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## Export Trend of Agro Processed Products from India - An Overview

Salla Sowjanya\* and P. Divakar Reddy

Department of Agricultural Economics, prof. Jayashankar Telangana State Agricultural University, Telangana, India

\*Corresponding author

### ABSTRACT

#### Keywords

Food industry, Agro- processed products, Export and imports

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Indian food industry is making an important mark in the global food arena as a large producer and exporter of agro food products. At present small players dominate the Indian food processing industry. The industry needs larger companies, which have financial muscle for establishing a large market network and also to invest in technology. Highest quantitative growth is observed in UK (3.57 %) followed by Germany (3.29 %) and Russia (1.67 %) in case of dried and preserved products like that there are so many countries in the world are importing our products over the years. The favourable policy environment and increasing interest of corporate in agro food processing sector, augurs well for India, which is well on track to become one of the leading food nations of the world.

### Introduction

“Agro-processing industries would be those which use not less than 50 per-cent of raw materials from agriculture and where the value added as a result of the processing undertaken, is not more than 50 per-cent of the final value of the output.”

Food processing sector is one of the largest sectors in India in terms of production, consumption, and export. India's food processing sector covers fruits and vegetables, spices, meat and poultry, milk and milk products, alcoholic beverages, fisheries, plantation, grain processing and other consumer product groups like confectionery, chocolates and cocoa products, soya-based products, mineral water, high protein foods, etc. Since liberalization in Aug'91 proposals

for projects of have been proposed in various segments of the food and agro-processing industry. Besides this, Government has also approved proposals for joint ventures; foreign collaboration, industrial licenses and 100 % export oriented units envisaging an investment. Out of this, foreign investment is over Rs.10,000 Crore.

India's exports of Processed Food was Rs. 31551.99 Crore in 2013-14, which including the share of products like Mango Pulp (Rs. 772.97 Crore), Dried and Preserved Vegetable (Rs. 742.74 Crore), Other Processed Fruit and Vegetable (Rs. 2,266.66 Crore), Pulses (Rs. 1,746.34 Crore), Groundnuts (Rs. 3,187.69 Crore), Guargum (Rs. 11,734.51 Crore), Jaggery and Confectionary (Rs. 1,136.91

Crore), Cocoa Products (Rs. 570.80 Crore), Cereal Preparations (Rs. 2,855.01 Crore), Alcoholic and Non-Alcoholic Beverages (Rs. 2,393.54 Crore) and Miscellaneous preparations (Rs 2,183.81 Crore). The Indian food processing industry is primarily export orient. India's geographical situation gives it the unique advantage of connectivity to Europe, the Middle East, Japan, Singapore, Thailand, Malaysia and Korea. One such example indicating India's location advantage is the value of trade in agriculture and processed food between India and Gulf region.

### **Significance of agro-processing**

It plays a vital role in the national economic development and has potential to meet the local needs and export requirements and accounting for about 32 per-cent of the country's total food market. The food processing industry is one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth. Indian agricultural and processed food exports during April-May, 2014 stood at Rs 2,32,631.43 Crore. In 2013-14, the total processed/value added agricultural products exported and the foreign exchange equivalent earned there from stood at Rs 4,627.99 Crore. The foreign direct investment (FDI) equity inflows in food processing industries during (April) 2000-2014(July) stood at Rs 3,62,901.81 Crore.

### **Materials and Methods**

To estimate and compare the level of growth, growth rates are analysed with the time series data on export of agro processed products of India

$$Y_t = AB^t e$$

Where,

$Y_t$  is the variable for which growth is calculated at  $t^{\text{th}}$  period,

$t$  is the time variable,

$A$  is constant,

$B$  is  $(1+r)$ , ' $r$ ' is compound growth rate and ' $e$ ' is error term.

Transforming this to logarithmic form

$$\ln Y_t = \ln A + (\ln B)t + \epsilon$$

Then CAGR calculated as: CAGR (per cent) =  $[\text{antilog}(\ln B) - 1] \times 100$

### **Results and Discussion**

Highest quantitative growth is observed in UK (3.57 %) followed by Germany (3.29 %) and Russia (1.67 %) in case of dried and preserved product. Highest quantitative growth is observed in China (4.25 %) followed by Nepal (1.6 %) and US (1.05 %) in case of cocoa. Highest quantitative growth is observed in France (8.9 %) followed by Russia (3.4 %) and US (1.9 %) in case of preserved gherkin and cucumber products. Highest quantitative growth is observed in Saudi Arabia (6.29 %) followed by Netherlands (3.65 %) and Yemen republic (1.49 %) in case of mango pulp. Highest quantitative growth is observed in US (2.4 %) followed by China (1.46 %) and Germany (1.29 %) in case of guar. Highest quantitative growth is observed in UAE (2.69 %) followed by Indonesia (1.87 %) and US (1.26 %) in case of milled products. Highest quantitative growth is observed in Netherlands (5.38 %) followed by UK (5.03 %) and Saudi Arabia (2.31 %) in case of processed fruits and vegetables. Highest quantitative growth is observed in Algeria (8.4 %) followed by Pakistan (2.24 %) and turkey (1.88 %) in case of pulses Highest quantitative growth is observed in Malaysia (4.93 %) followed by Vietnam (4.76 %) and Indonesia (4.03 %) in case of groundnut. Highest quantitative growth is observed in Ghana (8.2 %) followed by UAE (7.02 %) and Angola (1.73 %) in case of alcoholic products (Tables 1–10).

**Table.1** Export trend of dried and preserved products from India

(Quantity in quintals, Value in Crore)

SR.NO	YEAR	GERMANY		RUSSIA		UK		OTHERS	
		QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE
1	2004-05	31744.1	25.89	11586.4	5.89	28395.2	13.63	296800.8	136.02
2	2005-06	37756.89	32.19	21399.4	15.31	26450.7	17.67	480110.46	221.27
3	2006-07	170505.4	55.84	13547.2	15.16	32631.3	22.1	297613.99	218.51
4	2007-08	20802.48	23.89	3807.58	2.47	40008.2	31.63	650884.92	284.51
5	2008-09	43701.16	44.11	33850.9	31.37	35605.6	24.58	399054.54	203.94
6	2009-10	57292.09	58.23	54953.9	45.38	30559.8	22.77	361797.34	301.46
7	2010-11	68227.76	79.69	52435.3	46.59	56680.9	51.91	490091.21	373.33
8	2011-12	81029.25	100.09	51508.9	43.06	50667.3	47.96	647940.9	526.78
9	2012-13	58539.16	114.59	45065.3	59.33	44595	55.1	685202.48	637.96
10	2013-14	52916.92	76.95	21070.9	24.78	23246.3	29.32	561583.79	742.72
	CAGR	3.29		1.67		3.57		9.49	

Source: Export statistics for agro and food products, 2005 to 2014 (APEDA)

**Table.2** Export trend of COCOA products from India

(Quantity in quintals, Value in Crore)

S.NO	YEAR	NEPAL		US		CHINA		OTHERS	
		QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE
1	2004-05	6087.3	6.15	1222.9	1	2753	0.01	23133	27.66
2	2005-06	4791.9	6.37	2553.9	3.49	3788.62	0.09	25251.1	24.31
3	2006-07	5057.7	6.68	1838.8	2.18	4101.11	0.05	34122.1	40.12
4	2007-08	13400	21.75	6604.1	15.91	1486.62	0.46	49792.7	42.26
5	2008-09	10712	15.5	11454	26.54	1012.73	3.98	68319	84.04
6	2009-10	12697	16.87	6654.1	18.06	26741	12.86	58638.8	96.99
7	2010-11	18771	26.02	8613.9	14.77	28527.1	16.36	90775.4	126.97
8	2011-12	17395	30.73	12194	19.79	17546.4	71.46	166786	175.98
9	2012-13	27823	56.06	30613	104.83	25570.4	173.3	190833	293.92
10	2013-14	14225	28.43	25531	108.13	3257.76	22.22	159630	570.78
	CAGR	1.6		1.05		4.24		4.0	

Source: Export statistics for agro and food products, 2005 to 2014 (APEDA)

**Table.3** Export trend of preserved Gherkin and cucumber product from India

(Quantity in quintals, Value in Crore)

S.NO	YEAR	FRANCE		United States		RUSSIA		OTHERS	
		Qty	Value	Qty	Value	qty	value	QTY	VALUE
1	2004-05	18485	47.76	28149.4	59.55	104729	183.3	1151101	220.7
2	2005-06	21608	60.53	44266.7	97.13	72950	131.1	2211588	436.71
3	2006-07	19648	52.79	35495.1	78.58	46180	78.31	2347250	502.63
4	2007-08	31489	100.07	58960.5	161.67	70102	158.88	1881963	396.05
5	2008-09	26513	81.48	61845.8	185.55	41892	100.86	2999918	789.18
6	2009-10	20499	55.44	46063.9	129.34	32435	64.49	2633083	741.34
7	2010-11	25936	85.5	57465.2	175.12	46289	113.08	2092318	515.26
8	2011-12	25684	105.1	49884.7	196.7	45959	142.72	2586030	745.03
9	2012-13	18860	99.26	32302.9	157.13	57828	212.05	2386249	856.59
10	2013-14	7105.5	42.55	11927.1	65.14	25988	111.24	2187498	955.2
	CAGR	8.9		1.9		3.4		5.94	

Source: Export statistics for agro and food products, 2005 to 2014 (APEDA)

**Table.4** Export trend of mango-pulp from India

(Quantity in quintals, Value in Crore)

S.NO	YEAR	SAUDI ARABIA		YEMEN REPUBLIC		NETHERLAND		OTHERS	
		QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE
1	2004-05	450332	102.38	166163	31.61	92917.1	39.38	958570	315.72
2	2005-06	484208	135.17	196119	43.2	191909	84.4	1346132	364.24
3	2006-07	464346	118.36	216789	43.02	190444	77.33	1568355	505.83
4	2007-08	535636	201.17	155626	53.39	193113	106.63	1667522	509.69
5	2008-09	634799	221.56	217526	68.5	160734	90.13	1730136	752.99
6	2009-10	477438	211.6	143599	61.06	182212	110.69	1861979	744.61
7	2010-11	456856	156.84	182899	50.75	166886	92.62	1702197	818.93
8	2011-12	434480	132.18	252026	82.26	112362	63.91	1504991	620.83
9	2012-13	443903	216.42	371752	113.47	142286	99.28	1478157	608.56
10	2013-14	164117	77.36	132349	54.63	38940.1	30.38	1748603	772.95
	CAGR	6.29		1.49		3.65		1.09	

Source: Export statistics for agro and food products, 2005 to 2014 (APEDA)

**Table.5** Export trend of Guar from India

(Quantity in quintals, Value in Crore)

S.NO	YEAR	US		CHINA		GERMANY		OTHERS	
		Qty	Value	Qty	Value	Qty	Value	QTY	VALUE
1	2004-05	751867	465.77	271334	127.23	177795	121.47	1313000	689.48
2	2005-06	669289	441.03	315410	146.46	187403	126.28	1867184	1049.23
3	2006-07	817746	484.15	342990	158.09	178997	97.29	1893044	1125.79
4	2007-08	971493	623.05	392258	177.05	225090	122.74	2111666	1125.75
5	2008-09	719229	468.45	252615	122	205989	104.15	2585676	1338.99
6	2009-10	2152598	1776.6	563636	216.59	305443	178.55	2184797	1133.31
7	2010-11	4342541	12446	580311	969.94	350984	656.23	4416077	2938.7
8	2011-12	2426035	17282	322684	1368.3	120849	375.49	7073264	16523.87
9	2012-13	3322474	8528.7	569682	967.89	169567	332.22	4063118	21287.01
10	2013-14	1837458	3347.9	128050	184.82	70607	106.06	6019454	11734.52
	CAGR	1.46		2.4		1.29		5.69	

Source: Export statistics for agro and food products, 2005 to 2014 (APEDA)

**Table.6** Export trend of milled products from India

(Quantity in quintals, Value in Crore)

S.NO	YEAR	INDONESIA		UAE		US		OTHERS	
		QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE
1	2004-05	77958.5	8.33	40499.36	5.58	88750.3	12.05	1502628	157.33
2	2005-06	23030	2.1	49953.54	7.63	125365	19.87	569202.7	73.94
3	2006-07	11773.8	1.09	117477.6	16.68	135796	23.04	761675.7	104.23
4	2007-08	2635.9	0.74	59251.42	11.74	92358	18.63	866878.7	126.03
5	2008-09	1412.8	0.37	70779.33	18.25	170171	37.72	584066.4	109.89
6	2009-10	270.74	0.07	101917.1	26.82	201767	45.03	727443.6	153.63
7	2010-11	280	0.09	178644	41.4	226874	66.14	991012.4	197.06
8	2011-12	219797	44.49	261321.3	59.19	244486	69.99	1711581	358.9
9	2012-13	589118	121.51	335219.2	85.34	293672	104.59	2735844	603.61
10	2013-14	256064	52.48	129825.9	34.37	136195	50.23	4183980	1005.77
	CAGR	1.87		2.69		1.26		3.09	

Source: Export statistics for agro and food products, 2005 to 2014 (APEDA)

**Table.7** Export trend of processed fruits and vegetables from India

(Quantity in quintals, Value in Crore)

S.NO	YEAR	SAUDI ARABIA		UK		NETHERLANDS		OTHERS	
		QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE
1	2004-05	126662.3	35.51	146624.07	54.43	85294	34.4	847058.67	289.15
2	2005-06	168581.6	56.75	191264.33	77.8	112814	48.43	1372631.6	480.35
3	2006-07	261193.1	79.92	207246.5	80.61	185991	76.82	1729096.6	662.12
4	2007-08	258313.6	89.88	195055.93	80.12	188205	109.98	1844117.3	713.37
5	2008-09	255041.9	100.71	192537.98	87.98	178233	96.73	1953833.1	885.15
6	2009-10	250634	93.31	214023.2	111.06	180905	92.19	2233755.3	940.34
7	2010-11	440688	189.83	262761.69	150.57	238380	150.96	1998684.1	997.04
8	2011-12	366788.4	210.58	295807.36	210.1	245420	153.06	2748070.5	1577.6
9	2012-13	411430.6	259.18	317998.21	257.82	312135	246.89	2692172.6	1733.06
10	2013-14	163045.8	97.36	154069.62	118.42	131407	95.84	2873846.1	2266.6
	CAGR	2.31		5.03		5.38		1.84	

Source: Export statistics for agro and food products, 2005 to 2014 (APEDA)

**Table.8** Export trend of pulses from India

(Quantity in quintals, Value in Crore)

S.NO	YEAR	PAKISTHAN		TURKEY		ALGERIA		OTHERS	
		QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE
1	2004-05	386334	85.77	18141	6.81	124720	49.39	2669879	589.85
2	2005-06	136392	42.67	12150	4.57	78441	29.66	4516261	1124.66
3	2006-07	502434	141.99	92271	32.26	220960	80.57	2550845	789.99
4	2007-08	319186	109.48	101255	42.48	161020	66.4	1706144	549.01
5	2008-09	258290	92.35	104637	44.05	115630	49.3	1368801	542.32
6	2009-10	736048	271.76	232425	103.17	255990	117.42	1001309	408.32
7	2010-11	425078	218.79	238160	159.93	321991	211.24	2090105	870.04
8	2011-12	590592	297.52	277200	203.15	368530	269.75	1746252	1067.93
9	2012-13	1001694	395.6	604820	335.31	575530	329.99	2027514	1285
10	2013-14	388609	175.31	41690	23.95	88090	54.47	3450514	1746.37
	CAGR	2.24		1.88		8.4		4.29	

Source: Export statistics for agro and food products, 2005 to 2014 (APEDA)

**Table.9** Export trends of groundnuts from India

(Quantity in quintals, Value in Crore)

S.NO	YEAR	VIETNAM		INDONESIA		MALAYSIA		OTHERS	
		QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE
1	2004-05	2000	0.54	944023.5	254.37	410414	112.03	1771541	547.02
2	2005-06	3620	2.27	1357890	432.27	353818	113.31	1900533	513.69
3	2006-07	10315.52	4.23	1204240	458.39	360204	138.87	2514287	798.46
4	2007-08	1495	0.47	1461057	610.85	414056	169.27	2695877	1054.08
5	2008-09	12047.85	5.93	1362820	560.35	638376	269.37	2978904	1239.01
6	2009-10	29778	15.04	1828103	932.71	711759	376.33	3402463	1425.93
7	2010-11	2414969	1505.1	2526660	1589.9	765952	487.6	4337532	2178.41
8	2011-12	1393629	1060.7	1701790	1256.6	702747	535.01	8326169	5246.45
9	2012-13	404660	240.46	2277545	1407	592586	372.19	5356374	4065.36
10	2013-14	370950.5	237.96	956050.8	575.24	263264	161.66	5096648	3187.74
	CAGR	4.76		4.03		4.93		9.4	

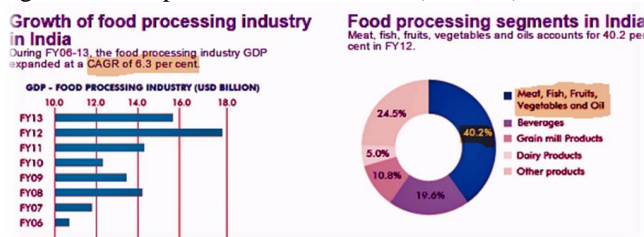
Source: Export statistics for agro and food products, 2005 to 2014 (APEDA)

**Table.10** Export trends of alcoholic products from India

(Quantity in quintals, Value in Crore)

SR.NO	YEAR	UAE		GHANA		ANGOLIA		OTHERS	
		QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE
1	2004-05	72442	31.41	11.15	0.01	18273	17.64	640032.07	203.05
2	2005-06	81892	56.32	27003	9.37	23105	17.12	486318.19	216.7
3	2006-07	137444	103.99	30012	11.97	35668	31.39	584743.04	335.56
4	2007-08	186571	230.66	29061	13.97	24410	38.33	527620.14	534.63
5	2008-09	166203	192.32	42579	21.99	41133	77.28	681077.78	582.45
6	2009-10	168709	189.35	165580	59.04	130098	173.18	1222951.6	816.84
7	2010-11	197361	277.13	443856	192.56	153677	225.25	2141107	1459.45
8	2011-12	257377	394.75	518331	248.77	183371	174	2644660.9	1909.37
9	2012-13	387995	477.59	560406	290.85	206882	241.13	3115641.9	2393.58
10	2013-14	95084	150.83	112035	59.62	91258	64.33		
	CAGR	7.02		8.2		1.73		4.66	

Source: Export statistics for agro and food products, 2005 to 2014 (APEDA)



Kachru (2000) observed that in India Agro processing sector has experienced expansion during last 5 decades and Agro processing technology in India has continued to make steady progress towards modernization.

Nilabja Ghosh *et al.*, (2013) found that the extent of processing of agricultural products in India among the agricultural products processed Soybean was the most processed (31.7 %) product followed by pulses, milk and spices lead in their extent of processing, while fruit and vegetable processing extremely poor at 1.7 % and 2.4 % respectively.

In conclusion, Indian food industry is making an important mark in the global food arena as a large producer and exporter of agro food products.

At present small players dominate the Indian food processing industry. The industry needs larger companies, which have financial muscle for establishing a large market network and also to invest in technology.

The favorable policy environment and increasing interest of corporate in agro food processing sector, augurs well for India, which is well on track to become one of the leading food nations of the world.

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