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### **An analysis of growth and performance of India's agriculture export**

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#### **Abstract**

Recent developments in the international trade scenario and corresponding alterations in India's foreign trade policies have depicted far-reaching implications for India's agricultural sector in general and agricultural exports in particular. Indian Agriculture product has occupied an important place in the world agriculture product. India used to be the central place of export for many agricultural commodities. The present study has ascertained the growth and performance of India's agricultural exports during the period (1991-2010). It has been found that in exports of certain commodities like rice and Cereals, India has been able to maintain its growth rate, but several other commodities like tea, coffee, pulses, sugar, etc. have been negatively affected. India has been found losing out its share in export of some of the agricultural commodities during the period after economic reforms (1991). This paper seeks to quantify the extent to which India has achieved growth in agriculture trade during the period of 2009-2011; emerging world demand for Indian agricultural commodities offers great opportunity. Indian agricultural exports have increased manifolds. However, the contribution of agricultural export in the total export of the country has decline. The present study explores the growth performance of India's agricultural exports from 1991-92 to 2010-11, and their contribution of percentage share in total export of India as well as Gross Domestic Product by using secondary sources of data collection. The study also examines the changing behavior of the contribution of individual group of commodities in the basket of total agricultural export. It includes the major agriculture product/crops that contributes to the maximum share in the total agriculture export in different periods (2000-2011).

**Keywords:** Agriculture, export, growth, composition, stability, reform era

#### **Introduction**

Indian agricultural commodities have come to occupy a supreme position in the global market over the years. Today, India is a major supplier of several agricultural commodities like tea, coffee, rice, spices, cashew, oil meals, fresh fruits, fresh vegetables, meat and its preparations and marine products to the international market. However, the country faces cut throat competition from other major players in the field, both the existing and new entrants in the field. Ironically, the major challenge is from within Asia itself where countries like China, Malaysia, Philippines, Thailand, Singapore and Indonesia among others pose a big threat to Indian agricultural products. The demand and supply situations in the Asian continent have undergone a rapid transformation due to the growth of the world economy and lowering of trade barriers. An economic revolution which took place in most of the South-East Asian countries has resulted in the creation of a huge supply potential of agriculture product in these economies along with an increase in their per capita income and a simultaneous increase in their trade potential.

Moreover, some recent developments in the international trade scenario, followed by the establishment of World Trade Organization (WTO) and, The formation of regional trading blocks like ASEAN Free Trade Area (AFTA), Bangkok Agreement, South Asia Free Trade Agreement (SAFTA), etc. has given rise to powerful associations with strong bargaining power and these can significantly influence the demand and supply factors in the global markets. Above all, the Indian economy in itself has undergone a rapid transformation after the inception of economic reforms in 1991. India's ratification of the Agreement on Agriculture (AoA) with WTO also had a major impact leading to redefining of its agricultural trade.

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During this time period, various agricultural commodities exported from India have responded differently and their levels of contribution in India's total export have shown a significantly an increasing trend.

Indian agriculture has greatly contributed to foreign trade even in its traditional form. The performance of agriculture sector after its integration with the world markets is linked to the success of exports. In its bid to increase overall exports, the government of India has decided to achieve this objective by giving a push to production and export of agricultural commodities. Most of the export earnings of agriculture came from the conventional items such as tea, cashew and spices, rice, cereals etc. Agriculture has been a source of foreign exchange for India in the past.

### Literature Review

Nageshwara *et al.* (2009) <sup>[16]</sup> India is amongst top ten producers in the world for rice, buffalo milk, wheat, cow milk, fresh vegetables, sugar cane, potatoes, groundnut, pepper mint and buffalo meat. The technological developments, macro-economic reforms and Uruguay Round Agreement have contributed to the changes in agricultural trade. The progress of agriculture has made a lot of changes in the net trading position of India. Burange L. G. & Sheetal J. Chaddha (2008) <sup>[1]</sup> evaluate the structure of comparative advantage in India and the change in the scene over a 10-year period from 1996 to 2005. India enjoys a comparative advantage in the exports of goods for which standard technology is required for the production is shifting to developing economies like India as shown by absence of Revealed Comparative Advantage in imports of these goods. Shinoj P *et al.* (2008) <sup>[7]</sup> examine the comparative advantage of India in agricultural export vis-a-vis Asia in the post reform era. From 1991 to 2004, ten major agricultural commodities group are studied. India has been able to maintain comparative advantage in commodities like cashew and oil meals, but tea, coffee, spices, marine products have been negatively affected. Kehar Singh *et al.* (2003) <sup>[2]</sup> study the prospects of agricultural exports of India using composite index approach. The study is based on the analysis time series data of export value and export quantum from 1980 to 2001. The study reveals that – coffee green, coffee extract, groundnuts, shelled milled paddy, rice, pepper, potatoes have bright prospects, bananas, beef and veal, buffalo meat, cake of rape seed, cotton waste, ghee from cow milk, hen eggs, infant food, lentils, oil of castor beans, oranges, sesame seed, tobacco leaves and walnuts shelled have also been visualized to have positive prospects. Prakash *et al.*, (1995) <sup>[5]</sup> examine the impact of new economic policy on agricultural exports. They look at the current trends in foreign trade of India, contribution of agricultural exports in total exports, the share of India in the global production and export of agricultural commodities, the changing compositions of major exportable commodities over time, major steps of liberalization in agricultural export import policy, to identify the newly emerging agricultural

commodities having vast potential for steady exports and to suggest a strategy for realizing full export potential of agricultural commodities.

### Objective of the Study

1. To study the growth and performance of agricultural export of India from period (1991-2011).
2. To find out the contribution of agriculture export in total export of India.
3. To find out the major crops contributing to the total agriculture export of India.

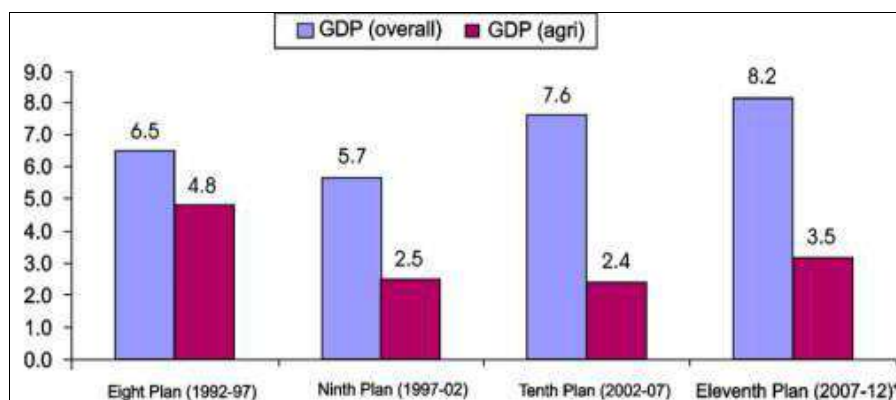
### Methodology

The study is based on the data collected from Directorate General of Commercial Intelligence and Statistics, Government of India from 1992-97 to 2007-12 of value of export (Million US \$). The data were collected from electronic data base of Ministry of Commerce, Government of India, Commodity Trade Statistics (COMTRADE) of United Nations, Food and Agricultural Organization's TRADESTAT and Foreign Trade and Balance of payment published by Centre for Monitoring Indian Economy. Some major agricultural commodities/commodity group's data were collected from Researcher report by CMIE's publication on Foreign Trade and Balance of Payment the analysis, based on their respective shares in India's total agricultural exports. They were tea, coffee, rice, spices, cashew, oil meals, fresh fruits, fresh vegetables, meat and meat preparations, and marine products. During the period under study (1992-2012), these commodities together accounted for more than 65 percent of India's total agricultural export earnings from the world. The data on exports of selected agricultural commodities for India and other major exporting countries were culled from various issues of FAO Trade Yearbook, published by the statistics division of Food and Agriculture Organization (FAO), Rome.

### Result

#### 1. Growth Performance of Agriculture

The growth performance of the agriculture sector has been fluctuating across the different five year plan periods (Fig 1). It witnessed a growth rate of 4.8 percent during the Eighth plan period (1992– 97). However, the agriculture sector saw a downward trend towards the beginning of the Ninth plan period (1997–2002) and the Tenth plan period (2002–07), when the agricultural growth rate came down to 2.5 percent and 2.4 percent respectively. This crippling growth rate of 2.4 percent in agriculture as against a robust annual average overall growth rate of 7.6 percent for the economy during the tenth plan period was clearly a cause for concern. The trend rate of growth during the period 1992-93 to 2010- 11 is 2.8 percent while the average annual rate of growth in agriculture & allied sectors- GDP during the same period is 3.2 percent.



Source: CSO.

**Fig 1:** Growth rates: gdp (overall) and gdp (agriculture & allied sectors)

The Eleventh Plan had sought to reverse the deceleration of agricultural growth which occurred in the Ninth Plan and continued into the Tenth Plan. It has had some success in that food grain production touched a new peak of 250.42 million tonnes in 2011-12. Agricultural GDP growth has accelerated to an average 3.9 percent growth during 2005-06 to 2010-11, partly because of initiatives taken since 2004. As per the latest advance estimate of National Income released by the Central Statistics Office (CSO), agriculture and allied sectors are likely to grow at 2.5 percent during 2011-12 as against 7 percent during the previous year at constant (2004-05) prices. The increasing divergence between the growth trends of the total economy and that of agriculture & allied sectors suggests an under performance by agriculture. It is also significant that unlike the overall economic growth pattern, agricultural performance in India has been quite volatile. It indicates that high and perhaps increasing volatility is a real challenge in agriculture, which is likely to increase in the years to come in the wake of climate change.

## 2. Contribution of Agricultural Export in Total Export

In case of share of agricultural exports in GDP originated from agriculture sector the rise was from 2.4 percent in 1991-92 to 6.1 percent in 1997-98. Later in next two years there was a decline to 5.7 percent, thereafter, it gradually increased from 6.4 percent in 2000-01 to 14 percent in

2007-08. The share of nonagricultural commodities export in national GDP increased from 3.3 percent in 1991-92, to 16.9 percent in 2009-10, whereas the agricultural export increased to 1.9 percent during 18 years from 1991-92 to 2009-10.

Table 1 shows that the share of agricultural exports in the total exports was 17.9 percent in 1991-92, which has increased to nearly 3 percent by the year 1996-97, there after the share was continuously declining and it reduced to 9.9 percent in 2005-06. Between the year 2005-06 and 2007-08 there was an increase of 2.3 percent. With a fall in 2008-09 to 10.2 percent it has seen a growth of 0.4 percent in 2009-10. However, the share of agricultural exports in India's overall exports has been declining from 17.9 percent in 1991-92 to 10.5 percent in 2010-11. Contribution of Indian agricultural export to the total export of India in 2010-11 stood at 10.5 percent. There is an increase in the volume of agricultural export from 3130.08 million USD in 1991-92 to 16753.23 in 2009-10. The slow rise in agricultural export calls for the change in strategic approach of Indian agriculture in a big way to achieve higher levels of production in crops in which India has comparative advantage and generate surpluses for exports. The government's commitment towards agriculture is seen from the ambitious 4 percent growth target set under the Eleventh Plan.

**Table 1:** Share of Agriculture and Non-agriculture export in total Exports of India

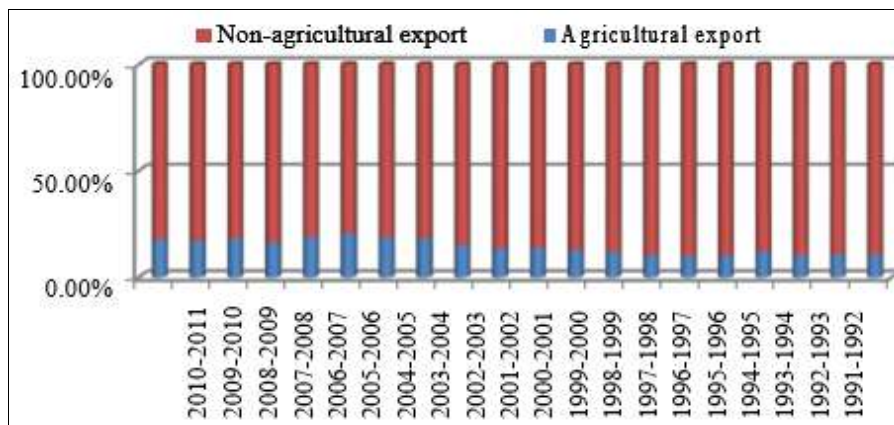
Year	Total exports (Million USD)	Agriculture and allied products export (Million USD)	Percentage share of agricultural export	Percentage share of non-agricultural export	Ratio of Agricultural export to Non-agricultural export
1	2	3	4	5	6
1991-92	17865.4	3202.5	17.9	82.1	1:5
1992-93	18537.2	3135.8	16.9	83.1	1:5
1993-94	22238.3	4027.5	18.1	81.9	1:5
1994-95	26330.5	4226.1	16.1	83.9	1:5
1995-96	31794.9	6081.9	19.1	80.9	1:4
1996-97	33469.7	6862.7	20.5	79.5	1:4
1997-98	35006.4	6626.2	18.9	81.1	1:4
1998-99	33218.7	6034.5	18.2	81.8	1:4
1999-00	36822.4	5608	15.2	84.8	1:6
2000-01	44560.3	5973.2	13.4	86.6	1:6
2001-02	43826.7	5901.2	13.5	86.5	1:6
2002-03	52719.4	6710	12.7	87.3	1:7
2003-04	63842.6	7533.1	11.8	88.2	1:7
2004-05	83535.9	8474.7	10.1	89.9	1:9

2005-06	103090.5	10213.8	9.9	90.1	1:9
2006-07	126361.5	12683.5	10.0	90	1:9
2007-08	159006.7	19398.8	12.2	87.8	1:7
2008-09	173865.3	17774.5	10.2	89.8	1.8
2009-10	184770.0	19572.4	10.6	89.4	1.8
2010-2011	193570.0	203248.5	10.5	89.5	1:8

**Source:** Directorate general of commercial intelligence and statistics, government of India

The policy reforms of the 1990s has eliminated the bias against agriculture by lowering industrial tariffs and correcting for the overvalued exchange rates which lead to an improvement in the terms of trade in favor of agriculture. As a result, Indian agriculture has increasingly been opened

to global agriculture with the ratio of agricultural exports and imports as a percent of Agricultural GDP rising from 4.9 percent in 1990-91 to 12.7 percent in 2010-11. This is still low as compared to the share of India's total exports and imports as a percent of India's GDP at 55.7 percent.



**Source:** Directorate General of Commercial Intelligence and Statistics, Government of India

**Fig 2:** Comparative performance of Indian agriculture export in total export of India (1991-2011)

India is a net exporter of agricultural commodities with agricultural exports constituting 11 percent of India's total exports. However, the share of agricultural exports in India's overall exports has been declining from 18.5 percent in 1990-91 to 10.5 percent in 2010-11. The *figure 2* shows that the share of agricultural exports in India's overall exports has been declining from 17.9 percent in 1991-92 to 10.5 percent in 2010-11. Contribution of Indian agricultural export to the total export of India in 2010-11 stood at 10.5 percent, which shows a decreasing trend as compare to previous year. In 2005-2006 the rate of contribution was 9.9 which increase in 07-08 to 12.2 and again falls down in 08-09 by 2% but now it starts picking up its pace in total export

of India.

### 3. Major crops contributing to the Agriculture Export

The share of four major groups of commodities i.e., cereals and cereals preparations, marine products, oil cakes, oil and oilseeds and tea and coffee has contributed as high as 79 percent in 1994 but there has been a gradual decline to 53.6 percent in 2009. Table 4 presents the composition of agricultural export from 2000 to 2011. From year 2000 to 20011 the share of cereals export has increased from 14.2 percent to 17.6 percent Maximum share of pulses was 2.7 in the year 2005. In 2004 dominance of cereals is visible. This group has earned 1884.18 million USD in 2003.

**Table 2:** Composition of India's Agricultural Export (2000 to 2011) (Percentage)

Sr. No	Commodity groups	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Cereals and cereal preparation	14.8	19.5	27.5	23.5	27.9	18.8	15.8	22.4	22.3	17.2	18.4	17.6
2	Pulses	2.1	1.4	1.2	1.0	1.7	2.7	1.5	0.8	0.7	0.5	0.7	1.04
3	Floriculture products	0.5	0.5	0.6	0.8	0.7	0.7	0.7	0.5	0.5	0.4	0.5	0.4
4	Tea and coffee	12.4	10.6	8.5	8.1	8.0	7.8	7.2	5.5	6.3	6.3	8.3	7.5
5	Spices	4.7	3.8	3.4	3.1	3.5	3.0	4.1	4.2	8.0	7.8	10.3	9.6
6	Tobacco	3.4	3.1	3.4	3.4	3.7	3.2	3.2	2.8	4.4	5.5	7.27	4.7
7	Marine Products	25.2	21.7	22.8	18.7	18.8	16.9	15.1	10.0	8.9	12.5	16.5	14.1
8	Meat and meat Preparations	5.8	4.6	4.5	5.1	5.0	6.5	6.2	5.3	6.8	7.9	10.5	10.7
9	Dairy products and Poultry	0.8	1.3	1.0	1.2	1.8	2.4	1.4	1.9	2.0	1.2	1.5	1.3
10	Oil cakes, oil and oil seeds	12.4	12.4	7.3	15.4	12.9	14.9	13.6	15.7	19.2	16.3	16.7	16.7
11	Sugar and molasses	2.2	7.1	6.4	4.3	0.9	2.1	6.6	8.5	5.7	0.2	4.2	13.5
12	Total agricultural export	100	100	100	100	100	100	100	100	100	100	100	100

**Source:** CMIE's publication on Foreign Trade and Balance of Payment.



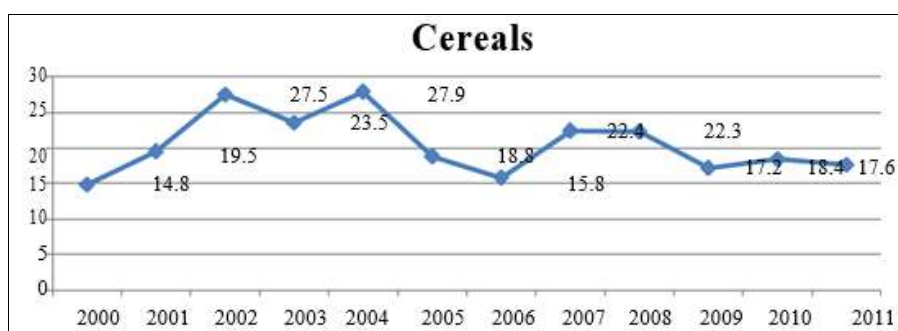
Marine products earned 1411.8 million USD in the same year. Even the earning from oil group was above 1200 million USD. In 2006 floriculture reached above 1.1 percent and rest of the period it was less than 1 percent. Tea and coffee which were the major export earners in the earlier decade declined to 13.2 percent in 2000 and further reduced to 6.3 percent of the total agricultural export value in 2007 but shown an increase from 2008 to 2010. It is 7.5 in 2011. There is a reduction in spices share from 7.2 per in 2000 to 5.4 percent in 2005 which increased in next four years. Tobacco records a rise in its share in the agricultural export of India from 3.9 percent in 2000 to 5.5 percent in 2009. Meat and meat preparations do not show any particular trend but over all there is 2.1 percent increase in the share from 2000 to 2009. The contribution of dairy products is marginal it has increased till 2005; thereafter it is on a decline till 2011. 16.5 percent of the total earnings in 2000 came from oil cakes, oil and oil seeds which saw a reduction

till 2002 and gradually it is increasing till 2008 but from 2009 it again starts decreasing till 2011. sugar also showing a variation trend but shows an incredible increase in 2010 and 2011.

#### Growth performance of some major agriculture crops:

some major agriculture crops including rice, wheat, pulses, cashews, groundnuts, tea, coffee and spices etc. are contributing to the 65% to the total agriculture export of India.

**Cereals:** The cereals product include rice, wheat etc. which shows different trend from 2000 to 2011. It shows an increasing trend from 2000 to 2004 from 14.85% to 27.5% and decreasing trend from 2005 to 2006 but again starts increasing from 2009 till 2010. But in 2011 it again decline by 0.8%. These trend can be easily understood with the help of Figure 3.

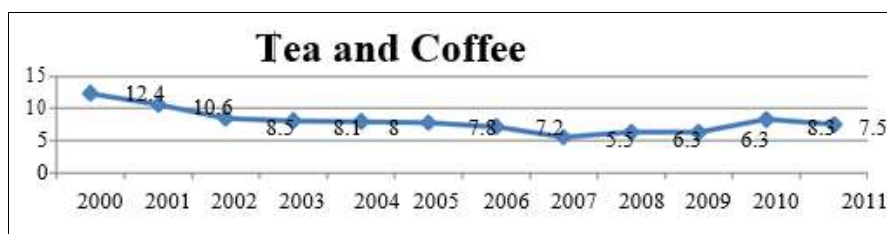


Source: CMIE's publication on Foreign Trade and Balance of Payment.

Fig 3: Cereal export in total agriculture export from 2000 to 2011. (Contribution in %)

**Tea and Coffee:** The tea and coffee shows different trend from 2000 to 2011. It shows a decreasing trend from 2000 to 2007 from 12.2 to 5.5% and increasing trend from 2008 to 2010 from 6.3 to 8.3 and again decreases in 2011 by 0.8%. India used to be the no. 1 exporter of tea but now Sri

Lanka has taken over its position in world tea export. Although it is still having no.2 share in tea export but it needs to increase its tea production to capture the maximum market share in tea export. It can be easily understood with help of figure 4.

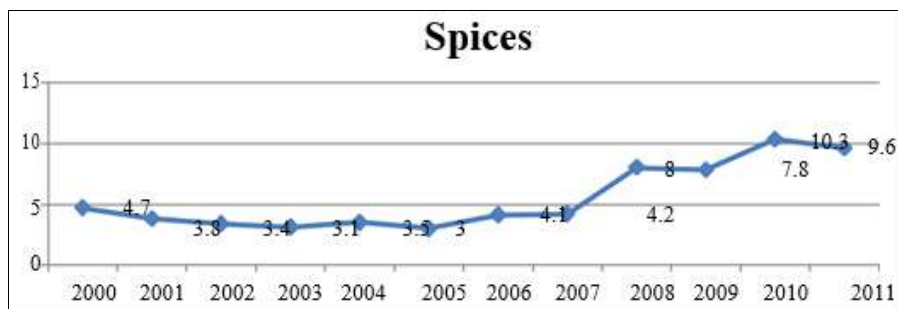


Source: CMIE's publication on Foreign Trade and Balance of Payment

Fig 4: Tea and coffee export in total agriculture export from 2000 to 2011. (Contribution in %)

**Spices:** The spices export shows different trend from 2000 to 2011. It shows a decreasing trend from 2000 to 2007 from 4.7% to 3% and increasing trend from 2009 to 2010 from 7.8% to 10.3% and again decreases in 2011 by 0.7%.

India used to be one of the biggest exporters of spices in the world but it loses its value in the year (2003-2004). It can be easily understood with help of figure 5.

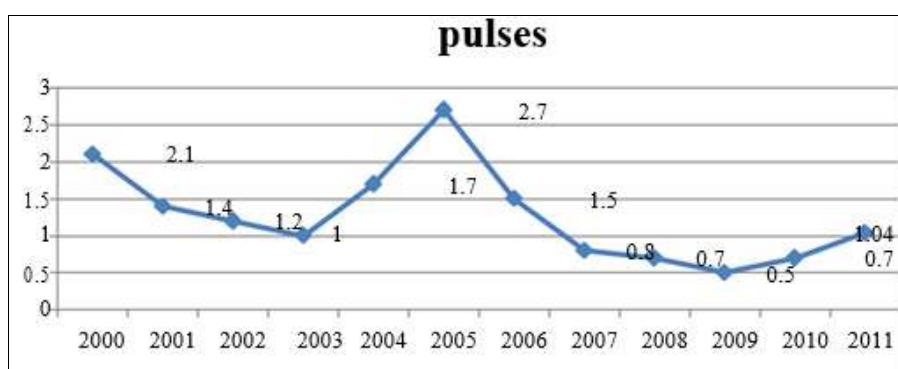


Source: CMIE's publication on Foreign Trade and Balance of Payment

**Fig 5:** Spices export in total agriculture export from 2000 to 2011. (Contribution in %)

*Pulses-* The pulses export shows many different variations in export trend from 2000 to 2011. It shows a decreasing trend from 2000 to 2003 from 2.1% to 1% and increasing

trend from 2004 to 2005 from 1.7% to 2.7% and again decreases in 2006 to 2009, but shows an increasing trend in 2010 and 2011 by 0.34%.



Source: CMIE's publication on Foreign Trade and Balance of Payment

**Fig 6:** Pulses export in total agriculture export from 2000 to 2011. (Contribution in %)

The contribution of major crops in total agriculture export from the period 2009-2010 to 2010-2011 is studied separately to understand the share of contribution more accurately by using the value and quantity of export of these

agricultural products in the total agriculture export. So that the trend in agriculture export can be easily analyzed. Table 3 shows the value and quantity of major agriculture export from 2009-10 to 2010-11.

**Table 3:** Export Value and quantity of Major Agriculture Crops according to their contribution to total agriculture export for period 2009-10 to 2010-11

(Quantity in Ton, Value in Million USD)				
2009-2010			2010-2011	
Items	Quantity	Value	Quantity	value
Tea	207532	623.29	238336	736.45
Coffee	157414	429.74	232627	661.77
Pulses	99915	86.75	208031	190.52
Rice	2156417	2365.73	2471362	2544.78
Cereals	2892416	625.71	3220093	803.61
Spices	663206	1301.10	762713	1768.08
Sugar	44736	23.20	1714372	1198.92
Cashew	117980	591.35	105755	619.23

Source: government of India, Ministry of commerce report 2010-2011

It shows an increasing trend in the value of export of these crops from 2009 to 2011. It indicates that year 2010-2011 was a successful year in terms of agriculture export because all the crops shows an increase value and quantity of their export as compare to previous year i.e. tea, coffee, pulses, sugar, rice, cashews etc. all these are the major contributing crops of Indian agriculture export.

## Conclusion

The buoyancy in exports of agricultural products is clearly

visible. Agriculture export had been occupying the place of pride in the export basket of India. Even though, there is an increase in the absolute quantum of agricultural exports, there is consistent decline in the percentage share of primary products in total export from 17.9 percent to 10.5 percent during the study period. This is an indicator of slow rise in agricultural export in comparison to national exports. Growth of percentage share of each of the commodity groups indicates improvement for all except tea and coffee which has negative growth. The agriculture commodities

show huge volatility in their export in the study period. The major commodities like Tea & Coffee, Cereals, Spices and pulses etc shows relatively an increasing trend in the period from 2009-10 to 2010-11. It has been found during the study that India used to be the leading exporter in some commodities but loses its place in the world market. The findings of the studies shows that the share of Indian agriculture export in total export has been rising during the period (1991-2011), but growth was not as expected in comparison to Non-Agriculture export. The Indian government needs to take some effective steps to increase its agriculture export in the coming time. Only then India will be succeeded in achieving higher share in agriculture export.

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