Chapter-III

EXPORT PERFORMANCE OF INDIA’S AGRICULTURAL SECTOR
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EXPORT PERFORMANCE OF INDIA’S AGRICULTURAL SECTOR

3.1 Introduction

The focus of the analysis in this core chapter of the thesis relates to the export performance of India’s agricultural sector during the last two decades in the post reforms period. The growth trends in absolute terms of exports of agricultural commodities have revealed a substantial increase in export earnings. The analysis has revealed the growing trend of the share of agricultural exports in India’s aggregate export earnings during the last two decades. A comparison of agricultural and non-agricultural exports has also revealed a growing share of agricultural exports in relation to non-agricultural exports. A varying trend of compound annual growth rate of exports of major agricultural commodities is also indicated during the corresponding period. The analysis in this chapter provides an aggregate picture of export trade in agricultural commodities. The analysis provides a good backdrop for an in-depth analysis of commodity composition of agricultural exports in the next chapter.

3.2 Dimensions of India’s Agricultural Exports

Agricultural exports are largely unrestricted in India. However a few items considered as essentials are prohibited like pulses and sugar (excluding sugar that are subjected to a tariff rate quota in the Unites States and the EC) to maintain domestic supplies of these products in order to keep the price at a reasonable level. Government has setup
Agri Export Zones in order to boost agriculture exports. These zones receive assistance from Central and State Governments. Currently there are over 60 Agri Export Zones sanctioned by the Central Government and monitored by Agriculture and Processed Food Products Export Development Authority (APEDA), Videsh Krishi Upaj Yojana (special vegetable products scheme) was introduced to promote exports of fruits, vegetables, flowers, minor forest produce, dairy, poultry and their value added products.

3.3 India’s Agricultural Exports During 90s and the New Millennium

A trend of fluctuations in India’s agricultural exports during the two decades from 1990-91 to 2010-11 is observed. Further a trend of decline in agricultural exports as percentage of total exports from India during the corresponding period is indicates. The data obtained from the publication by the Director General of Commercial Intelligence and Statistics, Ministry of Commerce has revealed these significant trends. The following table provides the details.
Table-3.1

India's Exports of Agricultural Commodities vis-à-vis Total National Exports

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Year</th>
<th>Agriculture Exports</th>
<th>Total National Exports</th>
<th>Percentage Agriculture Exports to Total National Exports</th>
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<tbody>
<tr>
<td>1</td>
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<td>32527.28</td>
<td>18.49</td>
</tr>
<tr>
<td>2</td>
<td>1991-92</td>
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<td>44041.81</td>
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<td>3</td>
<td>1992-93</td>
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<td>53688.26</td>
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</tr>
<tr>
<td>4</td>
<td>1993-94</td>
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<td>69748.85</td>
<td>18.05</td>
</tr>
<tr>
<td>5</td>
<td>1994-95</td>
<td>13222.76</td>
<td>82673.40</td>
<td>15.99</td>
</tr>
<tr>
<td>6</td>
<td>1995-96</td>
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<td>106353.35</td>
<td>19.18</td>
</tr>
<tr>
<td>7</td>
<td>1996-97</td>
<td>24161.29</td>
<td>118817.32</td>
<td>20.33</td>
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<td>8</td>
<td>1997-98</td>
<td>24832.45</td>
<td>130100.64</td>
<td>19.09</td>
</tr>
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<td>1998-99</td>
<td>25510.64</td>
<td>139751.77</td>
<td>18.25</td>
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<tr>
<td>10</td>
<td>1999-00</td>
<td>25313.66</td>
<td>159095.20</td>
<td>15.91</td>
</tr>
<tr>
<td>11</td>
<td>2000-01</td>
<td>28657.37</td>
<td>201356.45</td>
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</tr>
<tr>
<td>12</td>
<td>2001-02</td>
<td>29728.61</td>
<td>209017.97</td>
<td>14.22</td>
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<tr>
<td>13</td>
<td>2002-03</td>
<td>34653.94</td>
<td>255137.28</td>
<td>13.58</td>
</tr>
<tr>
<td>14</td>
<td>2003-04</td>
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<td>293366.75</td>
<td>12.70</td>
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<td>15</td>
<td>2004-05</td>
<td>41602.65</td>
<td>375339.53</td>
<td>11.08</td>
</tr>
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<td>16</td>
<td>2005-06</td>
<td>49216.96</td>
<td>456417.86</td>
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<td>2006-07</td>
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<td>571779.28</td>
<td>10.92</td>
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<td>18</td>
<td>2007-08</td>
<td>79039.72</td>
<td>655863.52</td>
<td>12.05</td>
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<td>19</td>
<td>2008-09</td>
<td>85951.67</td>
<td>840755.06</td>
<td>10.22</td>
</tr>
<tr>
<td>20</td>
<td>2009-10</td>
<td>89341.33</td>
<td>845533.64</td>
<td>10.57</td>
</tr>
<tr>
<td>21</td>
<td>2010-11(P)</td>
<td>120185.48</td>
<td>1148169.56</td>
<td>10.47</td>
</tr>
</tbody>
</table>

Note: P-Provisional
Source: Director General of Commercial Intelligence and Statistics, Ministry of Commerce, Kolkata.

Agricultural exports from India have shown a trend of increase in absolute terms during the first decade in the post reform era. Agricultural exports rose from Rs. 6012.76 crores in 1990-91 to Rs. 13222.76 crores in 1994-95 in a period of five years. Total national...
exports during this period rose steeply from Rs. 32527.28 crores in 1990-91 to Rs. 82673.40 crores. The rate of growth of agricultural exports however has been slower compared to the growth of total national exports during the correspondent period. Agricultural exports as percentage to total national exports have indicated a trend of decline. The percentage of agricultural exports to total national exports declined from 18.49 percent in 1990-91 to 15.99 percent in 1994-95. The five year period witnessed a downward trend of fluctuations except in the year 1993-94. An identical trend of downward fluctuations of agricultural exports as percentage of total national exports during the next five year period from 1995-96 to 1999-2000 is observed.

Agricultural exports rose from Rs. 20397.74 crores in 1995-96 to Rs. 25510.64 crores in 1999-2000. However there is a continuous rise in total national exports during this period. Total national exports rose from Rs. 106353.35 crores in 1995-96 to Rs. 159095.20 crores in 1999-2000. Agricultural exports during this period as percentage of total national exports have indicated a trend of downward fluctuations. The percentage declined from 19.18 percent in 1995-96 to 15.91 percent in 1999-2000 with an exception of a small increase to 20.33 percent in 1996-97.

The next five years from 2000-01 to 2004-05 have witnessed a continuous and substantial increase in agricultural exports in India. Agricultural exports rose from Rs. 28657.37 crores in 2000-01 to Rs. 41602.65 crores in 2004-05. Similarly there has been a substantial
and continuous increase in total national exports during the corresponding period. Total national exports rose from Rs. 201356.45 crores in 2000-01 to Rs. 375339.53 crores in 2004-05.

The share of agricultural exports in total exports from India has declined continuously despite a continuous increase in agricultural exports in absolute terms during the corresponding period. This indicates the slow rate of growth of agricultural exports compared to the rate of growth of total national exports from India. Agricultural exports as percentage of total national exports declined from 14.23 percent in 2000-01 to 11.08 percent in 2004-05.

The last five years of the first decade in the new millennium have witnessed a continuous and substantial increase in India's agricultural exports and the total agricultural exports and the total national exports from 2005-06 to 2010-11. Agricultural exports from India rose from 49216.96 crores in 2005-06 to Rs. 120185.48 crores in 2010-11 which is more than 100 percent increase during the five year period. Total national exports during the corresponding period rose from Rs. 456417.86 crores in 2005-06 to Rs. 1148169.56 crores in 2010-11 which is again an increase of more than 100 percent. There has been a slowdown in the percentage of agricultural exports to total national exports during the five years from 2005-06 to 2010-11. The percentage declined from 10.78 in 2005-6 to 10.47 in 2010-11 with a trend of fluctuations during the intervening period. It rose to a high of 12.05 percent in 2007-08 but declined to the lowest level of 10.22 percent in 2008-09.
3.4 Share of Agriculture and Non-Agriculture Export in Total Exports of India

The data relating to percentage share of agricultural export in total export indicate sustained level varying between 16.1 percent and 19.1 percent during the first five years of the decade of 90s. A similar trend of sustained level of percentage share of non-agricultural export varying between 80.9 percent and 83.9 percent during corresponding five year period of 1991-91 to 1995-96. Further the percentage share of agricultural exports in total exports during the next five years from 1996-97 to 2000-01 varied between 13.4 percent and 20.5 percent while non-agricultural exports varied between 79.5 percent in 1996-97 to 86.6 percent in 2000-01. Agricultural exports have shown a declining trend during the next five years from 2001-02 to 2005-06 from 13.4 percent to 9.9 percent. During this period non-agricultural exports have registered a rising trend from 86.5 percent to 90.1 percent. Further there is an increasing trend of exports of non-agricultural exports during the next four years from 2006-07 to 2009-10 while agricultural exports have fluctuated during the corresponding period.

The ratio of agricultural exports to non-agricultural exports during 90s and during the first decade of the new millennium has been largely on the increasing side. The ratio rose from 1:5 in 1991-92 to 1:8 in 2009-10 with minor fluctuations in the intervening period. The following table provides the details.
### Share of Agriculture and Non-Agriculture Exports in Total Exports of India

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Exports (Million USD)</th>
<th>Agriculture and Allied Products Export (Million USD)</th>
<th>Percentage Share of Agricultural Export</th>
<th>Percentage Share of Non-agricultural Export</th>
<th>Ratio of Agricultural Export to Non-agricultural Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991-92</td>
<td>17865.4</td>
<td>3202.5</td>
<td>17.9</td>
<td>82.1</td>
<td>1:5</td>
</tr>
<tr>
<td>1992-93</td>
<td>18537.2</td>
<td>3135.8</td>
<td>16.9</td>
<td>83.1</td>
<td>1:5</td>
</tr>
<tr>
<td>1993-94</td>
<td>22238.3</td>
<td>4027.5</td>
<td>18.1</td>
<td>81.9</td>
<td>1:5</td>
</tr>
<tr>
<td>1994-95</td>
<td>26330.5</td>
<td>4226.1</td>
<td>16.1</td>
<td>83.9</td>
<td>1:5</td>
</tr>
<tr>
<td>1995-96</td>
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<td>6081.9</td>
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<td>80.9</td>
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<td>1996-97</td>
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<td>79.5</td>
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<tr>
<td>1998-99</td>
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<td>6034.5</td>
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<td>81.8</td>
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<td>1999-00</td>
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<td>13.4</td>
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<tr>
<td>2001-02</td>
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<td>5901.2</td>
<td>13.5</td>
<td>86.5</td>
<td>1:6</td>
</tr>
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<td>2002-03</td>
<td>52719.4</td>
<td>6710</td>
<td>12.7</td>
<td>87.3</td>
<td>1:7</td>
</tr>
<tr>
<td>2003-04</td>
<td>63842.6</td>
<td>7533.1</td>
<td>11.8</td>
<td>88.2</td>
<td>1:7</td>
</tr>
<tr>
<td>2004-05</td>
<td>83535.9</td>
<td>8474.7</td>
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<td>89.9</td>
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<td>2005-06</td>
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<td>10213.8</td>
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<td>90.1</td>
<td>1:9</td>
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<td>2006-07</td>
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<td>12683.5</td>
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<td>2007-08</td>
<td>159006.7</td>
<td>19398.8</td>
<td>12.2</td>
<td>87.8</td>
<td>1:7</td>
</tr>
<tr>
<td>2008-09</td>
<td>173865.3</td>
<td>17774.5</td>
<td>10.2</td>
<td>89.8</td>
<td>1:8</td>
</tr>
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<td>2009-10</td>
<td>184770.0</td>
<td>19572.4</td>
<td>10.6</td>
<td>89.4</td>
<td>1:8</td>
</tr>
</tbody>
</table>

Source: Directorate General of Commercial Intelligence & Statistics, Govt. of India

### 3.5 Compound Annual Growth Rate of Agricultural Exports – Commoditywise Analysis

The data regarding the Compound Annual Growth Rate (CAGR) of the major groups of agricultural commodities indicate a trend of
fluctuations during the two decades from 1991 to 2009. The CAGR of agricultural exports during 2000 to 2009 indicates a higher performance compared to the CAGR of agricultural exports during 1991 to 1999.

Commodity wise analysis of CAGR indicates that the CAGR at 15.5 during 2000-09 was higher than the CAGR of 10.7 during 1991-99. The average CAGR of this commodity group at 11.9 during 1991 to 2009 was higher than the CAGR of total agricultural export of India at 9.2.

The CAGR of 18.4 for fresh and processed vegetables exports during 2000-09 was higher than the CAGR at -2.5 during 1991-99. The average CAGR of this commodity group for 19991 to 2009 at 9.3 was marginally higher than the CAGR of total agricultural export of India (9.2).

The CAGR of 21.0 for fresh and processed fruits for 2000-09 was higher than 17.3 during 19991-99. The average CAGR of this group of commodity exports at 20.8 was the highest for the period 1991 to 2009 compared to all the export commodity groups of agricultural exports. It was much higher than 9.2 of the CAGR for the total agricultural export of India during 1991 to 2009.

CAGR of exports of pulses was the highest at 22.5 during 1991-99, but the CAGR was negative at -1.8 during 2000-09. The average CAGRs for the period 1991 to 2009 for export of pulses was 10.6 which were higher than the CAGR of 9.2 for total agricultural export during 1991 to 2009.
CAGR of -8.7 for 1991-99 in case of exports of floriculture products improved to 9.8 during 2000-09. The average CAGR for the exports of this agricultural product for 1991 to 2009 was 0.5 which was much below the CAGR of exports for the total agricultural exports of Indian at 2.9.

The CAGR of exports of tea and coffee was 2.7 during 1991-99 which rose to 4.6 during 2000-09. The average CAGR of exports for 1991 to 2009 was 2.8 which were below the CAGR of total agriculture exports of India at 9.2.

The CAGR of export of spices rose from 11.2 during 1991-99 to 12.8 during 2000-09. The average CAGR of exports of spices during 1991 to 2009 was 12.1 which were above the CAGR of total agricultural export of India at 9.2 during the corresponding period.

The CAGR of exports of Tobacco rose steeply from 4.1 in 1991-99 to 15.9 during 2000-09. The average CAGR of exports of tobacco during 1991 to 2009 was 9.6 which was above the CAGR of total agricultural exports of 9.2 during the corresponding period.


The CAGR of exports of marine products declined from 7.8 during 1991-99 to 3.8 during 2000-09. The average CAGR of exports of marine products at 6.5 during 1991-2009 was below the CAGR of total agricultural exports of India at 9.2.

The CAGR of exports of meat and preparations rose steeply from 8.1 during 1991-99 to 16.1 during 1991-2009. The average CAGR of
exports of meat and preparations at 14.8 during 1991 to 2009 were above the CAGR of total agricultural export of India at 9.2 during the corresponding period.

The CAGR of exports of dairy and poultry products during 1991-99 was 9.6 which rose to 18.5 during 1991-2009. The average CAGR of exports of dairy and poultry during 1991-2009 was 16.9 which was much above the CAGR of total agricultural export of India at 9.2 during the corresponding period.

The CAGR of exports of oil cakes, oil and oil seeds rose from 5.7 in 1991-99 to 13.1 during 1991 to 2009. The average CAGR of export of this group of agricultural commodities at 9.9 was above the CAGR of total agricultural export of India at 9.2 during the corresponding period.

The CAGR of export of sugar and molasses during 1991-99 at -20 rose to 12.1 during 1991 to 2009. The average CAGR of export of sugar and molasses at 7.8 during 1991 to 2009 was lower than the CAGR of total agricultural export of India at 9.2 during the corresponding period. The following table provides the details.
Table-3.3

Compound Annual Growth Rate of Agricultural Exports – A Commodity wise Analysis

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Commodities</th>
<th>Compound Annual Growth Rate</th>
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<tr>
<td></td>
<td></td>
<td>From 1991 to 1999</td>
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<tr>
<td>1</td>
<td>Cereals and Cereal Preparation</td>
<td>10.7</td>
</tr>
<tr>
<td>2</td>
<td>Fresh and processed Vegetables</td>
<td>-2.5</td>
</tr>
<tr>
<td>3</td>
<td>Fresh and processed Fruits</td>
<td>17.3</td>
</tr>
<tr>
<td>4</td>
<td>Pulses</td>
<td>22.5*</td>
</tr>
<tr>
<td>5</td>
<td>Floriculture products</td>
<td>-8.7</td>
</tr>
<tr>
<td>6</td>
<td>Tea and coffee</td>
<td>2.7</td>
</tr>
<tr>
<td>7</td>
<td>Spices</td>
<td>11.2</td>
</tr>
<tr>
<td>8</td>
<td>Tobacco</td>
<td>4.1</td>
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<td>Cotton</td>
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<td>10</td>
<td>Marine Products</td>
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<td>11</td>
<td>Meat and meat Preparations</td>
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<td>13</td>
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<td>14</td>
<td>Sugar and Molasses</td>
<td>-20</td>
</tr>
<tr>
<td>15</td>
<td>Total Agriculture Export of India</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Note: * Indicates CAGR from 1992 to 1999.
# Indicates CAGR from 1994 to 1999.

Source: Calculation based on data collected from various issues of CMIE’s publication on Foreign Trade and Balance of Payment.

3.6 Sustainable Agricultural Export

Introduction

Agriculture, a core sector of the Indian economy, accounts for 30 percent of the country’s GDP, 20 percent of total export earnings, two thirds of country’s workforce and livelihood for 70 percent of the total population. The past accomplishments of this sector are a great strength to face, the current problems and future challenges in the
areas of greater efficiency (competitiveness), sustainability, poverty alleviation and continued food self-sufficiency. With trade liberalization, agricultural exports have also become an important national goal.

The new economic regime, initiated since early nineties, has led to resetting of the goals of Indian agriculture towards global competitiveness and export orientation without compromising the basic premise of self-reliance. The emergence of the concept of sustainability of agricultural production has made the task more difficult for all those who are associated with agricultural production systems in the country. The present goals of Indian agriculture warrant reformation of strategies and action plans. Agricultural exports increased from about 600 million US dollars in 1960-61 to 3520 million US dollars in 1990-91. During post-economic reforms period, the value of agricultural exports has nearly doubled. The share of agri-exports in total exports, however, has remained more or less stable around 20 percent, though the share of exports in agricultural GDP has been rising. Commodities such as marine products, oilmeals, rice, coffee, tea, spices, cashew, tobacco, castor oil, groundnut, sesame, fresh fruits, vegetables, pulses, etc. are important export earners and are being exported to more than 110 countries.

The encouraging results of goal-oriented Green Revolution, White Revolution, Yellow Revolution etc. enthuse the agricultural fraternity of the country to set a new goal for 'Agri-Export Revolution' which is not only the need of the hour but also a compulsion to strengthen and revitalize the economy of the country. While India
holds an important position in the export market for a set of traditional agricultural commodities, new areas and new commodities are likely to emerge such as live animals and animal products, fruits, vegetables, floriculture, medicinal plants and processed agricultural products. In order to understand the emerging challenges and to identify ways and means of placing our country as a major player in the global export market for agricultural products, the National Academy of Agricultural Sciences (NAAS) in collaboration with the Rajasthan Agricultural University, Bikaner and the State Government of Rajasthan deliberated on the theme “Sustainable Agricultural Export” during the Fourth Agricultural Science Congress held at Jaipur in February, 1999.

3.7 Agricultural Exports – Advantage India*

Since independence, India has made rapid strides in agricultural production. Salient attainments include the following:

- Food production has increased from a mere 50 million tonnes in 1947 to over 199.30 million tonnes during 1996-97, and per capita net availability of food grains has grown from 395 gm per day in early 50s to 529 gm in 1996-97.
- The country is now the largest producer of milk and the second largest producer of fruits and vegetables in the world.
- Oilseeds production has increased from 5.2 million tonnes in 1950 to 22.24 million tonnes in 1997.

* Adapted from Sustainable Agricultural Export, National Academy of Agricultural Sciences, India, Sept. 1999, Policy Paper-5.
• Fish and marine food production has risen from 7.5 to over 50 million tonnes at present.
• Quality seed production which was negligible in 1947 has shown a quantum jump and is currently placed at 7 million quintals. A large number of private seed companies have also come up.
• Both the irrigated and the potentially irrigated areas have increased since Independence. Efficient methods like sprinkler and drip irrigation have become popular in arid and semi-arid areas.
• The total fertilizer consumption has gone up and India now ranks fourth in the world, although the per unit area consumption is still low.
• India is also the largest reservoir of trained manpower in the world.
• Despite agriculture sector being not-taxed, prices of several agricultural commodities are below international prices, thus conferring trade advantages.

Despite impressive strides that the country has made in agricultural production, India has not yet become a major player in the international arena as far as exports are concerned.

The broad export strategy for Indian agriculture would, therefore, be to strengthen and widen the export market for established ‘commercial commodities’ like tea, coffee, spices, cotton, jute, sugar, oilmeals, etc. and also to create and capture new export market for ‘dynamic commodities’ like meat, dairy products, poultry, fishery products, vegetables, fruits, floriculture etc., whose demand in the international market is buoyant. India has a comparative
advantage in many of these commodities due to availability of varied agro-climatic conditions, diversified commodity mix and low wage rates leading to lower cost of production etc. The major plank of our foreign trade strategy must be on finding a niche for exports of the above mentioned non-conventional and dynamic commodities. This has to be achieved in the context of stricter control processes under Sanitary and Phytosanitary (SPS) Agreement and other non-tariff barriers viz. Technical Barriers to Trade (TBT), etc.

The strategies and action plan for increasing agricultural exports which emerged out of the deliberations are summarized below:

**Cereals**

- Since compromise on food security/self-sufficiency is undesirable, the export of strategic cereals should be planned very carefully.
- Wheat being a major commodity of agricultural exports from developed countries, India will have to face a tough competition from them. Future projections suggest continued upsurge in domestic wheat consumption and relatively small surpluses.
- While continuing the export of basmati rice targeted mostly to Middle East and to NRIs in Europe and USA, the limited scope for accelerating the export of basmati and other scented varieties will have to be kept in mind.
- The potential market for rice lies in the Southeast Asian countries like Indonesia, Malaysia and the Philippines and in East Asian countries like Japan and South Korea and also in Sub-Saharan countries. Rice exports to these countries from Thailand have
reached a plateau and India has the potential to enter these markets provided we succeed in developing and growing varieties preferred by consumers in these countries and make vigorous efforts to capture the market.

- Crops like barley and maize hold export potential either as cattle feed or as industrial raw material. The competitive edge can be further improved if the productivity of these crops is raised.

**Horticultural Produce**

- Opportunities of extended production of various fruits, vegetables and floriculture crops and exporting them to newer markets in Central and South Asian countries and Japan in addition to the traditional markets of Europe, USA, Russia and some countries in Africa, need to be tapped on a priority basis.

- Several spices, condiments and medicinal crops can be marketed abroad at a fancied price.

- Efforts are needed for identification of potential markets, choice of cost-effective, eco-friendly and sustainable technologies for product development, value addition and for devising innovative trade practices with emphasis on quality, transparency and timely delivery.

- Policy interventions and incentive packages leading to regional specialization in production and processing of tradable horticultural products, foreign participation in investment, transfer of technology and buy-back arrangements are also advocated.
Commercial Crops

- The dynamic demand for coffee in the world market opens up splendid opportunities for our country to emerge as a major player.
- Despite stagnation in international market of tea both in terms of prices and quantities and the stiff competition that Indian tea faces, India should continue to work and aspire for leadership in this crop.
- The inter-year instability in production coupled with low yields of cotton stand as major constraints for cotton to emerge as a stable exportable commodity. The possibility to keep our presence in international cotton market lies in the increased productivity and enhanced stability in production.
- India holds a great potential to take advantage of the surge in export of tobacco, especially by improving its productivity.

Oilseeds

- The mission mode approach implemented through Technology Mission on Oilseeds (TMO) not only narrowed down the large, domestic demand-supply gap for vegetable oil but also paved the way for devising separate strategies for import substitution and export of oilseeds. Exportable oilseeds include the production of HPS groundnut free from aflatoxin content, developing varieties of mustard with low glucosinilate, organizing production of white sesameum without pesticide residues and rice bran extraction with low silica content. Castor oil has also emerged as an important export item. The strategy for export of oilseeds must include
enhanced productivity, development of needed infrastructure, pre-
and post-harvest measures to upgrade the quality and popularization
of quality oilseeds production through contract farming in potential
places. Improving production efficiency would be most critical in
the oilseeds sector.

Dairy Products

- The growth rate of 4.5 percent per annum in milk production in the
country against the world average growth of 1.48 percent, and its
static growth in most milk producing countries indicates the
potential of India to emerge as a major player in the export of milk
products like whole milk powder, skimmed milk powder, butter,
cheese etc., in the rising markets for these products in Southeast
Asian countries and the Middle East. The emergence of the country
from a net importer to an exporter of milk products since early
nineties is an indication of pushing the sector from an occasional
exporter to a regular exporter in the years to come.

- The immediate need is to push up the production of milk to a level
of making adequate surplus for export after meeting the steadily
rising internal demand. To develop dairy products of international
standard for export, adequate thrust on quality and clean milk
production is required.

- There is a need to segmentise the milk production systems for
catering to different market segments including export market
which in turn will demand investment on mechanized milking,
chilling systems, quality packaging, etc. with strict adherence to
Codex Alimentarius Standards and developing branded market for consumers.

**Meat and Meat Products**

- Meat and meat products from buffalo, sheep and goat have a major export potential. Some private state-of-art abattoircum-meat processing plants have established a niche in international markets covering the Philippines, Malaysia, Iran, Egypt, Gulf and Middle East countries. The meat export can be further accelerated by modernizing more meat plants with world class sanitary and phytosanitary conditions, by establishing disease-free zones for meat animals and by vertically integrating production of meat animals with meat processing.

- The approach of lifting the ban on the export of culled cattle may lead to better economic returns to the farmers and to the country.

**Marine Products**

- The high growth rate in the volume and value of marine products, in general and frozen fish and shrimp, in particular during recent years is indicative of the export potential of marine products from India. The Marine Products Export Development Authority (MPEDA) should undertake massive advertising and marketing campaign in overseas food markets to diversify the market and products. There is an urgent need for India to modernize processing facilities to maintain international quality standards and meet the stringent quality standards of importing countries.
• Providing on-line information about international market trends, prices, etc. to seafood exporters of our country will further help to boost this sector.

Exports from Arid Agriculture

• The hot and cold arid zones together cover about 12 percent of the geographical area of the country. The hot region with 32 million hectares is spread over the states of Rajasthan, Gujarat, Punjab, Haryana, Andhra Pradesh and Karnataka. Despite poor resource base in this region, low density of human population with limited requirements for ensured food security makes it a good candidate to generate surplus agricultural production leading to export options under sustainable integrated farming systems with food crops, horticultural crops, medicinal plants, forestry plants, livestock, etc. The arid region fruits like citrus, guava, ber, pomegranate, aonla; vegetables like chillies, garlic, okra, tomato, cucurbits; and seed spices like cumin, fennel, fenugreek etc., hold lot of export potential. Plants like isabgol, henna, guggul, senna, ashwagandha, gwarpatha, safed musli, bantulsi, etc. also hold promise. Arid regions minor forest produce like gum arabica and oloogum resins also have export potential. Neem is an important tree species of arid region which can be used for developing medicinal products, bio-pesticides, etc. The diversified livestock mix of the region also opens up a number of avenues for export earnings from livestock products.
• The export strategies for seed spices, medicinal plants and other products of plant origin include germplasm collection, conservation, evaluation, cataloguing, crop improvement, mutation breeding, etc. for quality improvement. The expanded use of biotechnology can also play a crucial role.

• Agro-processing industries based on raw materials available in the arid region provide expanded markets for farmers, add value to the products, create additional employment opportunities and open up channels for sustainable exports.

• Added efforts are needed to increase earnings through exports of commodities like guar gum, guar powder and splits, deoiled cakes, spices, spice-oils, cotton, wool, meat, isabgol, castor, etc.

3.8 Developing Effective Interface among Various Agencies

• The most critical parameter determining exportability is efficiency. The challenge for the research system is to shift its focus from increased production to globally efficient production.

• Reorientation of research agenda for export involves, augmenting production of varieties, meeting quality requirements of importing countries, strengthening of research on non-conventional crops/plants like minor fruits, medicinal plants, seed spices, etc. having export potential, establishment of proper linkages with processing industries and export organizations and identification of exportable commodities and also matching of their potential areas of production in terms of agro-climatic conditions and entrepreneurial
support are advocated through effective interface of various agencies from primary production to final exports.

3.9 Investment in Physical Infrastructure

- Export of agricultural commodities can be viable and competitive, if required level of investment for creation of physical facilities like transport, cold chain, packaging, port facilities, etc. is made.
- Upgradation of domestic airports into international airports in potential areas like Jaipur will greatly spur production of fruits, vegetables, flowers, etc. for export purposes.
- Special incentives may be offered to encourage both public and private sector investment in various activities related to development of commodity specific physical infrastructure for export purposes. Cold storage facilities, transportation and cold chain linkages for maintaining freshness of the produce are important for items like horticultural products. Efforts been made to encourage foreign capital and technology marketing tie-ups including joint ventures for sustainable export of agricultural products.

3.10 Export Promotion

- The efforts being made for agri-exports by various agencies like APEDA, MPEDA, Spices Board, Coffee Board, Tea Board, etc. need to be augmented. Along the lines of these agencies, a Meat Development Board also needs to be established.
- Contract farming on the lines of the Pepsi Foods in Punjab and replicating the same in Gujarat and Karnataka for commodities like tomato, chillies, groundnut, garlic etc., may be beneficial to the
farmers and may facilitate export promotion as foreign buyers get vendor assurance and quality for the items supplied by such agencies.

3.11 Food Safety Requirements

- Commodity Boards e.g. Spices Board, Tea Board, Coffee Board, National Dairy Development Board (NDDB), Ministries of Agriculture, Food Processing, and Commerce and organizations like Bureau of Indian Standards, APEDA, MPEDA should initiate awareness programmes in a coordinated manner on Food Hygiene and Hazard Analysis Critical Control Point (HACCP) and other safety measures for export oriented food items so as to avoid rejection and detention of consignments not conforming to quality specifications of the importing countries on the ground of Sanitary and Phytosanitary (SPS) Agreement and also Technical Barrier to Trade (TBT) Agreement which came into force with effect from January 1, 1995.
- Efforts are also needed to develop HACCP and other safety measures for each of the potential fresh/processed food items separately, since single system is not universally applicable.
- Creation of quality testing and certification protocols of international standards would be necessary to fully exploit trade opportunities.

3.12 Agri-Export Information System

- In order to develop a common perspective on the constraints, opportunities and other facets of agri-exports by the various stakeholders like producers, research organizations, extension agencies, agro-processing industries, policy makers and exporters,
an easily accessible information system including database on aspects such as volume of trade, quality specifications, demand-supply scenario, border prices regulations governing certification and exports of commodities and countries along with inventory of available technologies for meeting the quality is advocated.

3.13 Developing Managerial Capability

- As the agribusiness is being enlarged from domestic to international and multinational to global level, the demand for trained manpower to manage it is becoming more and more explicit and is increasing. Therefore, for managing agribusiness, leadership and managerial ability need to be developed in areas such as agricultural production, procurement, processing, quality management, technology management, international trade, marketing, financial management, logistic management, human resource management and also strategic management. The implementation and adherence to quality assurance measures such as ISO 9000, ISO 15000, HACCP, CODES, etc. is possible only through trained manpower. Therefore, long-term educational programmes and short-term trainings are required for developing manpower for sustainable agricultural exports.

3.14 Long-term Export Policy

- In order that agriculture sector contributes to full potential of India's exports, a long-term policy leading to export orientation by differentiating the exportable items keeping in view the domestic needs, food security, price elasticity, responsiveness to R&D efforts and export competitiveness, assumes great significance.
3.15 Major Observations

Agricultural exports from India have been on a slow growth path during the first decade after the initiation of economic reforms since 1990-91. Agricultural exports more than doubled during the first half of the 90s. The growth rate has been higher during the second part of the decade between 1995-96 and 2000-01. This trend of higher growth of agricultural exports in absolute terms has been maintained during the two decades from 1990-91 to 2010-11 when agricultural exports increased from Rs. 6012.76 crores in 1990-91 to Rs. 120185.48 crores in 2010-11. However the growth of agricultural exports as a percentage of total national exports have indicated a trend of slow down since the beginning of the present millennium compared to the 90s. Frequent failure of agricultural production and severe competition in world market for primary products coupled with increased demand domestically have been responsible for the lower share of agricultural exports in India’s total export earnings.