency, created by the steady surge in domestic demand which, unfortunately, started sagging from around 1997. A number of measures have been taken by Iran and India to normalize the tea trade. Earlier Iran had banned the import of Indian tea, due to their huge domestic stocks, which has been lifted.
It had reduced the tariff barriers and there was no restriction on the quantity of imports. India on the other hand is promoting the orthodox tea production in Assam, which is preferred in the Iran market (Mandal, 2004). The UK has one of the highest per capita consumption for tea at 2.7 kg against 660 gm. in India. The UK consumption was estimated to grow at one per cent per annum. An equally significant aspect of the UK tea trade is its interest to re-export tea with value-addition. Thus, the UK market offers immense scope for the Indian tea industry (Sunder, 2002). To regain the market share in UK, efforts need to be made for product and logo promotion and also for developing market intelligence. The promotional efforts have helped Kenya to gain a larger share (43 per cent) of UK tea market as compared to 19 per cent by India. The Indian Tea Board has identified Saudi Arabia, Syria and the UAE as three key markets in the West Asia and North Africa (WANA) region to register its logos and carry out major promotional campaigns with the aim to boost India's share of the WANA tea export market (Vasan, 2003).

In Russia, there is a considerable shift noted in the consumption and buying pattern favouring orthodox tea. Sri Lanka has taken advantage of this changed scenario by increasingly establishing its foothold in that market. On the other hand, the Russian market is also price driven in the CTC segment, where cheaper teas from rivals like China and Vietnam are edging out Indian teas. The logistical advantages also favour these countries vis-à-vis India (Nair, 2004).

**4.6.6. Tea export projection to major destinations**

The transitional probabilities of major importing countries were used to project the market shares of Indian “black tea leaf in bulk” for 2007 and 2009. The actual and estimated values of exports to major importing countries are presented in Table 4.30. The share of UAE, USA, Kazakhstan, Iran, Pakistan and Iraq show an increasing trend and is projected to increase further in year 2007. The exports to UK and Russia is estimated to increase however, their share in total tea exports from India is projected to fall and would be 44 per cent in 2007. The other group of countries is projected to account for a major share (22 per cent) of total tea export from India in 2007. Thus the diversification of export market of Indian tea would boost the trade.
Table 4.30: Indian tea exports to major importing nations

(‘00 tones)

<table>
<thead>
<tr>
<th></th>
<th>United Kingdom</th>
<th>Russia</th>
<th>UAE</th>
<th>USA</th>
<th>Japan钾</th>
<th>Kazakhstan</th>
<th>Iran</th>
<th>Pakistan</th>
<th>Iraq</th>
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<th>Total</th>
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<tr>
<td></td>
<td>A</td>
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<td>(3.8)</td>
<td>(2.1)</td>
<td>(21.3)</td>
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</tr>
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</table>

Note: A and “*” are actual values; P is projected value.
The projected export of total tea from India follows an increasing trend over the period and hence greater efforts are called for to increase the production of tea in the country so as to be able to meet the growing export market demand. India should also focus on quality of tea produced, so as to get premium price in the world market. Further, more convenient ways of drinking tea need to be developed through product and process development, for instance, instant tea or tea bags, which also change the style of drinking tea and thus the nature of demand.

4.6.7. Comparative advantage

The export competitiveness of tea was ascertained using the Export Performance Ratio (EPR) for the selected years and shown in the Fig. 1. During early 90s the EPR recorded an increasing trend. However, during the late 90s the EPR fell sharply, revealing erosion of comparative advantage of Indian tea. The trend was reversed through corrective measures in the form of promotional efforts of the government, which needs to be sustained on a long term basis.

Fig 4.1. Revealed Comparative Advantage of Tea in India
The Nominal Protection Coefficient (NPCs) for Indian tea has been less than one for all reference years (Fig. 2), indicating that the Indian tea is price efficient. In mid 1990s NPCs showed an increasing trend revealing the erosion of export competitiveness. However, of late the NPC has started declining, revealing the gain in competitiveness. This turnaround in export performance could partly be attributed to improvement in exports to UAE, the UK and Iraq, and to some extent to CIS. Another important factor in improvement in export performance has been increase in exports to newer markets such as Pakistan, Australia, etc. Such a trend shows diversification of our export market portfolio leading to improvement in our global competitiveness in the long run. The future strategy for the tea sector should be to augment our competitive strengths in the supply chain management, value addition and marketing. The country needs to reorient our product mix, which is skewed in favour of CTC teas whereas the global demand is for orthodox tea (Nair, 2004).