Chapter-VI

SUMMARY OF MAJOR FINDINGS, CONCLUSIONS AND SUGGESTIONS
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The study has revealed the following major findings leading to some significant conclusions. A few suggestions have been offered for further growth of India's exports of agricultural commodities.

6.1 Major Findings and Conclusions

1.1 Export sector has been conceived by development economists as a propulsive sector. It widens the markets, provides economies of scale and sets in the pace of multiplier – acceleration process in the economy. Several studies by United Nations, the ECAFE, the World Bank and others have shown noteworthy correlation between the growth of exports of a country and its overall rate of growth. The examples of Mexico, Peru, Japan, Venezuela, Israel, Philippines and Thailand among others are often cited (Margaret G. de Vries, 1967). Export trade worked as engine of economic growth for the nineteenth century Europe (Ragnar Nurkse, 1961)

1.2 Export policy regime in India is characterized by three distinct periods: (i) Export permission period (The period coinciding the First Two Five Year Plans), (ii) The era of export promotion and import restriction and (iii) The period coinciding with the open economy system (from 1991 onwards).

1.3 A new approach for the promotion of exports proposed by the Ministry of Commerce in 1996 under Chidambaram's stewardship is the product of Country Matrics. It is based on the assessment that 15 destinations account for 20 billion of India's total exports of $26.2 billion. Similarly 15 products account for $17 billion of total products. This matrics approach led India to focus on markets with per capital income of over $20,000.

The product-country matrics is helpful in identifying emerging markets as well as product groups where the country can seek to make special efforts. The 10 emerging markets identified are Australia, Brazil, Indonesia, Iran, Israel, South Korea, Malaysia, Nigeria, South Africa and Spain. The 10 most prospective products are fruits and vegetables, processed fruits and juices, processed minerals, sports goods, cosmetics and toiletries, woolen yarn fabrics and made ups, silk readymade garments, wool readymade garments, electronic goods and computer software.

1.4 India's agricultural exports have potential to reach higher level than the present level of 17 percent of the total exports. Advantages of least amount of cash assistance for agricultural commodity exports, increasing world demand for high valued agricultural products like fruits and vegetables and large potential for dairy and marine products in the country are favourable factors for raising agricultural exports to higher level.

1.5 The share of agricultural exports in India's total exports has fluctuated during the last two decades from 18.49 percent in 1990-91
to 15.91 percent in 1999-2000 and further lowering to 10.59 percent in 2009-10. The Compound Annual Growth Rate (CAGR) of agricultural exports slumped from 18.96 in 1990-91 to 1999-2000 to 15.32 in 2000-01 to 9.2 in 2009-10.

2.1 Agricultural growth contributing to economic development and exports of a country has a crucial role in India’s growing economy. Indian agriculture has witnessed numerous changes during the last five or six decades. Innovation coupled with investments in irrigation, infrastructure, expansion of credit, marketing and processing facilities led to a significant increase in the use of modern inputs. These developments raised agricultural products for markets rather than for own consumption by the farm households. Thus export surplus has been created by increased agricultural production by various crops at both state and national level.

2.2 The market mediated linkages of agriculture is focussed by the conventional developments viz. (i) producing food for expanding population with higher income, (ii) supplying savings for investment in the industry, (iii) emerging markets for industrial output, (iv) providing export earnings to pay imported capital hoods and (v) producing primary materials for agro processing industries (Johnston and Meller, 1961; Ranis et al., 1990; Delgadi et al., 1994; Timmer, 2002).

2.3 Agricultural policy in India is focussed on some developmental programme viz. (i) provision of irrigation, (ii) land improvement and development, (iii) modernization of production process and (iv) creation
of institutional framework to systematically reach out to the rural community.

2.4 Agriculture in India suffers from four major weaknesses viz. (i) preponderance of low value agriculture, (ii) low cost benefit ratio, (iii) ineffective use of natural resources, and (iv) deterioration in self help institutions.

2.5 Agricultural trade policies have to be in consonance of WTO dispensation viz. (i) Market Access, (ii) Export Competition and (iii) Domestic Support.

   Export potential of agricultural commodities have to be identified. The criteria should be;
   i) The place of commodity in the consumption pattern of the people.
   ii) The ratio of export price and the domestic price and
   iii) Future demand/supply prospects in the international markets.

   These criteria should be kept in the forefront while deciding the strategy of international trade in agricultural commodities.

2.6 Agricultural trade policy till recently was designed to pursue two objectives viz. (i) Food self sufficiency and (ii) Promotion of exports of the so called 'commercial crops' e.g. cotton, jute, tobacco, etc. There is need for broadening the agricultural trade policy by promoting exports of dynamic commodities like fruits, vegetables, flowers, herbs, etc. These commodities enjoy advantages such as;
   i) a faster growing demand in the affluent parts of the world and
   ii) high value added associated with high labour content.
2.7 The growth of exports of these dynamic commodities depends on two factors.

i) Vertical integration of the small holdings with appropriate secondary and tertiary organizations for input supply, quality control marketing and processing and

ii) Infrastructural support in terms of communication, transport, cold storage, etc.

2.8 Export growth of India involved: (i) the achievement of food self sufficiency in cereals and create food surplus, (ii) focus on export of the commercial crops where India has comparative advantages particularly in tea, cotton and tobacco and (iii) harness export potential of processed agricultural commodities like fruits, flowers, herbs, etc. and ensure participation of small holdings in their production.

2.9 Institutional reforms for export promotion are needed. They should include;

- Policy for canalization of exports through public sector organization.
- Fixing arbitrary minimum baseline price for exports.
- “Stop-go” policy based on ad hoc consideration to be substituted by a well thought-out long term strategy for agricultural exports in tandem with domestic economic policies.

3.1 There is a growing trend of substantial increase in the share of agricultural exports in India's total exports during the last two decades. Further agricultural exports have increased faster than non-agricultural exports during the same period.
3.2 Agricultural exports are largely unrestricted in India. However a few items like pulses and sugar (excluding sugar that are subjected to a tariff rate quota in USA and the European Union) to maintain domestic supplies of these products in order to keep the price at a reasonable level.

3.3 Government has setup Agri Export Zones in order to boost agricultural exports. These zones received assistance from Central and State governments. Currently there are 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.

A trend of fluctuations in India's agricultural exports is observed during the last two decades. Exports of agricultural commodities have declined as a percentage of total exports during the same period.

3.5 Fluctuating trend of agricultural exports from India is clear from the fact that exports declined from 18.49 percent of national exports in 1990-91 to 15.99 percent in 1994-95 but rose to 20.33 percent in 1996-97 and declined to 14.22 percent in 2000-01. There has been a further decline in agricultural exports to reach the minimum of 10.47 percent in 2010-11.

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 national exports from 2005-06 to
2010-11. However there has been a slow down in the percentage of agricultural exports to total national exports during the last five years from 2005-06 to 2006-11. The percentage declined from 10.78 percent in 2005-06 to 10.47 percent in 2010-11 with a trend of fluctuations during the intervening period.

3.6 Agricultural and non-agricultural exports during the 90s and the first decade of the new millennium have indicated some significant trends.

A sustained level of agricultural and non-agricultural exports during the decade of 90s is observed. Agricultural exports varied between 16.1 percent and 19 percent while non-agricultural exports varied between 80.9 percent and 83.9 percent during the first five years from 1991-92 and 1995-96.

The percentage share of agricultural exports in total exports varied from 13.4 percent in 1996-97 to 20.5 percent in 2000-01 while non-agricultural exports varied between 79.5 percent in 1996-97 to 86.6 percent in 2000-01. Agricultural exports have shown declining trend during the next five years from 13.4 percent to 9.9 percent during 2001-02 and 2005-06. Non-agricultural exports have registered a rising trend from 86.5 percent to 90 percent during the same period. In the next five years the non-agricultural exports have indicated an increasing trend during 2006-07 to 2009-10, while agricultural exports have fluctuated during the corresponding period.

3.7 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.

3.8 The Compound Annual Growth Rate of agricultural exports of major groups of commodities indicates a trend of fluctuations during the two decades between 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 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 exports of India at 9.2.

3.9 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. There is need for strengthening and widening the export market for established commercial commodities like tea, coffee, spices, cotton, jute, sugar, oilmeals, etc. Further there is need for creating and capturing new export market for 'dynamic commodities' like meat, dairy products, poultry, fishery products, vegetables, fruits, floriculture, etc. International market is buoyant in these products and India has 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.
3.10 The major plank of our foreign trade strategy must be on finding a niche for exports of the non-conventional and dynamic commodities. This has to be achieved in the context of stricter control processes under Sanitary and Phyto Sanitary (SPS) Agreement and other non tariff barriers.

3.11 Horticultural products have export potential in new markets in Central and South Asian countries and Japan in addition to traditional markets of Europe, USA, Russia and some countries in Africa.

3.12 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.

3.13 Commoditywise exports of agricultural products needs policy interventions and incentive packages. Among the commercial crops Indian coffee has great potentials and opportunities in the world market. The strategy for export of oilseeds must include enhanced productivity, development of needed infrastructure, upgrading of quality through contract farming. India has emerged as a country from net importer to an exporter of milk products since early 90s. It is an indication of pushing the sector from an occasional exporter to a regular exporter in the years to come. The Marine Products Export Development Authority (MPEDA) should undertake massive advertising and marketing in overseas market to diversify the market and products.
4.1 Commodity composition of India's agricultural exports have revealed some significant trends. Exports of certain agricultural commodities like rice and cereals have been sustained while others like tea, coffee, pulses, etc. have been negatively affected. India is a major supplier of several agricultural commodities like tea, coffee, rice, spices, cashew, oilmeals, fresh fruits, fresh vegetables, meat and preparation and marine products to the international market.

4.2 Exports of pulses from India have exhibited a trend of fluctuations during the decade from 2001-02 to 2010-11. The fluctuations are noticed almost every alternate year both in terms of quantity and value. There is need for avoiding the trend of variations to ensure a stable level of earnings from this agricultural commodity. Domestic supplies need to be stabilized to achieve a stable level of exports of this major agricultural export.

4.3 Basmati rice is a major agricultural commodity from India which accounts for a maximum amount of export earnings. Exports of this high valued agricultural commodity has been largely stable with an increasing trend during the decade from 2001-02 to 2010-11. India has favourable soil, climate and water facility to produce this export commodity for which there is substantial demand in affluent markets of USA, Europe and in Gulf countries. Exports of Basmati rice varied from 667.07 thousand tonnes in 2001-02 to 2186.44 thousand tonnes in 2010-11 and the value of exports ranged between Rs. 1842.77 crore in 2001-02 and Rs. 10838.86 crore in 2010-11 during the decade.
There is great potential to boost exports of Basmati rice further as demand for this aromatic high valued rice is growing in high income countries.

4.4 Exports of non-Basmati rice from India have indicated the trend of severe fluctuations during the decade from 2001-02 to 2010-11. The fluctuations indicate a largely downward trend. Exports of this variety of rice varied between a minimum of 96.08 thousand tonnes and a maximum of 5314.18 thousand tonnes during the decade. The value of exports varied from Rs. 220.26 crore in 2010-11 to Rs. 7396.23 crore in 2007-08 during the corresponding period. India being a major producer and exporter of rice should try to expand her existing market and identify and try to enter new markets.

4.5 Wheat is the second largest agricultural export commodity from India. Exports of wheat largely go to Gulf countries and to some western countries. India is a major producer, consumer and exporter of wheat in the world.

Exports of wheat during the decade have indicated a continuous decline both in terms of quantity and value. Exports ranged between a minimum of 0.448 thousand tonnes in 2010-11 to a maximum of 4093.08 thousand tonnes in 2003-04 during the decade from 2001-02 to 2010-11. Export value of wheat, ranged between a minimum of Rs. 0.01 crore in 2009-10 to a maximum of Rs. 2391.15 crore in 2003-04.

The decline in wheat exports has been largely due to increased domestic consumption and import restrictions in western countries.
4.6 Exports of other cereals from India have been one of the major agricultural exports from India. There has been a steep increase in exports of this agricultural commodity in terms of both volume and value of exports during the decade from 2001-02 to 2010-11. Exports rose from 144.73 thousand tonnes in 2001-02 to 3187.86 thousand tonnes in 2010-11. The value of exports of other cereals rose from Rs. 115.92 crore in 2001-02 to Rs. 3596.10 crore in 2010-11. Exports reached the maximum level of 3999.13 thousand tonnes in 2008-09 valued at Rs. 3920.06 crore. India has the advantages of soil and climatic conditions to boost up further the production and exports in the future.

4.7 Tea exports have been a major traditional export among the agricultural commodities from India. India is one of the major exporters of tea in the world. There has been a continuous increase in the exports of Indian tea during the decade from 2001-02 to 2010-11. Exports rose from 180.10 thousand tonnes in 2001-02 to 233.39 thousand tonnes in 2010-11. The value of tea exports increased from Rs. 1719.22 crore in 2001-02 to Rs. 3174.50 crore in 2010-11.

4.8 Coffee exports from India constitute a major traditional export contributing a substantial amount of export earnings to the country. Exports rose from 176.26 thousand tonnes in 2001-02 to 222.86 thousand tonnes in 2010-11. The value of coffee exports from India rose from Rs. 1094.92 crore in 2001-02 to Rs. 2917.07 crore in 2010-11. There is an expanding market for coffee in Western Europe and USA. India should make further efforts to boost up the exports of this
major agricultural commodity with a proper marketing strategy. All India Coffee Board has an important role in this direction.

4.9 Tobacco is another major traditional agricultural export commodity from India. It has been contributing a substantial amount of foreign exchange to the country. Exports of unmanufactured tobacco were 84.48 thousand tonnes in 2001-02. Exports rose continuously during the decade and stood at 207.55 thousand tonnes in 2010-11. The maximum volume of exports stood at 230.77 thousand tonnes in 2009-10. The value of exports of unmanufactured tobacco rose from Rs. 582.05 crore in 2001-02 to Rs. 3007.60 crore in 2010-11. The maximum value of exports stood at Rs. 3621.24 crore in 2009-10.

4.10 Exports of manufactured tobacco rose from Rs. 225.66 crore in 2001-02 to Rs. 791.07 crore in 2010-11. There has been a continuous growth in export earnings from manufactured tobacco. India has natural advantages of production of tobacco in terms of soil and climate. Hence this agricultural commodity has good export potential for India.

4.11 A non-traditional and a new export commodity from agricultural sector in India is the dairy product. India has turned itself from a net importer of dairy product to a net exporter. India has vast potential to develop this agricultural export commodity. Exports of this non-traditional product have indicated a trend of fluctuations. This calls for sustained efforts to maintain a sustained level of exports as the world market for India dairy products is expanding. Exports of dairy
products from India rose from Rs. 207.96 crore in 2001-02 but
dropped to Rs. 161.56 crore in 2003-04, but substantially increased
in the subsequent period and reached a maximum of Rs. 1129.71
crore in 2008-09. Exports came down to Rs. 780.33 crore in 2010-11.
Necessary efforts must be made to enhance the exports of this major
agricultural product as India has huge potentials in this sector.

4.12 Cashew is one of the traditional agricultural exports from India.
Exports of cashew have been contributing a huge amount of foreign
exchange to the country. Cashew is a high valued agricultural
product. However, exports of cashew have been fluctuating severely
during the decade from 2001-02 to 2010-11. Exports rose from 98.20
thousand tonnes in 2001-02 to 129.43 thousand tonnes in 2002-03,
but declined sharply to 99.68 thousand tonnes in 2003-04. There has
been a good increase in the subsequent period till 2006-07 but the
trend of fluctuations is observed subsequently. Exports reached the
high of 915.59 thousand tonnes in 2010-11 during the decade. The
value of exports of cashew have increased almost steadily from Rs.
1788.68 crore in 2001-02 to Rs. 2584.70 crore in 2005-06 and
reached a higher level of Rs. 2900.99 crore in 2007-08 and stood at
Rs. 2598.15 crore in 2010-11.

4.13 Exports of sesame seed have brought substantial amount of
foreign exchange to India. This high valued non-traditional agricultural
export commodity has not maintained a substantial growth in export
trade. It has indicated a trend of fluctuations during the decade from
2001-02 to 2010-11. Exports declined from 218.97 thousand tonnes
in 2001-02 to 168.28 thousand tonnes in 2004-05 and rose to 314.11 thousand tonnes in 2007-08, but declined again to 215.98 thousand tonnes in 2009-10 and stood at the highest level during the decade at 343.03 thousand tonnes. The value of exports of sesamum declined from Rs. 562.23 crore in 2001-02 to Rs. 372.89 crore in 2002-03 but rose continuously thereafter and reached the maximum of Rs. 2194.44 crore in 2010-11. India's exports of sesamum seeds have good demand in world market. Hence efforts must be made to further the exports.

4.14 A new and non-traditional agricultural export like Guargum Meal has been contributing a substantial amount of export earnings during the decade from 2001-02 to 2010-11. Such exports indicate the product diversification of agricultural exports. Exports of guargum meal have gone up considerable with some degree of fluctuations during the 10 years from 2001-02 to 2010-11. Exports rose from 117.89 thousand tonnes in 2001-02 to 186.73 thousand tonnes in 2005-06 and further rose to the highest level of 403.00 thousand tonnes in 2010-11. The value of exports of guargum meal rose from Rs. 403.09 crore in 2001-02 to Rs. 1094.23 crore in 2005-06. Exports reached the highest level of Rs. 2805.75 crore in 2010-11.

4.15 Groundnut is one of the major traditional agricultural export commodity from India. A sustained growth of exports of groundnuts from India is observed during the decade from 2001-02 to 2010-11. There is almost a continuous increase in the exports of groundnut in terms of both volume and value of exports. Exports rose from 112.81
thousand tonnes in 2001-02 to 190.06 thousand tonnes in 2005-06 and further to 418.56 thousand tonnes in 2010-11 which is almost four times increase during the decade. The value of exports of groundnut from India rose from Rs. 250.94 crore in 2001-02 to Rs. 513.69 crore in 2005-06 and further to Rs. 2099.77 crore in 2010-11 an almost ten time increase in value during the decade. India has immense potentials for increased production and exports of groundnut and the world demand is increasing for this agricultural export.

4.16 Oilmeals have been a major export earner from India during the decade of 2001-02 to 2010-11. This is again a traditional agricultural export commodity from India. Export volume of oilmeals increased nearly three times during the decade while the value of exports has increased by more than four times over the period of ten years. Exports of oilmeals rose from 2781.72 thousand tonnes in 2001-02 to 6797.86 thousand tonnes in 2010-11. The value of exports rose from Rs. 2262.93 crore in 2001-02 to Rs. 10845.91 crore in 2010-11. The vast potentials of this agricultural exports commodity should be properly exploited as India has immense advantage of increased production and there is an expanding world demand for oilmeals.

4.17 Castor oil is an item of high value added agricultural export with increasing demand in the world market the value of exports of castor oil has almost doubled from 213.68 thousand tonnes in 2001-02 to 411.21 thousand tonnes in 2010-11. The value of exports of castor oil from India has increased by more than four times from Rs.
625.94 crore in 2001-02 to Rs. 2851.67 crore in 2010-11. The increase in exports of castor oil during the decade has been almost continuous in terms of both volume and value of exports.

4.18 India is one of the major exporters of sugar in the world. India is one of the largest producers, consumers and exporters of sugar in the world. The exports of sugar from India rose from 1456.45 thousand tonnes in 2001-02 to 3241.34 thousand tonnes in 2010-11. However the export of sugar during the decade has fluctuated from year to year. India’s exports of sugar reached the maximum of 4641.14 thousand tonnes in 2007-08. Sugar exports touched the lowest level of 44.04 thousand tonnes in 2009-10. The value of sugar exports from India have fluctuated between 2001-02 and 2010-11. Exports earnings declined from Rs. 1728.29 crore in 2001-02 to Rs. 149.53 crore in 2004-05 but rose steeply to Rs. 5404.18 crore in 2007-08 and again went down to Rs. 110.23 crore in 2009-10. However exports of sugar from India reached the highest figure of Rs. 10339.01 crore in 2010-11. India has all the advantages of increased production of sugar and export. However growing domestic demand has led to export control by the government on many occasions. Hence India should try to boost sugar production and create export surplus on a large scale.

4.19 India is emerging as an important exporter of fresh fruits which is one of the high value agricultural products. This product has good demand in developed countries of the West and in Gulf countries. The export performance of this high valued agricultural product has been
very impressive during the 10 years from 2001-02 to 2010-11. Exports rose from Rs. 447.15 crore in 2001-02 to Rs. 1120.69 crore in 2005-06. Exports reached the maximum of Rs. 2268.95 crore in 2009-10 and stood at Rs. 2144.30 crore in 2010-11. India should exploit the potentials of expanding international market for fresh fruits further.

4.20 Export of fresh vegetables is another high valued and non-traditional agricultural export commodity from India. It has emerged as an important foreign exchange earner for India. Exports of fresh vegetables rose from Rs. 575.20 crore in 2001-02 to Rs. 2530.82 crore in 2010-11 an increase of more than four times during the decade. The increase in export earnings has been almost continuous with minor variations during the period. The product has good export potentials as the demand in the advanced countries of the West and in the neighbouring countries of Asia.

4.21 Exports of processed vegetables from India have been contributing a substantial amount of foreign exchange during the last 10 years. The value of export earnings have indicated a continuous uptrend during the decade from 2001-02 to 2010-11. Exports of this high valued agricultural produce rose from Rs. 198.79 crore in 2001-02 to Rs. 494.48 crore in 2005-06 and further to a maximum of Rs. 752.18 crore in 2009-10. Exports stood at Rs. 732.97 crore in 2010-11. This new and high valued agricultural product has high export potentials. India should try to exploit the expanding word market for this product.
4.22 Processed fruit juices have been one of the major high valued agricultural products which have been contributing substantial amount of export earnings to the country. Exports rose from Rs. 512.55 crore in 2001-02 to Rs. 599.91 crore in 2005-06 and further rose to a maximum of Rs. 1155.95 crore in 2009-10 and stood at Rs. 1006.41 crore in 2010-11.

4.23 Exports of miscellaneous processed agricultural products have been contributing substantially to the export earnings of the country. Exports earnings from this group of non-traditional and high valued products rose from Rs. 724.18 crore in 2001-02 to Rs. 1125.53 crore in 2006-07 and contributed a maximum amount of export earnings of Rs. 2569.83 crore in 2010-11. These items of exports have helped in the process of diversification of exports from agricultural sector.

4.24 Exports of meat and preparations are significant export items in India. They have been earning substantial amount of foreign exchange annually. The value of export earnings of meat and preparations rose from Rs. 1193.28 crore in 2001-02 to Rs. 2750.17 crore in 2005-06 and further to Rs. 8776.6 crore in 2010-11. Thus there is almost seven times increase in export earnings from this major exports item.

4.25 Marine products have been a traditional export item for India. India has been exporting marine products to various countries in the West. The exports of marine products have been earning substantial amount of foreign exchange. Export earnings rose from Rs. 5898.34 crore in 2001-02 to Rs. 7035.91 crore in 2005-06. Exports of marine products earned maximum of Rs. 11550.5 crore in 2010-11. With vast
coastal area India has great potentials to increase her exports of marine products. Hence there is need for enhancing the exports of this major export items taking into account the growing world demand.

4.26 Cotton Raw including Waste is a major traditional export from India. Export earnings from this major agricultural commodity have increased substantially over the decade from 2001-02 to 2010-11. With some fluctuations in both volume and value of exports the earning from this commodity have been substantial. Export volume of cotton raw and water rose from 8.23 thousand tonnes in 2001-02 to 614.64 thousand tonnes in 2005-06 and there has been a continuous increase in the subsequent period. The value of exports of cotton raw and waste rose from Rs. 42.69 crore in 2001-02 to Rs. 2904.35 crore in 2005-06 and with fluctuation the export earnings reached the maximum of Rs. 12994.8 crore in 2010-11. India has the natural advantages of suitable soil and climate for growing cotton on a very large scale. Hence the export potentials of this traditional item are immense.

4.27 Cashewnut Shell/Liquid is a fast growing export commodity in the commodity composition of exports of India. However its contribution to total exports earnings, the volume of exports of cashewnut shell/liquid rose from 1.99 thousand tonnes in 2001-02 to 11.36 thousand tonnes in 2010-11. The value of exports rose from Rs. 5.25 crore in 2001-02 to Rs. 31.85 crore in 2010-11.

4.28 Niger seed exports from India have been steadily increasing in volume and value over the 10 years from 2001-02 to 2010-11. Exports
of niger seed rose from 22.22 thousand tonnes in 2001-02 to 30.02 thousand tonnes in 2006-07. There is continuous decline in exports till 2010-11 when exports of niger seed stood at 11.82 thousand tonnes. The value of exports of niger seed rose from Rs. 47.85 crore in 2001-02 to Rs. 60.25 crore in 2005-06 and reached the maximum of Rs. 90.03 crore in 2007-08. The decline in exports stood at Rs. 41.14 crore in 2010-11.

4.29 Shellac is another non-traditional agricultural export. The volume of exports rose from 5.70 thousand tonnes in 2001-02 to 9.30 thousand tonnes in 2005-06. With a declining trend the exports stood at 3.87 thousand tonnes in 2010-11. The value of exports of shellac rose from Rs. 72.99 crore in 2001-02 to Rs. 159.98 crore in 2005-06. The value of exports declined subsequently and reached a low of Rs. 71.27 crore in 2009-10 and rose to Rs. 112.95 crore in 2010-11.

4.30 Molasses have been one of the agricultural exports in view of India's organized sugar industry in the country. Molasses is used for manufacturing alcohol. India’s exports of molasses have indicated a decline from 221.12 thousand tonnes in 2001-02 to 72.94 thousand tonnes in 2005-06. However a big increase in exports of molasses to 863.46 thousand tonnes in 2007-08 is observed. With a further decline the export of molasses reached the highest level of 1822.88 thousand tonnes in 2010-11. The value of exports of molasses has also indicated similar trend. Exports declined from Rs. 53.56 crore in 2001-02 to Rs. 26.81 crore in 2005-06. Exports rose to Rs. 250.08
crore in 2007-08 and after decline to a low level of Rs. 996.46 crore in 2010-11.

4.31 Exports of fruits/vegetable seeds have assumed importance in India's commodity exports. Exports rose from 4.93 thousand tonnes in 2001-02 to 7.52 thousand tonnes in 2005-06. With some fluctuations exports stood at 11.14 thousand tonnes in 2010-11. The value of exports of this agricultural commodity rose from Rs. 62.19 crore in 2001-02 to Rs. 97.96 crore in 2002-03 and declined to lower level till export rose to maximum of Rs. 170.63 crore in 2010-11. The export of this non-traditional agricultural export has indicated a trend of fluctuations in terms of both volume and value during the decade from 2001-02 to 2010-11.

There is substantial product diversification of agricultural exports from India during the last few decades.

New and high valued agricultural products like fruits, vegetables, vegetable seeds, oilmeals, dairy products, floriculture, guargum meals, processed cereals, etc., have helped in achieving a high degree of product diversification and increased agricultural exports from India.

The growth rate of agricultural exports indicates some significant trends. There has been a gradual decrease in the contribution of four major groups of commodities as cereals and cereal preparations, marine products, oil cakes, oil and oil seeds and tea and coffee. They accounted for as high as 78 percent to agricultural export in 1994. Their contribution has gradually declined to 52.3 percent in 2009. From the year 2000 to 2011 the share of cereals export has increased
from 14.8 percent to 17.6 percent. Maximum share of pulses was 2.7 percent in the year 2005. Cereals share in the year 2004 was the maximum at 27.9 percent. Maximum share of pulses was 2.7 percent in the year 2005.

Marine products accounted for maximum of 25.2 percent of the agricultural exports in the year 2000. Floriculture could contribute less than 1 percent to the agricultural exports during the decade. Tea and Coffee which were major export earners in the earlier decade declined to 12.4 percent in 2000 and further reduced to 6.3 percent in 2008. Their contributions to total agricultural exports were above 8 percent during 2001 to 2004 and again in 2010.

Contribution of tobacco to the total agricultural exports continued to the below 4 percent till 2007. In 2008 tobacco exports contributed 4.4 percent to India’s agricultural exports and tobacco accounted for maximum of 7.27 percent of agricultural export in 2010. The share of meat and meat preparation to India’s agricultural export has been substantial between 2000 and 2011. Exports of dairy products and poultry varied between a minimum of 0.8 percent in 2000 and maximum of 2.4 percent in 2005. High contribution of oil cakes, oil and oil seeds to India’s agricultural exports is indicated by the fact that their contribution ranged between a minimum of 7.3 percent in 2002 and a maximum of 19.2 percent in 2008. Exports of sugar and molasses varied between a minimum of 0.2 percent of agricultural exports in 2009 and a maximum of 13.5 percent in 2011 during the decade.
5.1 Government of India has initiated various steps and has instituted a few organizations for promotion and development of agricultural exports to different countries. This has led to market diversification of agricultural exports for India. The measures include:

- Commodity Boards and Export Promotion Councils
- Agricultural and Processed Food Products Export Development Authority (APEDA) and the Marine Products Export Development Authority (MPEDA)
- Market Development Assistance (MDA)
- Assistance to States for Developing Export Infrastructure and Allied Activities
- Vishesh Krishi and Gram Upa Yojana
- Focus Product Scheme
- Focus Market Scheme
- Town of Export Excellence, etc.

5.2 Export of Processed Agricultural products are concentrated in top 5 countries viz. USA, Indonesia, Vietnam, UAE and China. The produce groups of focussed agriculture are: (1) dried and processed vegetables, (2) mango pulp, (3) other processed fruits and vegetables, (4) pulses, (5) groundnuts, (6) guargum, (7) jaggery and confectionary, (8) cocoa products, (9) cereal preparations, (10) alcoholic preparations, (11) miscellaneous preparations, (12) dried eggs, (13) dairy products and (14) processed meat.

5.3 USA accounts for the maximum amount of India's exports of processed agricultural products in terms of both quantity and value.
during the years 2009-10, 2010-11, 2011-12 and 2012-13 (April-
December). Indonesia is the second largest market for the exports of
India’s processed agricultural products. United Emirates is the third
largest market followed by China and Vietnam. For processed marine
products exports USA is the largest destination for India followed by
France, South Africa, Italy and Spain.

5.4 India’s exports of agricultural exports to different countries
indicate some significant trends. Major exports destinations for India’s
agricultural exports comprise of 11 countries viz. European Union,
UAE, Bangladesh, USA, Saudi Arabia, China, Vietnam, Malaysia,
Indonesia, Pakistan and Japan.

5.5 India’s exports of agricultural exports of both traditional and
non-traditional products to different countries indicate significant
trends. Countrywise analysis indicates that European Union accounts
for the maximum amount of exports compared to other countries.
Agricultural exports to UAE varied from US $ 1144 million in 2012.
Exports to EU from India indicates a continuous and constant rising
trends during the decade from 2003 to 2012. India’s non-traditional
agricultural products with high value like fresh fruits, vegetables,
processed cereals, pulses, dairy products, etc. have good export
potentials in EU. European Union consists of high income economies
like UK, France, Germany, Sweden, Greece, Belgium, Portugal, Spain,
Netherlands, Luxemburg, Finland, Ireland, etc. Here the market is
highly sophisticated and the consumers are quality conscious and are
particular of design, packaging, timely delivery, etc. Hence the
consumer products comprising agricultural exports from India should conform to those standards. The export marketing must be oriented to meet adequately those standards as competition in European Union is intense.

5.6 Agricultural exports to United Arab Emirates have been at a high level particularly during the second part of the decade between 2003 and 2012. Agricultural exports rose from a moderate level of US $368 million in 2003 to a much higher level to US $989 million in 2007. A sharp increase in India’s agricultural exports to US $1702 million in 2008 and subsequently to a high of US $2296 million in 2012 has been observed. UAE is an affluent market for food exports coming from agricultural sector of India. The UAE consists of oil rich states where per capital income is very high and people are quite quality conscious and the exports from India have to confirm with those standards. UAE market has good potentials for high valued agricultural products like fresh fruits, vegetables, processed vegetables, processed cereals, dairy products, processed meat and preparations, etc. Hence a proper strategy needs to be devised for a better share of the market for India’s agricultural exports.

5.7 Bangladesh is a major export destination for India’s agricultural exports. India’s agricultural exports to Bangladesh ranged from a minimum of US $583 million in 2003 to a maximum of US $1625 million in 2012. There is almost a consistent and continuous increase in agricultural exports to Bangladesh during the decade from 2003 to 2012. Bangladesh with large population and limited agricultural
resources needs agricultural commodities like pulses, cereals, vegetables, dairy products, fruits, etc. which are high valued exports. India should try to expand its share in imports of agricultural related products by Bangladesh which happens to be our neighbouring country. India is in an advantageous position to expand its exports of agricultural products to Bangladesh.

5.8 United States has been the largest destination for our export trade all these decades. Now USA has emerged as a major destination for agricultural exports from India. Agricultural exports to USA ranged between a minimum of US $ 585 million in 2003 to a maximum of US $ 1691 million in 2012. The increase in agricultural exports to United States of America has been consistent and continuous without any down turn during the decade from 2003 to 2012. This indicates the huge potential of the US market for India’s agricultural exports. India’s agricultural exports to USA have been sufficiently diversified and non-traditional agricultural exports have been getting a higher share in our total agricultural exports. The non-traditional and high value agricultural exports consist of fresh fruits, fruit juices, vegetables, processed vegetables, floriculture, pulses, cereals and processed cereals, dairy products, poultry, oilmeals, cashew, processed marine products, meat and preparations, etc. Such high value products have good market in the high income economy like USA. India should try to expand its agricultural exports through better quality standards, delivery schedules and better infrastructure for the domestic producers including credit and incentives.
5.9 Saudi Arabia has emerged as one of the major export destination for our agricultural products during the last decade. Agricultural exports to Saudi Arabia were moderate during the 5 years between 2003 and 2007. A steep increase in agricultural exports to Saudi Arabia is observed in the second part of the decade. Agricultural exports to Saudi Arabia rose from US $ 105 million in 2003 to US $ 2370 million in 2012. The increase in agricultural exports to Saudi Arabia is consistent throughout the decade from 2003 to 2012. This indicates the huge potentials in Saudi Arabia for India’s agricultural exports. Saudi Arabia is a oil rich gulf country with high per capita income of the people. Hence high valued non-traditional agricultural exports have greater potentials in Saudi Arabia. India should try to enhance the exports of fresh fruits, vegetables, processed vegetables, cereals and processed cereals, pulses, dairy products, meat and preparations, etc. to Saudi Arabia in the near future.

5.10 China is a large potential market for agricultural exports from India. It has emerged as an important export destination for India’s agricultural exports. Exports to China ranged from a small amount of US $ 105 million in 2003 to a huge amount of US $ 2370 million in 2012, which is almost twenty times increase in a period of ten years. The export growth to China is almost continuous with minor fluctuations during the intervening period. Thus there is a growing market in China for the export of agricultural commodities from India. India should plan to press her non-traditional high value agricultural commodities into Chinese market. China is a huge market with largest
population in the world. The economy of China is growing very fast and with increasing income there is great potential for India's agricultural products. India should try to increase the exports of high value agricultural products like fresh fruits, vegetables, processed cereals, pulses, marine products, poultry and meat and preparations, etc.

5.11 Vietnam is mother major export destination for India's agricultural commodities. Exports have been growing at a very fast rate to Vietnam. Exports of agricultural products to Vietnam have ranged from a moderate amount of US $ 104 million in 2003 to a maximum amount of US $ 1717 million which is almost 17 times increase in a period of ten years. India's strategy should be to sell more value added agricultural products like fresh fruits, vegetables, oilmeals, dairy products, cereals and processed cereals and pulses. Thus the growing economy of Vietnam can be a good market for India's agricultural exports.

5.12 Malaysia is a fast growing economy in Asian region. Malaysia can be a good potential market for India's high value agricultural products. Agricultural exports to Malaysia rose from US $ 297 million in 2003 to US $ 1224 million in 2012 amounting to 6 times increase in a period of ten years. There is a sustained and continuous increase in the exports of agricultural exports to Malaysia indicating greater potentials for India's agricultural products. India should try to diversify its products to this affluent market and try to sell high valued agricultural products along with her traditional exports like...
tobacco, tea, coffee, etc. India has the advantage of growing and exporting high value commodities like fruits, vegetables, processed cereals, etc.

5.13 Indonesia is a major export destination for India's agricultural exports. Exports of agricultural products to Indonesia rose from US $251 million in 2003 to a maximum of US $908 million in 2012. There has been sustained increase of agricultural exports to Indonesia during the 10 years without any fluctuations during the intervening period. The continuous growth of agricultural exports indicates the growing demand in Indonesia for India's agricultural exports. Indonesia is a vast country with large population and high purchasing power. Thus India's agricultural exports have great potentials for further increase in Indonesia. India should try to export high valued non-traditional exports along with traditional agricultural commodities like tea, coffee, jute, cotton, etc. New products with high value like fresh fruits, fruit juices, vegetables, cereals, pulses, poultry and meat and preparations and dairy products should be exported to Indonesia to obtain better export value.

5.14 Pakistan is emerging as a major export destination for India's agricultural exports in the last decade. India's agricultural exports to Pakistan rose from US $49 million in 2003 to a maximum of US $1296 million in 2012. Exports of agricultural products have increased sharply since 2006 with an increase of more than 12 times over the exports in 2003. A further increase of almost hundred percent to US $
1296 million in 2012 is observed. Thus there is a good potential export market in Pakistan for India's agricultural commodities.

5.16 Japan is a major export destination for India's agricultural exports. Japan is a traditional trade partner of India. Agricultural exports to Japan rose from US $ 144 million in 2003 to a maximum of US $ 847 million in 2012 amounting to almost six times increase in ten years from 2003 to 2012. Japan is an affluent market with high national income. Hence income elasticity of demand for imports is high particularly for consumer goods like fruits, cereals, vegetables, dairy products, meat and preparations, marine products, etc. India should devise appropriate strategy to further enhance its exports of agricultural commodities to this affluent market.

5.17 European Union has maintained the top rank among the importing countries of India's agricultural exports during the decade from 2003 to 2012. The position of other major importing countries has been altered in terms of ranking of 5 important export destinations for India's agricultural exports. Second rank was held by US during 2003 and 2006, while UAE and China held second rank during 2009 and 2012. Bangladesh was third in ranking in 2003 while China was holding third rank in 2006 and 2009 and UAE held third rank in 2012. In 2003 fourth rank was held by UAE, Pakistan in 2006, US in 2009 and Vietnam in 2012. Saudi Arabia held fifth rank in 2003 and Bangladesh in 2006 and 2009, while US held fifth rank in 2012. The rankings based on the value of agricultural exports to the major importing countries indicate how exporting of India’s
agricultural commodities have fared in different destinations during the decade covered by the study.

6.2 Verification of Hypotheses

The two hypotheses framed for the research study have been verified in the light of the research findings.

Hypothesis-1

"There is a trend of fluctuations in the exports of agricultural commodities during the post reform period from India".

The research findings have conclusively proved that the above hypothesis is vindicated. Fluctuations in the volume and value of exports of agricultural commodities are identified during the study period. There are fluctuations from year to year in export volume and value of all the 31 major agricultural commodities covered by the study. The trend of fluctuations in export is observed for both the traditional and non traditional agricultural commodities.

The fluctuations in exports of agricultural commodities are largely attributed to domestic supply constraints and frequent change in export policies of the Government of India.

The hypothesis is therefore vindicates and accepted.

Hypothesis-2

"There is no commodity and market diversification in export of agricultural commodities from India during the last two decades".

The hypothesis is not vindicated by the research findings as explained in Chapter-IV and Chapter-V of the thesis.
There has been adequate product diversification of agricultural export trade. The agricultural export commodities consisted both traditional and non traditional items. Traditional agricultural exports consist of tea, coffee, cotton, sugar, wheat, rice, spices, cashew and marine products. In addition to these Indian exports of non traditional agricultural commodities include fresh fruits, fresh vegetables, processed fruits and processed vegetables, floriculture, molasses, dairy products, guargum, fruits and vegetable seeds, etc.

Market diversification for exports of agricultural products is also indicated from the research findings. New markets for India’s agricultural exports include China, Vietnam, Saudi Arabia, United Arab Emirates, Bangladesh, Philippines and South Africa in addition to the traditional markets like USA, countries in the European Union, Russia, etc. which have been retained and expanding for our agricultural exports.

The globalization and trade liberalization in the wake of WTO dispensation have contributed a good deal for the market diversification for India’s agricultural exports.

The study has vindicated the hypothesis and therefore the hypothesis is accepted.

6.3 Policy and Suggestions

Following suggestions have been made for further improving the export performance of agricultural commodities from India.

1. The slow rise in agricultural exports calls for a change in strategic approach of Indian agriculture for achieving higher levels of
production in crops in which India has comparative advantage and generate surpluses for exports.

2. The establishment of WTO and the clauses relating to agriculture has elevated a local farmer to a global farmer. It is worthwhile to undertake a detailed analysis of the response of Indian agricultural exports to the reforms and domestic policy changes and export growth. It is important to note that the export growth of agricultural commodities is determined not only by internal but also by the external factors among which the most important is the growing world demand.

3. Government priority needs to be shifted from heavy support and protection of food staples to promotion of agricultural diversification, processing and commercialization. Agricultural exports of processed goods have better international market. A set of public policies and investment is required that must include investment in rural infrastructure and technologies needed for these new high value activities, improvement of marketing and distribution systems for high value and more perishable foods.

4. A separate agriculture infrastructure development fund should be set up for financing infrastructure for agriculture exports especially focusing on fruits and vegetables which have a short shelf life.

5. Export- hubs which act as integrated aggregators for agricultural products exports should be set up by providing physical infrastructure and market related infrastructure.
6. Export related agricultural infrastructure including cold chains, multi-chamber modified atmosphere containers storage facilities, grading, labeling and packing facilities should be provided.

7. Government should provide for e-commerce solutions such as agri-business portals for promoting agriculture exports.

8. There is need to expand financing product ranges through provision of structural finance, finance against export receivables ware house receipt finances, buyers credits and other innovative products.

9. Government should go in for deepening of reforms in specific export sectors relating to agricultural exports.

10. A broad export strategy for Indian agriculture should be to strength and wider the export market for established commercial commodities like tea coffee, spices, cotton, jute, sugar, oil meals etc and also to create and capture new export market for dynamic commodities like meat, dairy products, poultry fishery products, vegetables, fruits, floriculture etc. The major plan 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.

11. It is desirable to set up an easily available information system in order to develop a common perspective on the constraints, opportunities and other facets of agricultural exports by the
various stakeholders like producers, research organizations, extension agencies, agro processing industries, policy makers and exporters. It should include database an 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.

12. Agricultural exports could be enhanced provided the slow growth of agricultural production due to low yield, wastes and inefficiency in resource management are overcome. Thus the basic push to agricultural exports in India along with policy initiatives has to come through;

(a) yield improvement

(b) reduction in wastes and

(c) efficiency in resource management, land and capital.

The supply management has to be supplemented by conscious export promotion efforts.

13. Export orientation of Indian agriculture involves increased demand for trained manpower to manage it. For managing the agri-business 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 resources management and also
• Strategic management.

14. The implementation and adherence to quality assurance measures such as ISO 9000, ISO 15000, HACCP, CODES, etc. is possible only through trained manpower. Hence long term educational programmes and short term trainings are required for developing manpower for sustainable agricultural exports.

15. It is beneficial to promote 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. It may facilitate export promotion as foreign buyers get vendor assurance and quality for the items supplied by such agencies.

16. There is need for reorientation of research agenda for exports. It 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 species, etc. having export potential.
• Establishment of proper linkages with processing industries and export organizations.
• Identification of exportable commodities and
• Matching of their potential areas of production in terms of agro-climatic conditions and entrepreneurial support.

These efforts are advocated through effective interface of various agencies from primary production to final exports.

17. Dairy products have huge export potentials. India can emerge as a major player in export of milk products like whole milk powder, skimmer milk powder, butter, cheese, etc. in the rising markets for these products in Southeast Asian countries and the Middle East. The immediate need is to push up production of milk to a level of making adequate surplus for export after meeting the rising internal demand. India should develop dairy products of international standard for export. There is need for adequate thrust on quality and clean milk production.

18. There is need for market segmentation for milk production system for catering to different market segments including export market. This will demand;
• Investment on mechanized milking
• Chilling systems
• Quality packaging, etc. with strict adherence to Codex Alimentarius Standards and

• Developing branded market for consumers.

19. Meat and meat products have major export potential. 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 with meat processing.

20. Export potential of marine products is quite encouraging. The high growth rate in the volume and value of marine products in general and frozen fish and shrimp in particular 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. India should modernize processing facilities to maintain international quality standards and meet the stringent quality standards of importing countries. Government and the MPEDA should provide online information about international market trends, prices, etc. to seafood exporters will further help to boost exports of this sector.

21. Quality improvement should be the export strategy for seed spices, medicinal plants and other products of plant origin. They include germplasm collection, conservation, evaluation, cataloguing, crop improvement, mutation, breeding, etc. The expanded use of biotechnology can also play a crucial role.
22. Export strategy for oilseeds should include enhanced productivity, development of needed infrastructure, pre and post harvest measures to upgrade the quality and popularization of quality oilseeds production. Improving production efficiency would be most critical in the oilseeds sector.