

## Agricultural Export Instability in India

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### Abstract

*Agricultural exports witnessed an increase of Rs. 60683.96 crores between 2000-01 and 2009-10. The policies of trade liberalization show a clear positive impact on exports of agricultural commodities from India. The share of total agricultural exports in total national exports was 14.23 % in 2000-01. After that it declined continuously and accounted for 10.57% in 2009-10. The share of food grains groups in agricultural exports of India has shown an increasing trend with almost 4 times in 2000 to 2010. The share of food grains was 13.69% in 2000-01. It continuously fluctuates and reached up to 16.38% in 2009-10. Rice (basmati & non basmati) was major contributor, nearly 65%, in food grains group. Share of oil seeds exports in total agricultural exports was 13.64% with Rs. 3909.16 crores in 2000-01. It continuously fluctuates and reached up to 14.50% with Rs. 12955.32 crores in 2009-10. The share of horticultural commodities in agricultural exports was 6.31% with Rs. 1808.90 crores value in 2000-01. It increased and reached 8.46% with Rs. 7561.96 crores in 2009-10. The share of marine product was 22.22% with Rs. 6367.29 crores value in 2000-01. It continuously decreased and reached 11.08% in 2009-10, but in value terms it increase from Rs. 6367.29 crores to 9899.98 crores. The share of spices in agricultural exports was 5.65% in 2000-01. It showed mixed trend and reached 6.89% in 2009-10. The share of beverages and tobacco was 13.40% in 2000-01. It decreased and reached 10.43% in 2009-10. The share of animal products was 5.87% in 2000-01. It showed mixed trend and reached 8.06% in 2009-10. The share of other agricultural commodities group was 19.22% in 2000-01. It showed mixed trend. It increased and reached up to 24.30% in 2009-10.*

Key words: Food grains, exports, liberalization, policies

### Introduction

India's total agricultural product exports have a potentially large impact on world market. The Exports from India in value terms is about Rs.846 thousand crores. Agricultural exports account for about 10.57percent in total national exports and in 2009-2010, agricultural products valued at Rs. 89341.33 crores were exported from the country. This indicates importance of agriculture in export sector.

Indian agriculture exports have improved over the years in value terms but their share in total exports of India is declining continuously. The main reason behind this is better and faster development of secondary and tertiary sectors of the Indian economy as the country approaches on the path of development, ever increasing population of the country and stagnation in productivities of our major agriculture crops. Indian agriculture exports are mainly residual exports which mean that whatever is left after fulfilling the consumption requirement is exported. Such type of policy leads to large year to year instability in agriculture exports and their slower growth over the years.

The Government of India, Ministry of commerce and Industry announces Export Import (EXIM) Policy after every five years. EXIM policy, in general, aims at developing export potential, improving export potential, improving export performance, encouraging foreign trade and creating favorable balance of

payments position. The current EXIM policy covers the period 2009-2014. The EXIM policy is updated every five year on 31 March and modifications, improvements and new schemes become effective from 1 April of every year.

The policy aims are promoting exports and augmenting foreign exchange earnings and regulating exports wherever it is necessary for the purposes of either avoiding competition among the Indian exporters or ensuring domestic availability of essential item of mass consumption at reasonable prices.

Keeping in view the above consideration research study entitled "Performance of agricultural exports from India" was planned with specific objectives as:

1. To analyze the instability in agricultural export.
2. To suggest suitable measures for improving export of agricultural export.

### Methodology

#### *Collection and analysis of data*

The secondary data regarding quantity, value and value of exported agricultural products overtime were collected from various publications and websites of Ministry of Agriculture, Govt. of India, Director General of Commercial Intelligence & Statistics,

Ministry of Commerce, Kolkata for the period of 10 years (according to availability of data).

The collected data were analyzed by using various statistical tools such as average, percentage etc, to achieve objectives of the study.

Instability analysis:

To study the variability in agricultural export, coefficient of variation was used as a measure of variability.

$$\text{Coefficient of variation (c.v.)} = \frac{\text{S.D.}}{\text{A.M.}} \times 100$$

Where,

S.D. = Standard deviation

$$\text{S.D.} = \sqrt{\frac{\sum (\mathbf{X} - \bar{\mathbf{X}})^2}{\mathbf{N}}}$$

A.M = Arithmetic mean

$$\text{A. M.} = \frac{\sum (\mathbf{X}_1 + \mathbf{X}_2 + \mathbf{X}_3 + \dots + \mathbf{X}_n)}{n}$$

## Results and Discussion

Changes in the structure of exports of agricultural commodities, all the exportable agricultural commodities were classified in eight groups viz, Foodgrain group, Oilseed group, Horticultural group, Beverages & tobacco group, Marine products group, Spices group, Animal products group and Other commodities group. The commodities included in each of structural group were as follows: The first group was foodgrains group in which cereals like Rice basmati, Rice other than basmati, Wheat and other cereals and total pulses were included. Second structural group was oilseed group in which groundnut, castor oil, sesamum, niger seed, and oil meal were included. The horticultural commodities group included fruits & vegetables seeds, fresh fruits, fresh vegetables, processed fruit juice and floricultural products. The fourth structural group was marine products in which marine products were included and next was spices group in which total spices export from India were included. The beverages & tobacco group included tea, coffee, tobacco manufactured and tobacco unmanufactured. In the animal products group dairy products, poultry products and meat & its preparations were included. Last group was other commodities group in which remaining commodities like sugar, molasses, shellac, cashew nut shell liquid, cashew, cotton include waste, jute, paper/ wood products guar gum and miscellaneous processed products included, whose exports were irregular and in small quantities.

In India like other developing countries, agriculture continues to be an important source of foreign exchange and revenue and for tapping the full potential of agricultural exports, it is essential that research and development should take place in such a

way that it can have greater bearing on the production of a particular agricultural produce for the purpose of export on the one hand, and financial and fiscal incentives must be provided for exporting a particular produce after addressing all pre-harvesting and post harvesting concerns on the other.

Tables 1 shows the relative shares of different agricultural groups in the total agricultural export from India. Agricultural export witnessed an increase of Rs. 60683.96 crores between 2000-01 and 2009-10. India's agricultural exports have continuously improved in over the period. The share of total agricultural exports in national export was 14.23% in 2000-01. After that, it continuously decline from 14.23 percent to 10.78% in 2005-06 and improve slightly to 12.05% in 2007-08. Later on it declined from 12.05 percent to 10.57% during 2009-10. The major factor behind the decline in total agricultural export was decrease in export of major agricultural groups such as Beverage & tobacco, Oilseed and Marine products together contributing 36.01% of total agricultural export during 2009-10, whereas during 2000-01 these products provided a share of 49.26% in total agricultural export. However, the share of food grains, spices and animal products has increased from 13.69, 5.65 and 5.87% to 16.38, 6.89 and 8.06%, respectively between the decades and share of horticultural commodities has increased from 6.31 to 8.46% between the decades. The major problem for Indian horticultural export is lack of proper market institution and supporting infrastructure.

To study instability in the export trade of agricultural commodities of India over the period 2000-01 to 2009-10, the deterministic components of total instability in exports was calculated by coefficient of variation in exports is quantity and value terms. The results are presented in tables 2.

### A. Food Grain Group

The coefficient of variation with respect to export quantity of pulses & rice basmati was observed to be 46.14 & 35.68% respectively during the study period 2000-01 to 2009-10. The instability with respect to export quantity of rice other than basmati and wheat were 62.63 and 107.67%, it showed a relatively high instability in exports of quantity of rice other than basmati and wheat.

### B. Oilseed

The coefficient of variation of ground nut, castor oil, sesamum oil, Niger seed, and oil meal were 37.83, 26.69, 23.70, 36.25 and 41.47%, respectively. Ground nut and oil meal showed higher instability in value export 66.65 and 58.17% where as castor oil, sesamum oil and niger seed showed relatively stable in value exports with 46.96, 47.35 and 29.30% during last decade.

### C. Horticultural Commodities

Among the all horticultural commodities fresh fruits, fresh vegetables and floricultural products showed

Table 1: Share of Different Agricultural Groups in the Agricultural Exports of India

Years	Agricultural Export										Total Agricultural Product					
	Food Grains	Oil Seeds	Horticultural Commodities	Marine products	Spices	Beverages & Tobacco	Animal products	Others	Agricultural Product	Total Agricultural Product						
2000-01	3923.11	13.64	1808.9	6.31	6367.29	22.22	1617.74	5.65	3840.78	13.4	1682.71	5.87	5507.56	19.22	28657.37	100
2001-02	4989.4	16.78	3749.89	12.61	1893.31	6.37	5898.34	19.84	3621.85	12.18	1549.53	5.21	6529.32	21.96	29728.61	100
2002-03	8027.19	23.16	2726.34	7.87	2199.69	6.35	6928.0	19.99	3668.94	10.59	1735.71	5.01	7712.53	22.26	34653.94	100
2003-04	7285.29	19.55	4839.37	12.99	2676.85	7.18	6105.63	16.38	381.74	10.25	2129.56	5.71	8014.86	21.51	37266.52	100
2004-05	9625.13	23.14	5576.29	13.4	2745.3	6.6	6469.22	15.55	4163.99	10.01	2646.02	6.36	8492.99	20.41	41602.65	100
2005-06	8347.83	16.96	7135.29	14.5	3529.3	7.17	7035.91	14.3	4650.08	9.45	3858.15	7.84	12589.42	25.58	49216.96	100
2006-07	8443.85	13.53	8399.34	13.46	5096.43	8.17	8001.04	12.82	5623.68	9.01	4124.94	6.61	19364.24	31.03	62411.42	100
2007-08	15283.59	19.34	12202.87	15.44	4782.32	6.05	6926.67	8.76	5838.33	7.39	5139.24	6.5	24551.84	31.06	79039.72	100
2008-09	15626.66	18.18	15195.46	17.68	6698.56	7.79	7066.37	8.22	8005.68	9.31	6915.03	8.05	19705.49	22.93	85951.67	100
2009-10	14635.35	16.38	12955.32	14.5	7561.96	8.46	9899.98	11.08	9319.39	10.43	7201.57	8.06	21709.83	24.3	89341.33	100

a relatively higher instability than fruits/vegetables seeds, processed vegetables and processed fruit juice. The instability for these commodities was fruits/vegetables seeds 20.92% in quantity export and 33.96 per cent in value export, fresh fruits 55.99% in value export, fresh vegetables 61.56% in value export, processed vegetables 44.37% in value export, processed fruit juice 39.06% in value export and floricultural products 51.23% in value export during last decade.

*D. Marine Products*

The coefficient of variation with respect to exports quantity of marine products during the study period 2000-01 to 2009-10 was observed to be 15.57% in quantity exports and 15.54% in value exports. The instability of marine products was relatively low as compared to other commodities.

*E. Spices*

The instability with respect to exports quantity of spices during the study period 2000-01 to 2009-10 was observed to be 39.29 and 59.98% in exports value. it showed a relatively low instability in quantity and high instability in exports value.

*F. Beverages & Tobacco*

The coefficient of variation with respect to exports value during the study period 2000-01 to 2009-10 of Tea, coffee, and tobacco manufactured were 21.45, 30.22 and 40.97% which showed relatively low instability. Tobacco manufactured showed 69.42% coefficient of variation which showed higher instability in export value during study period.

*G. Animal Products*

The coefficient of variance with respect to exports value of animal products during the study period 2000-01 to 2009-10 was observed to be poultry products 37.05%, dairy products 67.45% and meat & preparation 57.61%. The poultry products were stable and dairy product and meat & preparations were relatively more instable as compared to poultry products.

*Conclusion and Suggestions for Improvement of Agricultural Exports*

1. To increase the export potential of India, the concept of Agricultural Export Zone attempts to take a comprehensive look at a particular produce/product located in a contiguous area for the purpose of developing and sourcing the raw materials, their processing / packaging, leading to final exports. Thus, the entire effort is centered on the cluster approach of identifying the potential product, the geographical region in which these products grown and adopting an end to end approach of integration the entire process right from the stage of production till it reaches the market.
2. Government should amend the exim policy for growth and stabilization in agricultural export.
3. Government should provide subsidies for adopt technological up gradation and mechanization. Reducing the cost of agricultural commodities production with technological up gradation and increasing in mechanization.
4. Government should make negotiations regarding bilateral agreement between India and other countries and thereby the trade risk can be minimized.
5. Action needs to be taken to offer exportable agricultural

Table 2: Instability in Different Agricultural Crop

Group	Commodities	CGR					
		SD	Quantity AM	CV	Value SD	AM	CV
Food grain	Pulses	95.85	207.74	46.14	227.34	554.49	41.00
	Rice Basmati	397.11	1112.8	35.68	3114.34	4142	75.19
	Rice other than Basmati	1610.74	2571.98	62.63	1986.5	2888.5	68.77
	Wheat	1510.71	1403.08	107.67	829.35	795.08	104.31
	Other cereals	1386.07	1349.59	102.7	1387.78	1238.6	112.04
Oil seeds	Groundnut	78.88	208.54	37.8	433.39	650.2	66.65
	Castor oil	71.06	26.21	26.69	541.78	1153.6	46.996
	Sesamum oil	48.34	20.99	23.7	434.94	918.51	47.35
	Niger seed	8.4	23.1	36.25	18.22	62.18	29.3
	Oil meal	1845.08	4448.68	41.47	2841.33	4884.3	58.17
Horticultural Commodity	Fruits/vegetables seeds	1.64	7.817	20.92	32.74	96.4	33.96
	Fresh fruits	NA	NA	NA	621.08	1109.3	55.99
	Fresh vegetables	NA	NA	NA	789.95	123.2	61.56
	Processed vegetables	NA	NA	NA	201.78	454.78	44.37
	Processed Fruit Juice	NA	NA	NA	261.67	669.95	39.06
	Floricultural Products	NA	NA	NA	146.38	285.73	51.23
Marine products	Marine Products	81.3	522.21	15.57	1098.86	7069.9	15.54
Spices	Total Spices	166.13	422.8	39.29	1816.17	3028.2	59.98
Beverages & Tobacco	Tea	13.02	187.24	6.95	429.06	2000.5	21.45
	Coffee	14.05	180.31	7.79	457.73	1514.7	30.22
	Tobacco unmanufactured	45.77	145.21	31.52	958.82	13881.1	69.42
	Tobacco manufactured	NA	NA	NA	147.11	359.06	40.97
Animal Products	Dairy Product	NA	NA	NA	340.23	504.44	67.45
	Poultry Product	NA	NA	NA	104.01	280.71	37.05
	Meat and its Preparation	NA	NA	NA	1678.1	2913.1	57.69
Other Commodities	Sugar	142.12	1479.28	96.61	1762.066	1896.3	92.92
	Molasses	250.25	246.48	101.53	69.74	71.29	97.82
	Shellac	1.9	7.06	27.28	40.48	118.15	34.26
	Cashew nut shell liquid	3.92	7.09	55.27	9.38	14.12	66.45
	Cashew	13.03	113.79	11.45	34.2	2285.6	16.81
	Cotton raw including waste	571.08	546.61	104.48	3499.77	3196	109.51
	Jute	NA	NA	NA	97.58	363.27	26.86
	Guar Gum	49.52	167.1	29.63	383.69	810.95	47.31
	Paper/wood products	NA	NA	NA	1539.54	347.9	44.32
	Miscellaneous Processed Products	NA	NA	NA	519.28	1188.3	43.7

SD = Standard Deviation AM = Arithmetic Mean CV = Coefficient of variation

commodities at competitive prices than other exporting country so as to capture the market.

6. Animal products have good potential to increase exports. To give a boost to exports of animal products various sanitary and phytosanitary measures should be taken up vigorously to ensure the international hygienic standards of animal products.

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