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**India's Trade of Agricultural Commodities during COVID-19
Pandemic: Performance and Prospects**

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India's Trade of Agricultural Commodities during COVID-19 Pandemic: Performance and Prospects

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Abstract

Promotion of farm exports is extremely important not only for earning precious foreign exchange for the country but also for achieving the goal of an 'Aatmanirbhar Bharat,' for which self-reliant agriculture is critical. The present study is an attempt to analyse the trends and performance of agricultural trade during 1990-91 to 2020-21, with last year coinciding with the COVID-19 pandemic. As per WTO's Trade Statistics 2020, the share of India's agricultural exports and imports in the world agriculture trade in 2019 was 2.07 per cent and 1.46 per cent, respectively. The agri-exports increased from Rs.6012.76 crore in 1990-91 to Rs.305469 crore in 2020-21, growing at CAGR of 13.99 per cent. The agri-imports increased from Rs.1205.86 crore to 157788.16 crore, registering a growth of 16.85 per cent. Further, comparison of exports of agriculture and allied commodities by value during the April-September of 2020-21 and 2021-22 shows that the exports were Rs.167631.49 crore (2021-22) as compared to Rs.134471.13 crore (2020-21), indicating an increase of 24.66 per cent. Meanwhile, the imports had also increased by 55.35 per cent, from Rs.70783.86 crore (2020-21) to Rs.109965.29 crore (2021-22). India's net agri-export surplus has also increased from Rs.4806.90 crore in 1990-91 to 147680.84 crore in 2020-21. Study revealed that share of agricultural exports to agricultural Gross Value Added (GVA) increased from 3.88 per cent in 1990-91 to 8.48 per cent in 2020-21. While share of agricultural imports to agricultural GVA decreased from 6.54 per cent in 2016-17 to 4.36 per cent in 2020-21 indicating decreased dependence on import of agricultural products in India. It is brought out that despite the severe second COVID-19 wave, the exports in the agriculture sector had performed remarkably well. Study suggests need to develop efficient global value-chains and encourage contract farming on a medium to long-term basis. Exporters and processors must be encouraged to buy directly from farmer producer organisations (FPOs). Attention should be given towards diversification of agricultural exports to more products and more destinations with improved infrastructure, trained human resources and support facilities to move up the value chain and meet international standards like sanitary and phyto-sanitary measures, etc. The efficiency at production level needs to be raised to make the product price competitive in the international market. The producers and exporters need to be educated and trained to maintain the quality of the products as per global standards. India should have an effective and efficient market intelligence system to monitor developments in the world markets (price, subsidy levels, demand and supply) and link import tariffs to world prices. Further, under 'One District One Product' scheme, districts should be promoted as agri-export hubs to ensure that local goes global.

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Introduction

Agri-exports have an important role to play in doubling farmers' income and India should aim to become the top 5 agri-exporting nations in coming years. The promotion of farm exports is extremely important not only for earning precious foreign exchange for the country but also for achieving the goal of an 'Aatmanirbhar Bharat', for which self-reliant agriculture is critical. India is an agrarian economy and is a major contributor to the global food basket, thanks to the favourable agro-climatic conditions and the rich base of natural resources. As per WTO's Trade Statistics 2020, the share of India's agricultural exports and imports in the world agriculture trade in 2019 was 2.07 per cent and 1.46 per cent, respectively. India is among the world's leading producers of many commodities such as dairy, cereals, spices, fruits & vegetables, rice, wheat, cotton and others. Total foodgrain production in the country increased from 176.39 million tonnes (MT) in 1990-91 to 308.65 MT in 2020-21 and horticultural production increased much faster, 96.6 MT in 1991-92 to 331.05 MT in 2020-21. The milk production has also increased significantly from 53.9 MT in 1990-91 to 208 MT in 2020-21. Fish production increased from 3.84 MT in 1990-91 to 14.07 MT in 2019-20 and egg production increased from 21101 million in 1990-91 to 114419 million in 2019-20. India has consistently maintained a trade surplus in agricultural products over the years. Despite the COVID-19 pandemic, agri-exports from India increased to Rs.305469 crore in 2020-21 from Rs.252976 crore in 2019-20 and net agriculture export surplus has also increased to Rs.147681 crore in 2020-21 from Rs.105530 crore in 2019-20, registering growth of 20.75 per cent and 39.94 percent, respectively compared to the previous year.

The global economy saw an unprecedented disruption in 2020 owing to the COVID-19 pandemic and subsequent strict lockdown to contain the spread of the virus across the countries. As the movement of people across the borders was severely curtailed, it led to disruptions in the supply chains and demand shocks. These disruptions have further dampened the prospects of global agri-trade after an event of trade war and protectionism in 2019. However, after considering the situation and its anticipated repercussion, agricultural trade from India reinforced India's position as a valued and trusted partner across the world. The present study analyses the trends and performance in India's agriculture trade during COVID-19 pandemic.

Data and Methodology

The present study is based on time series secondary data collected and compiled from various sources. To capture the trends and performance of agricultural trade a large number of commodities/products (46) were analysed. The study uses data from various published sources. The data on exports and imports of agricultural products/commodities were extracted from the export-import data bank maintained by the Ministry of Commerce and Industry (www.commercemintistry.nic.in) and APEDA. The data on agricultural exports of other countries and other related global statistics were extracted from the Trade Yearbook of Food and Agricultural Organisation

(FAOSTAT). Year-wise data on agricultural exports and imports and national exports and imports were extracted from Agricultural Statistics at a Glance, Publication of Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare, Government of India; data on agriculture gross value added (GVA) were taken from CMIE and Economic Survey, National Statistical Office (NSO), MoSPI, etc. The data were compiled and analysed with simple tabular techniques, graphs, compound annual growth rate (CAGR) and Coefficient of Variation (CV).

Results and Discussion

Role of Agriculture in India's Economy

The role of agriculture and allied sector in the economy of almost all the states has been increasing as is evident from its enhancing share of value of agriculture and allied sectors (Table 1). The gross value of output from agriculture and allied sectors increased from Rs.1908087.53 crore in 2011-12 to Rs. 3727427.23 crore in 2018-19 at current prices, with a compound annual growth rate (CAGR) of 9.89 per cent. The share of the value of output of agriculture and allied sectors was highest for Uttar Pradesh (12.83%) followed by Maharashtra (9.36%), Rajasthan (8.58%), Gujarat (7.77%), West Bengal (7.30%) and Madhya Pradesh (6.16%) during 2011-12. These six states together accounted for 52 per cent the total value of output from agriculture and allied sector in the economy. While its share in 2018-19 was also highest in Uttar Pradesh (12.07%) followed by Madhya Pradesh (8.97%), Andhra Pradesh (8.39%), Maharashtra (7.86%), Rajasthan (7.75%) and West Bengal (7.33%). These six states together accounted for 52.37 per cent of the total value of output from agriculture and allied sector in 2018-19. The total value of output from agriculture and allied sector grew at CAGR of 9.89 per cent during 2011-12 to 2018-19. Among the major states, the highest growth was observed in Andhra Pradesh (17.42%), followed by Madhya Pradesh (15.64%), Chhattisgarh (11.81%), Jharkhand (11.34%), Tamil Nadu (10.65%) and Bihar (9.60%). It may be concluded that maximum growth was in those states which have implemented the second green revolution.

Table 1: State-wise Share of Value of Output from Agriculture, Forestry and Fishing at Current Prices (%)

State/U.Ts	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CAGR (%)
Andhra Pradesh	5.55	5.83	5.84	6.25	7.00	7.58	8.31	8.39	17.42
Arunachal Pradesh	0.29	0.29	0.31	0.32	0.32	0.26	0.25	0.30	8.58
Assam	1.92	2.04	1.89	1.91	1.97	1.83	1.75	1.71	7.76
Bihar	3.94	4.23	3.83	3.94	3.97	4.00	3.94	3.95	9.60
Chhattisgarh	1.88	1.99	1.98	2.02	2.04	2.21	2.00	2.20	11.81
Goa	0.12	0.12	0.15	0.13	0.14	0.18	0.15	0.14	13.40
Gujarat	7.77	6.23	6.91	6.52	6.56	6.71	7.00	6.29	8.60
Haryana	4.13	4.13	4.06	3.79	3.75	3.62	3.50	3.75	7.49
Himachal Pradesh	0.81	0.82	0.83	0.77	0.81	0.81	0.71	0.69	7.41
Jammu & Kashmir	0.93	0.98	0.93	0.79	0.92	0.92	0.89	0.88	8.93

Jharkhand	1.56	1.61	1.60	1.99	1.52	1.69	1.78	1.73	11.34
Karnataka	4.91	4.82	4.85	5.17	4.89	4.59	4.80	4.91	9.57
Kerala	2.91	2.68	2.64	2.65	2.69	2.57	2.54	2.41	7.70
Madhya Pradesh	6.16	6.96	6.95	7.65	7.85	8.39	8.61	8.97	15.64
Maharashtra	9.36	9.15	9.63	8.45	8.14	9.13	8.45	7.86	7.55
Manipur	0.22	0.19	0.20	0.20	0.20	0.20	0.22	0.20	10.02
Meghalaya	0.17	0.15	0.18	0.18	0.18	0.17	0.16	0.16	9.45
Mizoram	0.10	0.09	0.09	0.19	0.19	0.18	0.18	0.18	23.93
Nagaland	0.23	0.25	0.26	0.26	0.24	0.24	0.25	0.25	10.23
Odisha	2.65	2.88	2.86	2.93	2.66	2.74	2.65	2.87	9.77
Punjab	5.02	4.83	4.55	4.34	4.41	4.11	4.25	4.38	7.47
Rajasthan	8.58	8.69	8.47	8.31	8.55	8.39	7.70	7.75	8.18
Sikkim	0.07	0.07	0.06	0.06	0.07	0.07	0.08	0.09	13.68
Tamil Nadu	5.69	4.96	5.29	5.82	5.87	5.19	5.68	5.64	10.65
Telangana	3.45	3.75	3.56	3.29	3.12	3.18	3.47	3.57	9.19
Tripura	0.30	0.32	0.35	0.39	0.42	0.45	0.45	0.46	17.19
Uttar Pradesh	12.83	13.22	12.81	12.57	12.97	12.58	12.26	12.07	8.81
Uttarakhand	0.86	0.87	0.79	0.74	0.72	0.67	0.64	0.65	4.79
West Bengal	7.30	7.57	7.88	8.13	7.60	7.10	7.12	7.33	9.03
A & N Islands	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	7.37
Chandigarh	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	7.26
Dadra & Nagar Haveli	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	4.70
Daman & Diu	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	9.98
Delhi	0.16	0.13	0.12	0.11	0.11	0.10	0.10	0.10	2.93
Lakshadweep	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	11.39
Puducherry	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.06	10.53
All India	100 (1908088)	100 (2153173)	100 (2481996)	100 (2682465)	100 (2846846)	100 (3196504)	100 (3490793)	100 (3727427)	9.89

The figures in parentheses indicate the gross value of output from agriculture and allied sector in Rs crore.

Source: National Statistical Office (2021), Ministry of Statistics and Programme Implementation, GoI.

Figures 1 and 2 presents the gross value output (GVO) at current prices of the main agriculture commodities namely crop, livestock, forestry & logging and fishing & aquaculture which together are called agriculture and allied sectors. It may be seen that the crops sub-sector accounted for 62.44% of the agriculture and allied sectors in 2011-12, which has gradually come down to 54.36% in 2018-19. The share of the livestock sector increased significantly from 25 per cent in 2011-12 to 31 per cent in 2018-19. The share of fisheries and aquaculture increased from 4 per cent to 6 percent during the same period. During the same time, the share of oilseeds declined from 6 per cent to 4 per cent. It may be noted that the value of livestock and fishery increased from 29.76 per cent in 2011-12 to 37.51 per cent in 2018-19 of the gross value of agricultural output. Horticulture accounted for 16.18 per cent during 2018-19 as compared to 15.06 per cent during 2011-12. Results reveal that cropping patterns have changed towards high-value crops/livestock-poultry, dairy, fruits, vegetables, spices and fisheries.

Figure 1: Shares of Agriculture Commodities in Gross Value of Output (2011-12)

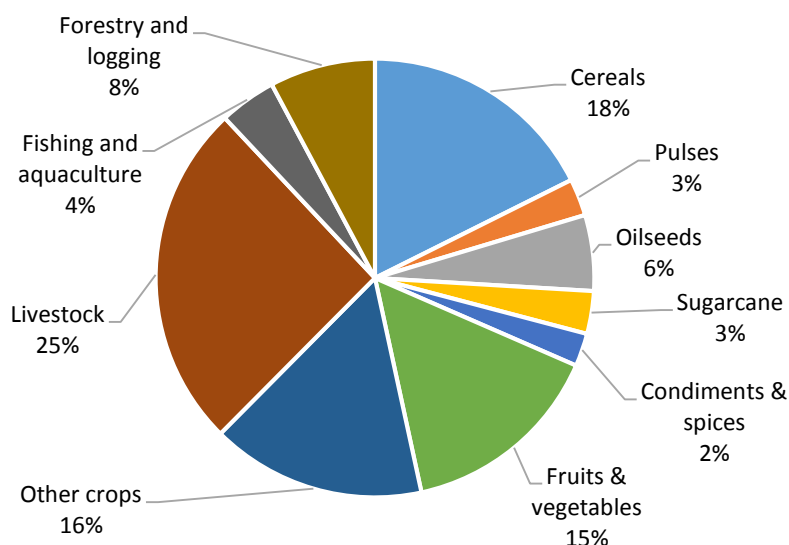
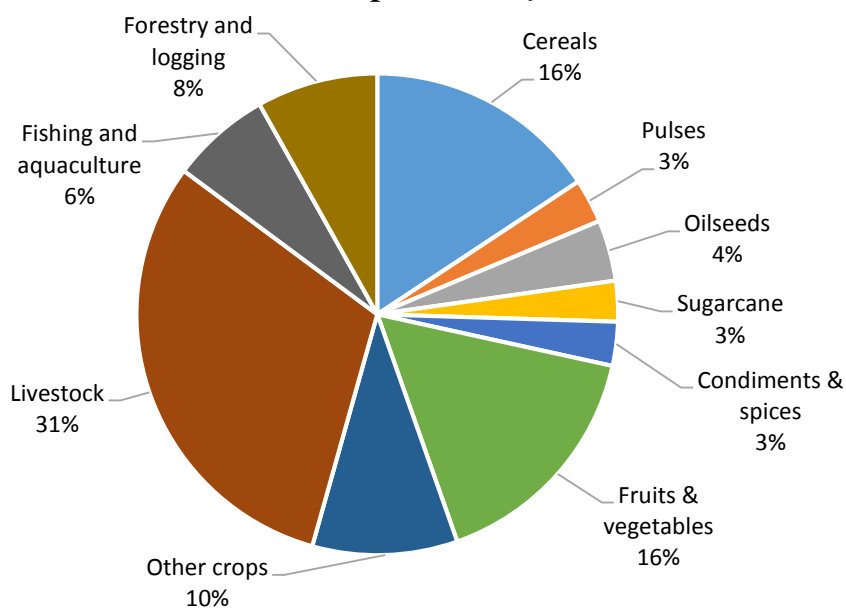


Figure 2: Shares of Agriculture Commodities in Gross Value of Output (2018-19)



The share of various sub-sectors of agriculture and allied sector in India's economy reveals that while the share of crops and forestry are declining, the share of livestock and fisheries are showing increasing trend (Table 2).

**Table 2: Share of Agriculture and Allied Sector in Total Economy
(at current prices)**

(In %)

Year	Agriculture, Forestry and Fishing	Crops	Livestock	Forestry and Logging	Fishing & Aquaculture
2011-12	18.5	12.1	4.0	1.5	0.8
2012-13	18.2	11.8	4.0	1.5	0.9
2013-14	18.6	12.1	4.1	1.5	0.9
2014-15	18.2	11.2	4.4	1.5	1.0
2015-16	18.0	10.6	4.6	1.5	1.1
2016-17	18.3	10.6	4.8	1.5	1.1
2017-18	17.6	10.5	5.1	1.4	1.2
2018-19	18.4	9.7	5.1	1.5	1.2
2019-20	20.2	10.7	5.2	1.3	1.2
2020-21	20.2	Data not available			

Source: Monthly Bulletin June 2021, Directorate of Economics and Statistics, MoA&FW, GoI

State-wise Value of Output from Agriculture and Allied Sector

It may be observed from Table 3 that 13, 13, 18 and 15 states have their average share in gross value of output from crop, livestock, forestry and fishery at more than the all India average.

**Table 3: State-wise Average Share in Value of Output from Agriculture,
Livestock, Forestry and Fishery for the period of 2011-12 to 2018-19
at Current Prices (%)**

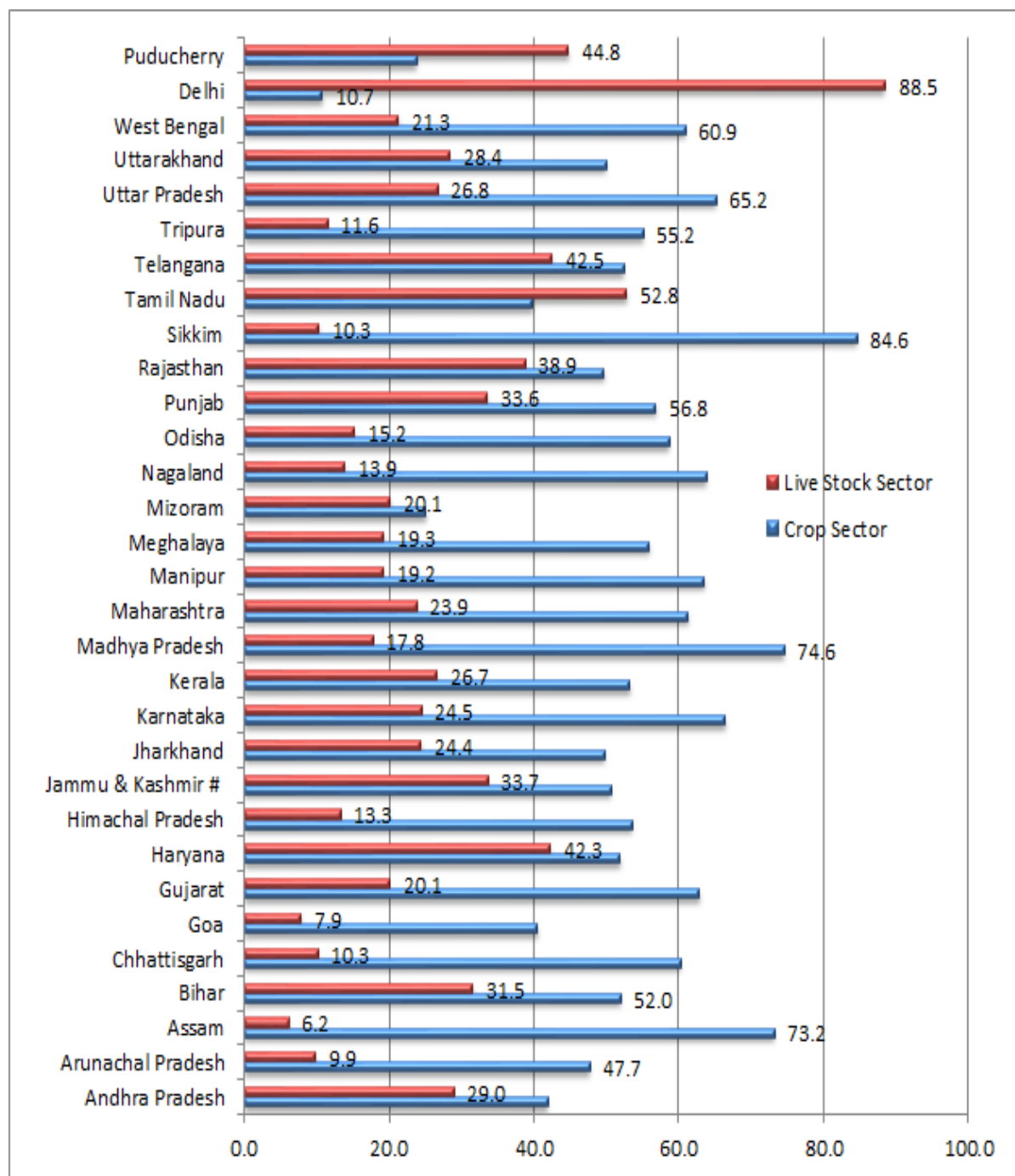
Sr. No.	State/U.Ts	Crop	Livestock	Forestry	Fishery	Agri., Forestry and Fishery
1	Andhra Pradesh	45.29	31.81	2.59	20.31	100
2	Arunachal Pradesh	43.80	11.16	43.84	1.20	100
3	Assam	66.63	14.89	6.58	11.90	100
4	Bihar	53.91	33.41	6.42	6.26	100
5	Chhattisgarh	60.38	13.94	17.27	8.41	100
6	Goa	40.88	8.28	12.41	38.43	100
7	Gujarat	61.70	26.18	7.87	4.25	100
8	Haryana	54.65	39.46	4.53	1.36	100
9	Himachal Pradesh	48.65	19.75	31.05	0.55	100
10	Jammu & Kashmir	56.76	33.67	7.96	1.61	100
11	Jharkhand	54.43	23.94	18.35	3.28	100
12	Karnataka	68.67	20.76	6.80	3.77	100
13	Kerala	46.84	27.26	12.54	13.36	100
14	Madhya Pradesh	71.10	20.84	7.36	0.70	100
15	Maharashtra	64.18	23.15	10.27	2.40	100

16	Manipur	65.12	17.00	10.63	7.25	100
17	Meghalaya	54.34	15.62	26.59	3.45	100
18	Mizoram	32.78	17.31	48.03	1.88	100
19	Nagaland	60.00	16.37	22.22	1.41	100
20	Odisha	59.66	18.50	13.44	8.40	100
21	Punjab	59.31	32.16	7.57	0.96	100
22	Rajasthan	50.14	39.13	10.46	0.27	100
23	Sikkim	82.84	13.05	3.80	0.31	100
24	Tamil Nadu	52.16	38.25	3.55	6.04	100
25	Telangana	49.78	43.68	3.50	3.04	100
26	Tripura	56.82	12.97	16.58	13.63	100
27	Uttar Pradesh	61.15	32.45	5.06	1.34	100
28	Uttarakhand	51.04	29.11	19.58	0.27	100
29	West Bengal	61.33	19.87	3.57	15.23	100
30	A & N Islands	43.95	23.99	7.29	24.77	100
31	Chandigarh	9.26	84.91	4.74	1.09	100
32	Dadra & Nagar Haveli	57.09	21.99	20.71	0.21	100
33	Daman & Diu	3.21	4.42	3.38	88.99	100
34	Delhi	27.96	68.77	2.90	0.37	100
35	Lakshadweep	9.74	6.21	2.46	81.59	100
36	Puducherry	34.52	36.91	4.10	24.47	100
All India		58.23	28.54	7.72	5.51	100

Source: Computations based on data from NSO, MoSPI, GoI.

Contribution of Crops & Livestock in Total Gross State Value Added of Agriculture and Allied Sector

For the year 2019-20, crops contributed more than 60% to the Gross State Value Added (GSVA) for 11 states viz., Assam, Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Sikkim, Uttar Pradesh and West Bengal. Whereas, livestock formed an important component of GSVA (more than 40%) for 5 states, viz., Haryana, Tamil Nadu, Telangana, Delhi and Puducherry.



Source: National Statistical Office (NSO), MoSPI, GoI.

State-wise Exports of Agricultural Products

State-wise exports of agricultural products monitored by APEDA are presented in Table 4. It is clear from the table that Gujarat has exported the highest agricultural commodities in value term with a worth of Rs.70757.30 crore in 2020-21 followed by Maharashtra (Rs.49199.20 crore), Uttar Pradesh (Rs.32209 crore), Andhra Pradesh (Rs.23505.20 crore), West Bengal (Rs.22420 crore), Haryana (Rs.21308.30 crore) and Tamil Nadu (Rs.15293.60 crore). These seven states, together, accounted for 88 per cent of the total exports of agricultural commodities under APEDA.

Table 4: State-wise Export of Principal Agricultural Commodities

(Rs. Crore)

State	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	CAGR
Gujarat	90.9	94.0	6853.8	9464.1	11289.0	10713.3	19585.5	29763.2	33347.1	32082.0	24873.1	25564.5	30036.1	37258.8	35305.6	70757.3	37.7
Maharashtra	219.1	294.1	7738.4	11048.0	11120.5	12555.5	18428.1	22723.5	30078.9	28941.0	26123.0	27223.3	25723.0	27162.1	23948.4	49199.2	28.7
Uttar Pradesh	13.1	9.1	261.3	208.2	337.2	4809.2	8783.0	13367.0	20516.2	20583.7	17255.8	15705.6	18660.5	17605.1	15902.8	32209.0	64.2
Andhra Pradesh	0.4	0.2	2932.9	1763.9	400.4	822.0	5933.4	11113.5	9816.2	8204.0	5539.7	7021.7	8274.1	8929.5	5429.5	23505.2	68.1
West Bengal	18.4	15.8	3471.9	1624.6	2109.0	1898.4	2405.5	3900.2	7530.9	7425.0	5728.0	5500.0	7577.6	6834.7	4928.6	22420.0	38.0
Haryana	0.1	0.1	490.0	1384.0	2098.3	2064.3	5165.6	8446.7	8290.7	8387.8	6340.4	7447.2	8535.6	9533.9	8428.2	21308.3	82.7
Tamil Nadu	48.1	77.7	3706.7	3747.2	3851.9	4214.7	6729.5	8044.9	8280.0	8023.9	7936.5	8393.9	8259.0	8662.8	8114.4	15293.6	28.9
Punjab	32.1	9.3	944.3	2282.3	1120.9	1243.1	2626.5	3755.3	5169.3	4381.6	3101.6	3100.7	3328.7	3632.0	3210.6	5456.3	31.2
Bihar	3.4	6.4	137.5	155.4	155.3	175.7	456.1	796.5	1017.6	1535.6	1232.1	1689.8	1792.8	2056.1	2047.4	5346.8	48.2
Karnataka	13.3	24.8	386.6	699.7	669.5	504.0	795.7	1089.9	1214.0	1407.9	1387.3	2375.3	2777.7	2808.6	2662.2	5344.7	34.3
Kerala	14.1	26.6	369.1	405.1	450.1	482.4	784.3	1086.1	1391.5	1342.8	1659.5	4191.7	4407.4	3681.1	3638.1	5033.7	38.7
Rajasthan	1.8	2.2	447.0	546.2	522.8	1088.5	9649.1	11162.6	5762.0	4744.6	1576.1	1334.3	1798.4	2232.0	1669.2	2569.9	40.1
Telangana	29.0	9.5	144.1	179.5	213.9	282.3	486.8	674.2	866.9	977.9	1201.1	1139.4	1283.2	1367.0	1238.3	2506.6	33.0
Madhya Pradesh	83.0	4.5	141.7	167.0	79.7	153.1	90.1	359.1	847.3	665.4	599.8	622.6	912.0	940.6	884.3	2199.4	30.7
Delhi	61.5	78.5	1424.0	1611.4	818.9	1381.6	962.1	1736.8	2377.1	2222.5	2222.9	1769.9	1832.5	1901.0	1459.1	1948.2	16.7
Odisha	0.4	0.3	3.1	6.1	7.7	9.0	9.3	10.6	25.3	18.7	213.2	237.0	238.7	219.0	227.5	763.4	61.3
Uttarakhand	0.0	0.0	0.9	1.0	0.4	5.2	4.6	5.7	4.2	13.3	31.8	28.6	95.2	69.4	78.0	136.8	72.5
GOA	0.8	0.3	24.1	41.9	10.8	5.2	15.5	130.7	163.2	98.8	96.0	142.1	143.8	122.9	105.0	132.2	38.4
Others	18043.6	20503.1	60.2	2.3	4.0	26.7	29.6	84.7	224.3	286.7	365.0	366.3	176.5	85.2	113.8	285.5	-4.9
Total	18673.0	21156.2	29537.5	35337.8	35260.2	42434.2	82940.2	118251.0	136922.6	131343.0	107482.9	113853.8	125852.7	135101.4	119390.8	266416.2	16.7

Source: Computations based on data from www.apeda.gov.in

Table 5 and Figure 3 give the trends in India's exports and imports of agricultural commodities for the period 1990-91 to 2020-21. India has consistently maintained a trade surplus in agricultural commodities over the years. India's agri-exports increased from Rs.6012.76 crore in 1990-91 to Rs.305469.00 crore in 2020-21, registering an increase of over 50 times in the span of 30 years and grew at a CAGR of 13.99 per cent during the period, although in 2019-20, there was a slight drop in agri-exports by 8.5 per cent. During 2020-21, India's agri-exports surged and reached the highest so far which was possible due to the hard work put in by our farmers and a slew of measures/schemes initiated by the Government of India and institutions including Farmers Producer Organisations (FPOs).

Likewise, the import of agricultural products has also increased over the years. In 1990-91, agri-imports were worth Rs.1205.86 crore which went up to Rs.164726.83 crore in 2016-17, recording an increase of 136 times. However, since 2016-17, the value of agri-imports dropped to reach Rs.137019.46 crore in 2018-19. In 2019-20, India's agri-imports were worth Rs.147445.81 crore and during 2020-21, the agri-imports were worth Rs.157788.16 crore.

Table 5: India's Imports and Exports of Principal Agricultural Commodities

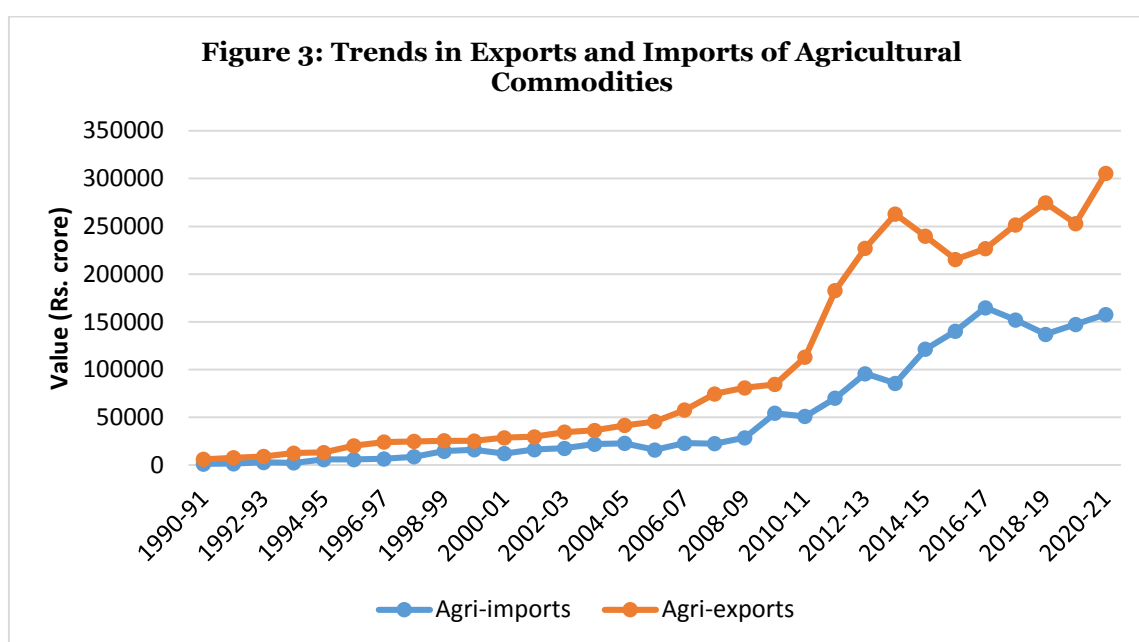
(Rs.Crore)

Year	Agricultural Imports	Total National Imports	Share of Agricultural Imports to Total National Imports (%)	Agricultural Exports	Total National Exports	Share of Exports to Total National Exports (%)	Net Agri Export Surplus (Agri-exports-agri-imports)	Agriculture GVA at Current Prices	Share of Agri-import in agri-GVA (%)	Share of Agri-export in agri-GVA (%)
1990-91	1205.86	43198.00	2.79	6012.76	32553.00	18.47	4806.90	154953	0.78	3.88
1991-92	1478.27	47850.84	3.09	7838.04	44041.81	17.80	6359.77	181017	0.82	4.33
1992-93	2876.25	63374.52	4.54	9040.30	53688.26	16.84	6164.05	203009	1.42	4.45
1993-94	2327.33	73101.01	3.18	12586.55	69748.85	18.05	10259.22	235483	0.99	5.34
1994-95	5937.21	89970.70	6.60	13222.76	82673.40	15.99	7285.55	271162	2.19	4.88
1995-96	5890.10	122678.14	4.80	20397.74	106353.35	19.18	14507.64	294848	2.00	6.92
1996-97	6612.60	138919.88	4.76	24161.29	118817.32	20.33	17548.69	354521	1.87	6.82
1997-98	8784.19	154176.29	5.70	24832.45	130100.64	19.09	16048.26	376207	2.33	6.60
1998-99	14566.48	178331.69	8.17	25510.64	139751.77	18.25	10944.16	432065	3.37	5.90
1999-00	16066.73	215528.53	7.45	25313.66	159095.20	15.91	9246.93	457081	3.52	5.54
2000-01	12086.23	230872.75	5.24	28657.37	203571.00	14.08	16571.14	462407	2.61	6.20
2001-02	16256.61	245199.71	6.63	29728.61	209017.96	14.22	13472.00	500567	3.25	5.94
2002-03	17608.83	297205.86	5.92	34653.94	255137.26	13.58	17045.11	486974	3.62	7.12
2003-04	21972.68	359107.61	6.12	36415.48	293366.74	12.41	14442.80	546794	4.02	6.66
2004-05	22811.84	481371.53	4.74	41602.65	375339.51	11.08	18790.81	567635	4.02	7.33
2005-06	15977.75	574190.89	2.78	45710.97	456417.85	10.02	29733.22	639988	2.50	7.14
2006-07	23000.28	840506.30	2.74	57767.87	571779.27	10.10	34767.59	715179	3.22	8.08
2007-08	22549.81	1012311.69	2.23	74673.48	655863.51	11.39	52123.67	820532	2.75	9.10
2008-09	28719.24	1374435.37	2.09	81064.52	840755.05	9.64	52345.28	925878	3.10	8.76
2009-10	54365.29	1363735.54	3.99	84443.95	845533.63	9.99	30078.66	1066008	5.10	7.92
2010-11	51073.97	1683466.96	3.03	113046.58	1136964.25	9.94	61972.61	1299884	3.93	8.70
2011-12	70164.51	2345463.23	2.99	182801.00	1465959.39	12.47	112636.49	1501947	4.67	12.17

2012-13	95718.89	2669161.95	3.59	227192.61	1634318.28	13.90	131473.72	1675107	5.71	13.56
2013-14	85727.30	2715420.78	3.16	262778.54	1905011.08	13.79	177051.24	1926372	4.45	13.64
2014-15	121319.02	2736676.99	4.43	239681.04	1896348.42	12.64	118362.02	2093612	5.79	11.45
2015-16	140289.22	2490303.76	5.63	215396.32	1716384.39	12.55	75107.10	2227533	6.30	9.67
2016-17	164726.83	2577671.14	6.39	226651.91	1849433.54	12.26	61925.08	2518662	6.54	9.00
2017-18	152095.20	3001028.71	5.07	251563.94	1956514.52	12.86	99468.74	2829826	5.37	8.89
2018-19	137019.46	3594674.22	3.81	274571.28	2307726.19	11.90	137551.82	3016277	4.54	9.10
2019-20	147445.81	3360954.45	4.39	252976.06	2219854.17	11.40	105530.25	3394033	4.34	7.45
2020-21	157788.16	2909830.00	5.42	305469.00	2151770.00	14.20	147680.84	3616523	4.36	8.45
2021-22*	109965.29	2025108.00	5.43	167631.49	1466249.00	11.43	57666.20			
CAGR	16.85	17.21		13.99	15.87			10.82		

Sources: Directorate General of Commercial Intelligence & Statistics, Department of Commerce, Ministry of Commerce and Industry and CMIE.

Note: CAGR was calculated for the period 1990-91 to 2020-21. (*) April-September 2021.



India has thus showcased an impressive growth trajectory from a food-scarce country to a food sufficient and a food surplus one now. All revolutions in agricultural production, triggered by innovations, incentives and institutions, have successfully made India a net exporter of agricultural produce. As a result, agricultural exports, increased significantly from Rs.6012.76 crore in 1990-91 to Rs.305469.00 crore in 2020-21 (Table 5). However, after achieving peak level in 2013-14, exports declined slightly due to falling global agri-commodity prices. On the other hand, agricultural imports also increased sharply, from Rs.1205.86 crore in 1990-91 to Rs.164726.83 crore in 2016-17, and came down slightly thereafter. The share of agricultural exports to total exports which increased from 18.47 per cent in 1990-91 to 20.33 per cent in 1996-97, showed a decreasing trend since then till 2006-07 when it reached 10.10%. Later it displayed mixed trends before finally reaching 14.20 per cent in 2020-21. It may also be observed that although agri-exports grew (13.99%) less than agri-imports (16.85%) during 1990-91 to 2020-21, agri-trade grew more than the total merchandise trade in the country. Not only this, India's net agri-export surplus has also increased from Rs.4806.90 crore in 1990-91 to 147680.84 crore in 2020-21 (Table 5).

The share of agricultural exports to agricultural GVA increased from 3.88 per cent in 1990-91 to 13.64 per cent in 2013-14. Thereafter, it slipped from this peak and stood at 8.45 per cent in 2020-21. The agricultural imports as a percentage of India's agricultural GVA have also increased from 0.78 per cent in 1990-91 to 6.54 per cent in 2016-17, which declined thereafter to 4.36 per cent in 2020-21 indicating exportable surplus and decreased dependence on import of agricultural products/commodities in India. Further, it may be seen that while the share of agri-exports to India's exports was highest (20.33%) in 1996-97 and lowest (9.64%) in 2008-09, the share of agri-

imports to India's national imports was highest (8.17%) in 1998-99 and lowest (2.09%) in 2008-09 after implementation of the WTO Agreement (Table 5).

COVID-19 Pandemic and India's Agri-exports

India's agricultural exports have beaten the pandemic, registering a growth of 20.75 per cent to Rs.3.05 lakh crore in 2020-21 against the Rs.2.53 lakh crore in the previous year. India's agricultural and allied imports during 2019-20 were Rs.1.47 lakh crore, and the corresponding figures for 2020-21 were Rs.1.58 lakh crore. Despite the COVID-19 pandemic, the balance of trade in agriculture has improved by 39.94 per cent from Rs.1.06 lakh crore in 2019-20 to Rs.1.48 lakh crore in 2020-21.

The largest markets for India's agriculture products are the USA, China, Bangladesh, UAE, Vietnam, Saudi Arabia, Indonesia, Nepal, Iran and Malaysia. These top 10 countries accounted for 52.2 per cent of the total agricultural exports in 2020-21.

The main drivers of the increase in agri-exports in 2020-21 are wheat (809%), vegetable oil (268%), other cereals (252%), non-Basmati rice (146%) and molasses (143%). Marine products, Basmati rice, non-Basmati rice, spices and buffalo meat were among the top five commodities to be exported, in terms of value, in 2020-21. Together, these five products/commodities accounted for 53.20 per cent of agriculture exports in 2020-21. In rupee terms, Marine products are the most exported with over Rs.44176 crore worth exports in 2020-21. However, their exports have dropped by 7.28 per cent in 2020-21 as compared to Rs.47618 crore worth of marine exports in 2019-20. The exports of Basmati rice have also marginally dropped by 3.79 per cent in 2020-21. The exports of Basmati rice and non-Basmati rice grew at the CAGR of 9.48 per cent and 39.77 per cent, respectively during 2009-10 to 2020-21 and marine products also increased from Rs.9899.98 crore in 2009-10 to Rs.44176.03 crore in 2020-21, registering a growth of 15.67 per cent (Table 6).

Table 6: India's Exports of Principal Agricultural Commodities

(Rs. Crore)

Commodity	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	CAGR (%)
Tea	2943.53	3354.34	4078.53	4718.79	4873.34	4171.25	4719	4905.64	5396.65	5828.34	5851.11	5603.36	5.53
Coffee	2032.06	3009.91	4534.62	4711.07	4799.1	4973.25	5125.45	5646.43	6245.36	5721.98	5236.76	5339.62	6.93
Rice- Basmati	10889.6	11354.63	15449.6	19409.39	29291.82	27586.71	22718.6	21512.91	26870.67	32804.3	31026.33	29849.89	9.48
Rice (other than Basmati)	365.3	231.29	8659.13	14448.81	17795.21	20441.55	15483.39	16929.88	23437.23	21171.17	14400.32	35476.61	39.77
Wheat	0.05	0.7	1023.2	10529	9277.65	4991.81	1061.77	447.85	624.37	424.47	444.2	4037.60	69.81
Other cereals	2973.19	3648.49	5492.92	8180.61	7178.14	5262.16	1702.5	1425.77	1604.28	2426.07	1454.71	5119.37	-7.45
Pulses	408.32	870.04	1067.93	1284.99	1748.81	1218.31	1655.9	1277.7	1469.63	1801.51	1511.8	1978.36	9.53
Tobacco unmanufactured	3621.44	3151.58	2899.46	3815.76	4782.74	4162.71	4373.45	4249.85	3828.13	3984.53	3761.37	3840.06	1.47
Tobacco manufactured	722.96	833.61	1106.96	1214.47	1351.72	1705.88	2078.91	2174.12	2193.58	2874.07	2648.02	2656.03	13.40
Spices	5948.73	7886.51	13102.5	15176.75	15146.36	14847.74	16630.14	19111.25	20084.91	23217.77	25642.04	29535.64	12.80
Cashew	2801.58	2819.39	4390.16	4067.21	5095.49	5565.85	5027.99	5278.61	5945.28	4579.17	4018.35	3112.22	2.31
Cashew nut shell liquid	27.62	33.77	59.46	29.84	38.61	55.81	57.59	43.99	32.63	26.91	23.09	19.72	-4.04
Sesame seeds	1494.1	2307.52	2641.66	2880.85	3583.46	4717.77	3012.31	2695.84	2990.93	3761.62	3723.31	3159.22	4.98
Niger seeds	24.23	44.51	117.27	90.13	113.61	108.96	123.27	117.22	69.86	95.5	106.01	160.23	9.55
Groundnut	1425.93	2178.41	5246.45	4065.36	3187.66	4675.37	4075.63	5444.33	3386.3	3297.32	5096.39	5381.61	7.08
Other oil seeds	139.36	113.40	201.43	414.61	945.53	1135.36	964.47	846.58	1126.32	926.75	437.42	455.90	15.16
Vegetable oils	182.90	114.62	269.1	469.35	324.82	580.13	522.94	779.97	566.04	744.58	1208.65	4450.16	26.35
Oil meals	7831.79	11069.58	11796.46	16519.53	17070.13	8129.18	3599.56	5410.1	7043.15	10557.48	5861.35	11618.34	-3.67
Guargum meal	1133.31	2938.7	16523.87	21287	11735.39	9478.26	3233.87	3106.62	4169.56	4707.05	3261.6	1949.07	-5.14
Castor oil	2179.28	2982.92	4571.67	4309.82	4364.33	4710.42	4616.1	4521.51	6730	6170.12	6323.84	6801.99	8.64
Shellac	71.3	140.07	256.79	401.74	514.03	267.47	203.31	225.53	285.18	304.79	411.94	649.83	11.35
Sugar	110.21	5472.79	8766.78	8576.32	7178.5	5328.83	9824.52	8659.54	5225.6	9523.14	13981.56	20671.55	25.65
Molasses	19.77	214.09	204.33	223.03	147.29	193.01	656.84	314.94	97.45	586.8	517.51	1258.08	23.51
Fruits / vegetable seeds	145.08	184.92	287.76	347.72	416.58	427.04	529.19	522.75	670.91	866.31	771.66	929.49	17.12
Fresh fruits	1524.21	1355.19	1937.22	2686.57	3645.62	3160.08	4191.24	4974.21	4913.28	5538.15	5496.38	5650.78	14.45
Fresh vegetables	3014.32	2620.48	3023.31	3407.19	5384.47	4666.45	5237.1	5790.71	5297.72	5679.1	4617.34	5374.23	6.65
Processed vegetables	743.12	747.92	1043.72	1102.56	1288.86	1721.89	1697.22	1765.75	1823.36	2055.41	2212.03	3149.12	12.56
Processed fruits and juices	1904.18	1859.96	2277.04	2577.32	3332.05	3626.86	3767.08	3921.08	4169.13	4481.25	4590.96	5150.52	9.80

Cereal preparations	1030.09	1264.15	1888.62	2240.76	2856.26	3036.64	3358.12	3565.55	3561.69	3859.46	3885.3	4705.81	12.98
Cocoa products	96.99	126.97	175.98	293.92	573.22	848.66	1267.61	1086.77	1144.35	1350.86	1274.69	1108.38	28.15
Milled products	153.63	197.06	359.92	603.61	1008	1030.61	1102.73	813.54	876.62	1063.03	1074.62	1536.02	18.88
Misc processed items	838.19	1065.48	1434.17	1853.98	2531.48	2772.44	2907.85	3053.79	3548.95	4613.38	4586.8	6389.72	18.07
Animal casings	32.82	33.24	33.98	21.46	28.46	19.33	17.02	13.84	327.44	480.66	398.5	416.54	32.36
Buffalo meat	5481.43	8613.31	13741.11	17408.99	26457.82	29282.58	26684.22	26161.38	26035.19	25091.43	22661.12	23459.89	11.37
Sheep/goat meat	745.94	258.83	252.83	426.47	694.12	828.11	837.76	869.84	843.61	867.53	654.05	330.45	4.33
Other meat	10.75	9.51	3.67	2.33	3.4	2.67	0	0.21	7	13.73	16.57	18.07	0.00
Processed meat	8.79	13.96	9.5	9.37	7.68	14.2	6.16	4.58	9.89	13.92	15.25	12.65	1.89
Dairy products	796.99	1216.76	647.79	2324.68	4407.78	2169.03	1677.46	1701.18	1954.63	3375.73	1983.84	2388.21	8.77
Poultry products	372.53	314.33	458.05	494.93	566.8	651.19	769.14	530.44	552.09	687.22	574.65	435.53	3.74
Floriculture products	294.46	296.04	365.32	423.45	455.9	460.8	483.41	546.71	507.32	571.43	541.61	575.98	6.29
Alcoholic beverages	584.87	819.86	1469.07	1932.45	2429.67	2264.89	2030.92	2004.79	2105.78	2103.97	1649.31	2445.90	8.86
Marine products	9899.98	11917.11	16584.71	18841.2	30627.28	33688.38	31219.48	39593.78	47646.41	47664.94	47618.1	44176.03	15.67
Ayush and herbal products	1247.05	1346.99	1696.97	2120.36	2208.55	2169.49	2385.49	2693.57	2940.06	3127.26	3033.04	0	
Jute, raw	54.4	128.33	80.92	95.67	113.35	119.2	113.58	76.63	95.43	107.74	103.48	191	4.52
Jute hessian	307.63	722.87	945.83	876.68	859.59	770.08	824.89	927.32	909.94	795.77	729.54	804	3.53
Cotton raw incld. Waste	9537.08	13162.42	21624.24	20276.51	22337.84	11642.64	12821.13	10907.32	12200.05	14627.55	7539.53	13968.33	-2.81
Total Agricultural Exports	86171.1	113047	182801	227193	262779	239681	215396	226652	251564	274571	252976	3,05,469	8.74
Total National Exports	845534	1136964	1465959	1634318	1905011	1896348	1716384	1849434	1956515	2307726	2219854	2151770	7.31
% Share of Agricultural Exports in National Export	10.19	9.94	12.47	13.9	13.79	12.64	12.55	12.26	12.86	11.9	11.4	14.20	

Source: Directorate General of Commercial Intelligence & Statistics, Department of Commerce. Agricultural Statistics at a Glance, 2020.

Looking at agri-imports, about 52 per cent of agri-imports by India are of vegetable oils. India's vegetable oil imports in 2020-21 are worth Rs.82116 crore (Table 7). To reduce the dependency on imported edible oils, GoI has announced the National Mission on Edible Oils-Oil Palm with a financial outlay of Rs.11040 crore. Other major agri-imports are fresh fruits, pulses, spices, and cashew. Together, these five products accounted for 79.4 per cent of India's total agri-imports. In the case of other commodities, there is a growth in India's sugar imports in 2020-21 by 91 per cent. Import of niger seeds grew by 67 per cent, tea by 60 per cent, other oil seeds by 42 per cent, marine products by 27 per cent, castor oil by 26 per cent, pulses by 17 per cent, and cereal preparations by 20 per cent. However, this increase was neutralized by the significant drop in agri-imports of raw cotton and non-Basmati rice (69% each), other cereals (73%), fresh vegetables (62%), guar gum meal (57%), processed vegetables (36%) and wheat (100%).

Table 7: India's Imports of Principal Agricultural Commodities

(Rs. crore)

Commodity	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	CAGR (%)
Tea	276.52	202	218.91	274.52	291.68	388.66	377.47	338.35	356.99	417.96	411.06	658.87	8.07
Coffee	297.34	295	469.52	795.72	729.02	930.47	801.83	926.81	996.5	958.59	962.16	900.57	10.87
Rice- Basmati	0	0	2.47	0	0	0	0	0	0	0	0	0	
Rice (other than Basmati)	0.37	0.92	3	3.96	8.29	10.83	5.91	7.25	12.18	32.14	78.75	24.67	45.60
Wheat	231.9	255.84	0.08	6.03	26.92	61.34	872.59	8509.05	2357.84	5.44	4.63	0.01	-20.99
Other cereals	76.33	59.53	30.04	111.01	98.03	61.76	344.31	493.18	433.9	471.28	1221.12	331.1	30.43
Pulses	10629.16	7512.49	9448.35	13344.63	11036.75	17062.94	25619.06	28523.18	18748.57	8035.3	10221.45	11937.59	2.79
Tobacco unmanufactured	37.76	44.61	68.57	91.94	79.52	98.17	137.3	77.21	69.47	102.89	154.73	129.1	9.67
Tobacco manufactured	78.73	80.36	113.01	155.01	168.87	200.28	193.92	228.54	185.92	257.52	237.2	159.09	9.15
Spices	1476.04	1595.91	2284.85	2715.76	3451.69	4393.25	5399.95	5760.25	6385.26	7932.7	10186.93	8014.28	19.11
Cashew	3047.5	2649.07	5381.43	5433.91	4667.8	6599.74	8701.28	9027.09	9134.33	11162.32	9026.34	7491.21	11.40
Cashew nut shell liquid	0	0.07	0.32	0.33	2.08	10.03	5.6	3.67	5.66	21.05	22.94	7.17	
Sesame seeds	53.26	37.66	3.93	296.03	808.64	379.99	179.66	442.15	176.77	875.17	1450.19	910.76	40.27
Niger seeds	13.33	0.79	0.39	0	3.73	3.73	44.14	82.82	29	40.62	24.43	40.71	
Groundnut	1.7	0	0.47	0.29	0.36	0.49	0.31	1.39	13.04	8.14	11.47	7.95	
Other oil seeds	118.18	74.76	88.77	109.74	166.79	163.29	218.62	392.36	364.59	745.35	1527.78	2165.28	33.62
Vegetable oils	22316.68	25919.59	38909.02	53561.61	44038.04	64889.6	68676.62	73038.98	74995.91	69023.79	68558.16	82115.82	11.20
Oil meals	104.69	75.03	98.72	210.38	199.87	272.65	429.91	974.59	746.67	869.56	1519.48	1017.61	31.75
Guar Gum meal	2.41	2.66	9.9	33.61	21.85	5.72	13.93	2.41	3.3	5.9	25.9	11.02	5.85
Castor oil	0.44	0.91	1.29	2.23	2.04	1.81	1.1	1.5	2.54	5.32	8.03	10.13	24.75
Shellac	34.1	50.55	22.15	172.61	45.8	59.54	19.48	13.43	18.38	19.35	23.49	21.22	-9.66
Sugar	5965.8	2789.54	313.83	3094.38	2286.86	3668.21	4037.86	6868.61	6035.84	3175.39	2473.25	4720.01	6.97
Molasses	32.29	6.15	4.35	7.5	8.93	30.14	7.5	9.04	69.29	1.38	10.21	0.91	-10.89
Fruits / vegetable seeds	284.42	291.22	380.15	471.1	449.48	611.53	703.03	653.33	768.26	835.81	851.79	1060.24	12.37
Fresh fruits	2843.47	3586.51	4610.84	6180.47	7715.96	9566.81	11071.57	11290.62	12524.55	13931.65	14137.09	15764.86	16.53
Fresh vegetables	8.14	40.6	7.31	11.24	41.67	11.14	394.45	11.12	25.64	24.22	594.82	225.57	28.99
Processed vegetables	77.9	117.48	120.19	149.01	173.94	104.45	120.33	115.26	134.83	161.83	253.68	163.52	5.60
Processed fruits and juices	191.12	251.54	314.93	432.02	410.83	499.54	526.49	548.1	803.81	909.34	771.22	662.86	13.10

Cereal preparations	188.92	243.43	316.39	359.98	419.34	583.93	575.42	579.03	659.68	971.36	1007.66	1213.18	17.07
Cocoa products	376.08	584.21	934.32	1049.25	1071.55	1551.63	1398.91	1542.28	1473.1	1845.89	1833.97	2020.99	13.51
Milled products						17.72	21.4	16.22	13.02	15.6	16.11	10.17	
Misc processed items	552.34	664.01	915.19	1268.33	1474.47	1785.23	1811.12	2115.82	2249.73	2560.2	2635.85	2263.39	14.64
Animal casings	0	0	0	0	0	0	0	0	0	0	0	0.49	
Buffalo meat	0	0	0	0	0	0	0	0	0	0	0	0	
Sheep/goat meat	1.22	0.8	0.21	1.52	5.13	8.73	4.8	8.5	13.36	10.83	13.21	0.94	24.10
Other meat	6.67	7.01	12.48	15.71	15.8	19.5	17.18	19.03	27.8	30.65	32.82	17.5	12.65
Processed meat	9.79	7.56	9.74	9.02	7.64	5.17	2.75	4.47	3.22	4.14	4.52	5.12	-8.41
Dairy products	333.64	847.83	1219.41	184.25	232.68	375.01	371.58	254.84	312.59	254.12	371.68	364.51	-4.95
Poultry products	26.72	14.46	19.72	18.29	23.39	38.22	26.42	29.46	26.87	41.8	40.44	25.75	5.88
Floriculture products	45.88	45.48	68.64	85.67	112.19	113.37	114.4	133.81	136.46	174.09	229.64	160.38	14.10
Alcoholic beverages	1244.26	1029.13	1309.77	1416.77	2076.18	2508.66	2935.85	3590.33	3876.14	4678.72	4643.52	4036.6	15.92
Marine products	303.09	429.04	569.53	452.7	411.01	453.9	639.77	633.39	793.3	1088.13	1290.17	1636.36	13.98
Ayush and herbal products	136.36	155.12	184.75	243.75	318.5	352.58	354.35	358.87	392.72	510.23	598.49	0	
Jute, raw	149.49	302.49	449.17	370.79	146.25	139.58	363.44	704.13	289.02	235.86	350.39	179.00	1.13
Jute hessian	231.22	169.43	177.34	87.34	79.92	177.79	181.41	57.45	122.38	184.4	237.83	257.00	1.84
Cotton raw incld. Waste	1241.37	622.24	1059.19	2466.74	2375.78	3101.92	2566.21	6338.92	6306.77	4383.4	9371.21	2860.9	19.51
Total Agricultural Imports	53056.4	51074	70164.5	95718.9	85727.3	121319	140289	164727	152095	137019	147446	157788.2	11.31
Total National Imports	1363736	1683467	2345463	2669162	2715421	2736677	2490304	2577671	3001029	3594674	3360954	2909830	6.45
% Share of Agricultural Imports in National Imports	3.89	3.03	2.99	3.59	3.16	4.43	5.63	6.39	5.07	3.81	4.39	5.42	

Source: Directorate General of Commercial Intelligence & Statistics, Department of Commerce. Agricultural Statistics at a Glance, 2020.

Comparison of exports of agriculture and allied commodities by value during April-September of 2020-21 and 2021-22 shows that the exports during April to September of 2021-22 were Rs.167631.49 crore as compared to Rs.134471.13 crore during the same period in 2020-21, indicating an increase of 24.66 per cent (Table 8). Meanwhile, the agri-imports had also increased by 55.35 per cent, from Rs.70783.86 crore to Rs.109965.29 crore during the same period in 2020-21 and 2021-22, respectively (Table 9). During April-September 2021-22, increase was observed in exports of wheat (465%), cotton raw including waste (142%), other cereals (114%), molasses (111%), miscellaneous processed items (60%), dairy products (56%), guar gum meal (44%) marine products (40%) and castor oil (38%) in comparison to the same period during 2020-21 (Table 8). Similarly, agri-imports in April-September 2021-22 grew highest for cashew (497%), followed by oil meals (217%) floriculture products (123%), other meat (107%), poultry products (94%), fresh vegetables (85%), vegetable oil (82%), processed fruits and juices (77%), in comparison to the same period during 2020-21 (Table 9). It may be concluded that despite severe second COVID-19 wave, the exports in the agriculture sector had performed extremely well.

Table 8: Export of Agricultural Commodities

(Rs.Crore)

Commodities	April-September 2021-22	April-September 2020-21	% Change
Alcoholic Beverages	1080.04	1241.92	-13.03
Animal Casings	217.17	202.68	7.15
Buffalo Meat	11774.93	10208.81	15.34
Cashew	1642.30	1266.57	29.67
Cashew Nut Shell Liquid	13.98	7.74	80.70
Castor Oil	4550.27	3289.71	38.32
Cereal Preparations	2327.23	2098.86	10.88
Cocoa Products	553.36	481.19	15.00
Dairy Products	1599.96	1025.63	56.00
Floriculture Products	367.68	255.41	43.96
Fresh Fruits	2223.99	1739.05	27.89
Fresh Vegetables	3178.45	3313.16	-4.07
Fruits/Vegetable Seeds	485.28	540.62	-10.24
Groundnut	1823.31	1775.96	2.67
Guergam Meal	1316.06	916.06	43.66
Milled Products	858.90	766.73	12.02
Misc Processed Items	4186.49	2620.63	59.75
Molasses	703.69	333.79	110.82
Niger Seeds	35.16	90.14	-61.00
Oil Meals	3471.39	3458.87	0.36
Other Cereals	3399.29	1590.68	113.70
Other Meat	16.80	0.04	38081.36
Other Oil Seeds	103.82	265.63	-60.92
Poultry Products	228.32	206.19	10.74
Processed Fruits and Juices	2733.07	2412.13	13.31

Processed Meat	5.72	3.23	77.46
Processed Vegetables	1625.48	1604.84	1.29
Pulses	1005.33	1165.80	-13.76
Rice - Basmati	12294.17	15968.74	-23.01
Rice(other than Basmati)	21852.80	14724.67	48.41
Sesame Seeds	1391.05	1683.18	-17.36
Sheep/Goat Meat	216.70	147.83	46.59
Shellac	332.34	276.59	20.15
Spices	14828.85	14330.25	3.48
Sugar	13457.84	10250.90	31.28
Tobacco Manufactured	1292.55	1179.15	9.62
Tobacco Unmanufactured	2131.39	1982.60	7.50
Vegetable Oils	734.50	984.02	-25.36
Wheat	4590.33	812.03	465.29
Marine Products	28367.38	20315.12	39.64
Coffee	3402.76	2762.05	23.20
Natural Rubber	37.02	23.70	56.19
Tea	2763.30	2671.95	3.42
Cotton Raw Incl. Waste	8411.02	3476.28	141.95
Total	167631.49	134471.13	24.66

Source: <https://dashboard.commerce.gov.in/commercedashboard.aspx>, accessed on 8 Nov.2021.

Table 9: Import of Agricultural Commodities

(Rs. Crore)

Commodities	April-September 2021-22	April-September 2020-21	% Change
Wheat	0.17	0.00	86750.00
Mollases	0.43	0.91	-52.38
Sheep/goat Meat	1.53	0.77	98.65
Processed Meat	2.40	3.73	-35.59
Guergam Meal	2.68	3.92	-31.58
Castor Oil	3.21	5.64	-43.06
Milled Products	5.44	3.53	54.22
Groundnut	7.80	7.69	1.48
Rice(other than Basmati)	9.65	11.59	-16.70
Fresh Vegetables	11.97	6.48	84.76
Other Meat	12.15	5.88	106.51
Shellac	18.13	9.21	97.00
Cashew Nut Shell Liquid	18.29	3.06	497.25
Poultry Products	19.36	9.96	94.32
Niger Seeds	24.97	31.06	-19.60
Tobacco Unmanufactured	53.29	60.13	-11.37
Sesame Seeds	66.40	613.17	-89.17
Tobacco Manufactured	76.99	87.37	-11.87
Processed Vegetables	100.21	71.11	40.93
Floriculture Products	127.09	57.07	122.69
Other Cereals	157.31	222.20	-29.21
Dairy Products	205.59	228.64	-10.08

Tea	276.76	348.52	-20.59
Coffee	425.57	446.61	-4.71
Processed Fruits And Juices	436.66	246.92	76.85
Fruits/Vegetable Seeds	564.10	545.45	3.42
Cereal Preparations	640.90	531.18	20.66
Marine Products	755.78	740.10	2.12
Sugar	918.42	2257.99	-59.33
Cocoa Products	1082.72	816.05	32.68
Misc Processed Items	1512.32	970.36	55.85
Oil Meals	1775.52	560.12	216.99
Cotton Raw Includ. Waste	2194.51	1376.48	59.43
Alcoholic Beverages	2364.74	2048.08	15.46
Other Oil Seeds	2644.62	1500.77	76.22
Natural Rubber	3276.55	1974.05	65.98
Spices	4867.89	3683.69	32.15
Cashew	5581.70	4798.75	16.32
Pulses	6180.12	4933.33	25.27
Fresh Fruits	8138.48	5692.85	42.96
Vegetable Oils	65402.83	35869.41	82.34
Total	109965.29	70783.86	55.35

Source: <https://dashboard.commerce.gov.in/commercedashboard.aspx>, accessed on 8 Nov.2021.

The sub-category wise share of exports of agriculture products was highest for agriculture and allied products (77.35%), followed by marine products (14.46%), textile and allied products (4.57%) and plantation (3.62%) in 2020-21. The sub-category wise share of imports of agriculture products was highest for agriculture and allied products (93.23%), followed by plantation (3.92%), textile and allied products (1.81%) and marine products (1.04%) in 2020-21 (Table 10).

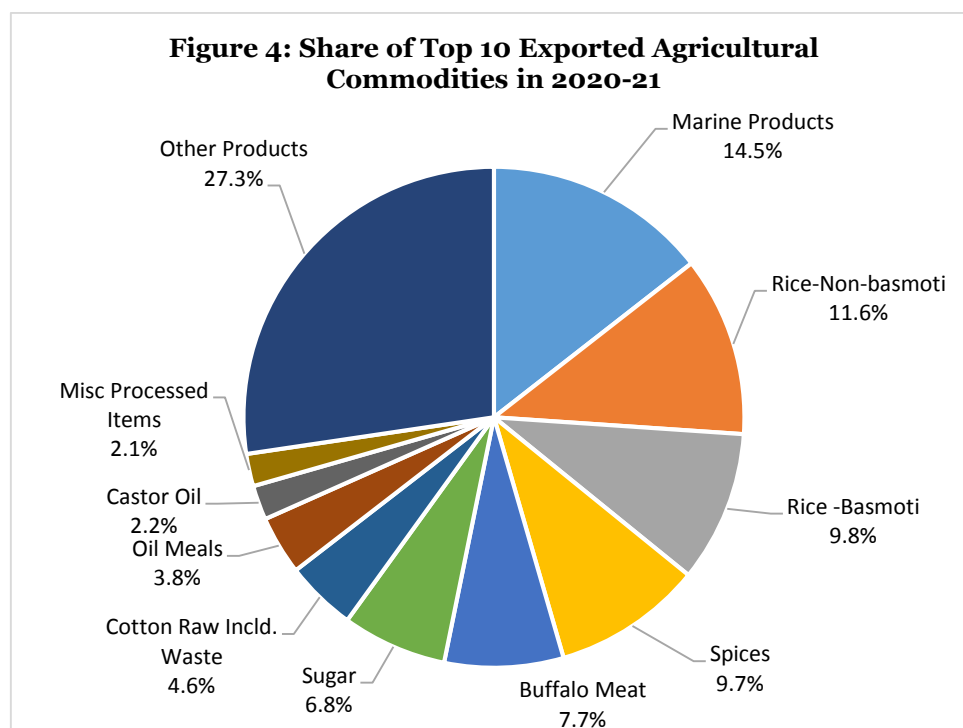
Table 10: Composition of Exports and Imports of Agricultural Products during 2020-21

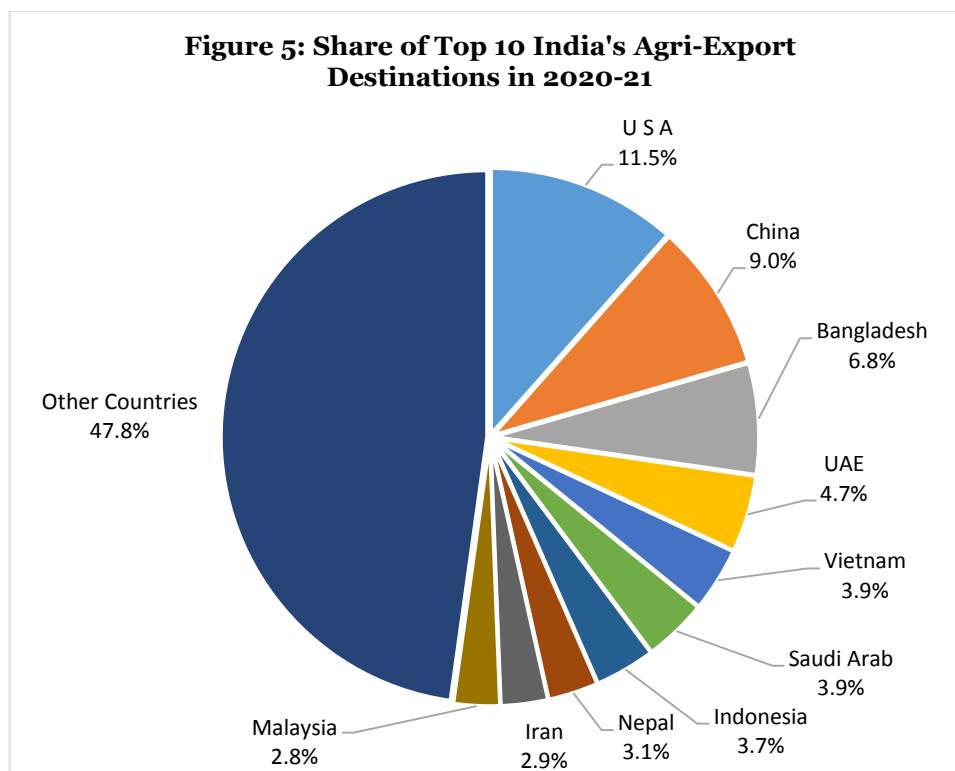
(Rs. Crore)

Sub-category	Exports	Imports
Agriculture & Allied Products	236258.80 (77.35)	147111.70 (93.23)
Marine Products	44176.03 (14.46)	1636.36 (1.04)
Plantation	11066.25 (3.62)	6179.19 (3.92)
Textile & Allied Products	13968.33 (4.57)	2860.90 (1.81)
Total	305469.41 (100)	157788.16 (100)

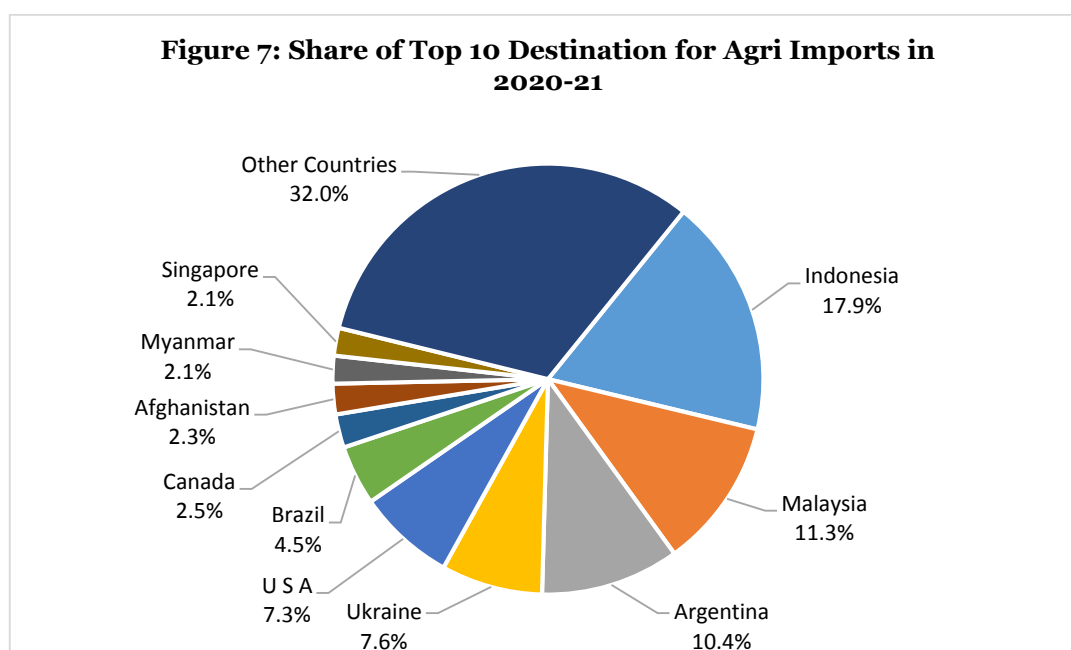
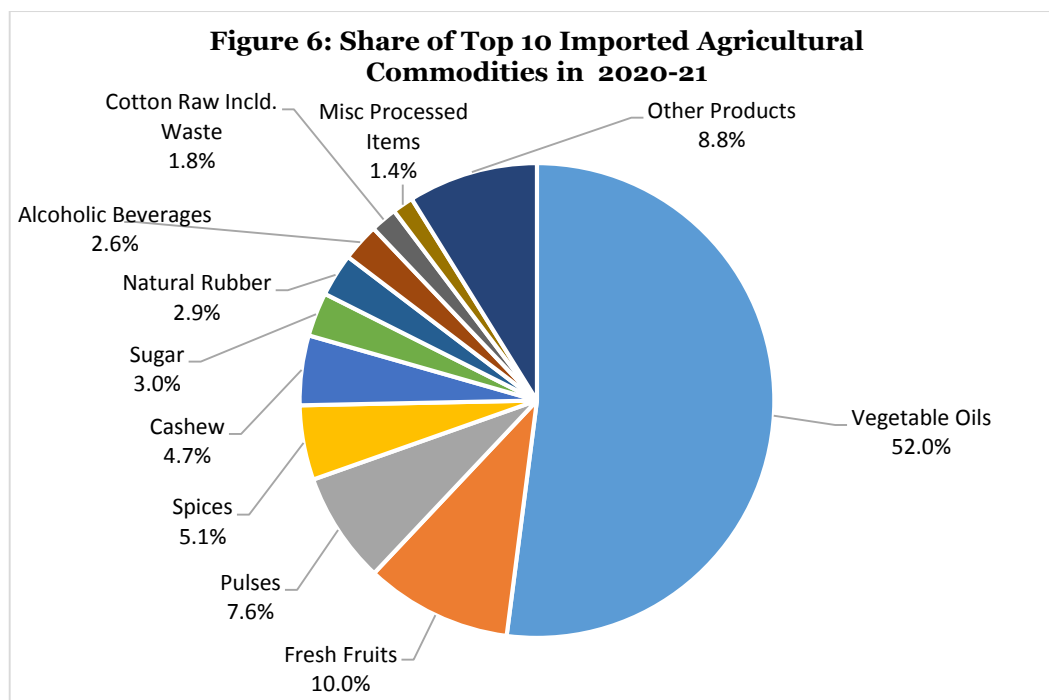
Source: Directorate General of Commercial Intelligence & Statistics, Department of Commerce.
Figures in the parentheses indicate percentage to total.

India has success with exporting a set of value chains in recent times, including rice and marine products, which constitute a third of India's total agri-exports. India has a comparative advantage in these products and they are specified as value chains of opportunities by APEDA and the 2018 Agriculture Export Policy. India exports about 70 per cent of its commodities and agricultural products to nearby geographies including the Middle East, Africa and the Asia Pacific, with only 30 per cent being exported to Europe and America. It may be observed from the Figure 4 that rice (both Basmati and non-Basmati) emerged as the single largest commodity group of agricultural exports from India in 2020-21 with a share of 21.4 per cent, followed by marine products (14.5%), spices (9.7%), buffalo meat (7.7%) and sugar (6.8%). These top five products/commodities together accounted for 60.10 per cent of the total agricultural exports. Hence, there is a need to diversify our exports for more products and more destinations. Further, all export restrictions on organic and processed food should be removed and trade restrictions on tomato, onion and potato (TOP) crops should be reviewed keeping in view the price and production in the domestic markets. It may be revealed that agricultural products were exported to USA, China, Bangladesh, UAE and Vietnam. These five countries together accounted for 35.9 per cent of the total agri-exports (Figure 5).





As regards the import of agricultural products/commodities, vegetable oils have been the single largest product, with a share of 52 per cent in total agri-imports in 2020-21 (Figure 6). Fresh fruits constitute the second largest import item in agricultural products with a share of 10 per cent, followed by pulses (7.6%), spices (5.1%) and cashew (4.7%). Among the major commodities imported by India, it is notable that as compared to the previous year, India imported 90.8 per cent more of sugar in 2020-21 while the imports of vegetable oils increased by 19.8 per cent, pulses imports grew by 16.8 per cent and cotton imports decreased by 69.5 per cent during the same period (Table 7). India should spell out the strategies to increase the domestic production of heavily imported agricultural products (vegetable oils, oil seeds, pulses, etc). Indonesia emerged as the largest agri-exporter to India with 17.9 per cent share followed by Malaysia (11.3%), Argentina (10.4%), Ukraine (7.6%) and USA (7.3%). These top five countries together accounted for 54.5 per cent of India's total agri-imports during 2020-21 (Figure 7).



Relationship between Agri-trade of India and the World

Though India's agri-trade intensity ratio has been rising over the period, now the question that arises is how India can play a major role in changing world ecosystem in general and COVID-19 pandemic in particular in the world? India's total exports share in the total world trade increased from 0.52 per cent in 1990 to 1.71 per cent in 2019, growing at the CAGR of 12.39 per cent as compared to 7.03 per cent of the world total exports (Table 11). Similarly, agri-exports in dollar terms went on rising continuously from 0.94 per cent in 1990 to 3.04 per cent in 2013. It is interesting to note that from 2013 to 2016, agri-exports declined both in absolute and relative terms

and did not reach the 2013 level till date. When India's agri-exports were declining in absolute terms, the world agri-exports were also declining. They came to the later levels one year after India, i.e., in 2014. The decline in the agri-exports earnings starting from 1997 has been attributed to the south-east Asian crisis, slowdown in the world economy and decrease in the agricultural prices. The share of India's agri-exports in world agri-exports has increased from 0.94 per cent in 1990 to 3.04 per cent in 2013. Thereafter this share has shown declining trends, reaching 2.03 per cent in 2019. India's agri-exports and agri-imports grew at a much higher CAGR of 10.41 per cent and 12.74 per cent, respectively as compared to 6.28 per cent and 6.14 per cent of the world agri-exports and agri-imports. The study further revealed that India's total imports have grown at a higher rate than that for the agri-imports (13.82% and 12.74%, respectively). Estimates indicate that Coefficient of Variation (CV) of world agri-exports and agri-imports was 53.76 per cent and 52.72 per cent, respectively. In the case of India's agri-exports and agri-imports it was 83.74 per cent and 88.75 per cent, respectively. Its variability is about 30 percentage points higher than that for the world agri-trade. It may be concluded that India's trade in agriculture is highly volatile (Table 12).

Table 11: India's Share of Import and Export in World Trade

(Value in US \$ billion)

Year	Import			Export		
	India	World	Share (%)	India	World	Share (%)
1990	24.19	3597.78	0.67	18.22	3492.12	0.52
1991	19.62	3615.84	0.54	18.06	3497.26	0.52
1992	24.08	3874.33	0.62	20.40	3750.49	0.54
1993	23.39	3785.51	0.62	22.32	3747.12	0.60
1994	27.89	4313.70	0.65	26.46	4275.27	0.62
1995	38.03	5144.46	0.74	32.97	5112.82	0.64
1996	39.21	5389.30	0.73	33.54	5340.74	0.63
1997	42.46	5573.36	0.76	35.83	5538.24	0.65
1998	43.22	5523.53	0.78	33.87	5465.73	0.62
1999	49.99	5754.22	0.87	37.06	5665.65	0.65
2000	51.37	6536.89	0.79	45.30	6402.41	0.71
2001	51.96	6279.13	0.83	44.29	6121.73	0.72
2002	62.41	6555.49	0.95	53.58	6439.84	0.83
2003	77.14	7631.41	1.01	63.02	7516.16	0.84
2004	105.56	9367.16	1.13	79.87	9103.54	0.88
2005	149.78	10595.61	1.41	103.52	10368.67	1.00
2006	181.18	12305.42	1.47	124.49	11932.61	1.04
2007	216.76	14168.64	1.53	147.03	13980.25	1.05
2008	321.03	16421.57	1.95	194.83	16143.19	1.21
2009	257.20	12675.85	2.03	164.91	12532.23	1.32
2010	350.23	15396.14	2.27	226.35	15267.82	1.48
2011	464.46	18390.54	2.53	302.91	18297.52	1.66

2012	488.59	18506.02	2.64	296.81	18404.63	1.61
2013	466.04	18781.56	2.48	313.24	18818.41	1.66
2014	462.91	19046.72	2.43	322.69	18988.44	1.70
2015	392.87	16722.90	2.35	267.44	16536.89	1.62
2016	361.21	16227.04	2.23	264.14	16036.34	1.65
2017	448.42	17987.33	2.49	299.28	17736.58	1.69
2018	514.46	19807.69	2.60	324.78	19451.55	1.67
2019	486.06	19272.55	2.52	324.25	18928.92	1.71
CAGR (%)	13.82	6.99	--	12.39	7.03	--
CV	89.55	54.57	--	84.48	54.90	--

Source: Computations based on data from www.fao.org.

Table 12: India's Share of Agri-Trade in World Agri-Trade

(Value in US \$ billion)

Year	Import			Export		
	India	World	Share (%)	India	World	Share (%)
1990	1.08	351.33	0.31	3.07	325.62	0.94
1991	0.74	352.95	0.21	2.80	328.71	0.85
1992	1.35	386.07	0.35	2.95	357.37	0.82
1993	1.04	355.07	0.29	3.36	338.70	0.99
1994	2.20	402.42	0.55	3.24	388.44	0.83
1995	2.22	460.98	0.48	5.49	442.96	1.24
1996	2.21	480.16	0.46	5.85	465.63	1.26
1997	2.58	468.42	0.55	5.66	457.67	1.24
1998	3.83	457.07	0.84	5.23	437.78	1.19
1999	3.97	443.46	0.90	4.64	417.23	1.11
2000	2.88	433.11	0.66	4.95	411.16	1.20
2001	3.92	441.83	0.89	5.23	414.53	1.26
2002	4.03	465.34	0.87	5.52	442.86	1.25
2003	4.91	551.81	0.89	6.50	525.54	1.24
2004	5.12	638.54	0.80	7.06	607.64	1.16
2005	5.36	679.98	0.79	9.02	653.81	1.38
2006	7.07	754.18	0.94	11.26	721.85	1.56
2007	8.09	913.51	0.89	16.71	873.72	1.91
2008	9.14	1118.87	0.82	17.31	1068.03	1.62
2009	12.82	988.34	1.30	15.66	951.56	1.65
2010	10.66	1107.93	0.96	19.97	1085.63	1.84
2011	17.26	1358.25	1.27	30.29	1321.45	2.29
2012	20.19	1371.19	1.47	38.17	1338.96	2.85
2013	19.22	1430.67	1.34	42.49	1397.95	3.04
2014	21.30	1451.10	1.47	36.18	1421.84	2.54
2015	22.40	1317.42	1.70	28.66	1275.06	2.25
2016	24.08	1315.20	1.83	26.49	1287.32	2.06
2017	27.39	1441.46	1.90	30.42	1411.29	2.16
2018	21.68	1500.34	1.45	30.74	1454.10	2.11
2019	21.69	1486.99	1.46	29.30	1444.67	2.03
CAGR (%)	12.74	6.14	--	10.41	6.28	--
CV	88.75	52.72	--	83.74	53.76	--

Source: Computations based on data from www.fao.org

State-wise Potential for Export Credit

Table 13 present the state-wise potential for export credit during 2021-22. It may be seen from the table that maximum potential was estimated for Maharashtra and followed by Punjab, Tamil Nadu and Uttar Pradesh.

Table 13: State-wise Estimated Potential for Export Credit Potential
(Rs. Crore)

State	Potential for Export Credit
A&N Islands	63.75
Andhra Pradesh	2880.50
Arunachal Pradesh	0.00
Assam	34.79
Bihar	324.80
Chhattisgarh	394.62
Goa	130.00
Gujarat	2705.32
Haryana	2929.80
Himachal Pradesh	83.85
Jammu and Kashmir	167.97
Jharkhand	111.74
Karnataka	4502.90
Kerala	1395.60
Madhya Pradesh	1384.28
Maharashtra	35185.00
Manipur	23.10
Meghalaya	22.05
Mizoram	3.08
Nagaland	0.76
Odisha	4557.46
Punjab	15482.60
Rajasthan	2295.19
Sikkim	3.41
Tamil Nadu	10854.27
Telangana	0.00
Tripura	10.05
Uttar Pradesh	5067.73
Uttarakhand	50.41
West Bengal	1834.56
Total	92499.58

Source: State Focus Paper 2021-22 of all the States, NABARD.

Challenges to Indian Agriculture Exports

Giant strides have been made in agri-exports since independence. In 1950-51, India's agri-export was only about Rs.149 crore which has risen to the level of Rs.305469 crore in 2020-21. There has been substantial increase in the export of almost all the agricultural items in the last 12 years (Table 6), but despite being one of the top producers of agricultural products, India does not figure among the top exporters of agricultural produce. There are **five critical** challenges that contribute to India's relatively low rank among global agriculture exporters: low productivity and high logistics costs; limited value addition; export promotion and branding challenges; non-tariff barriers and quality issues.

Low Productivity and High Logistics Costs: India lags other large producers in yield/hectare for many crops, including spices, shrimp, mango and buffalo, to name a few. One reason is that Indian farms are smaller (1-2 hectares on average), making it harder to achieve economies of scale. In addition, mechanisation is relatively low and Indian farmers do not utilise many high-yield input varieties used in other agri-producing countries. India's cost of logistics is currently around 14% of GDP – higher than developed country exporters like the US (9.5%). India's tremendous push to reduce logistics costs to below 10% will have a significant impact on its competitiveness in agricultural exports.

Limited Value Addition: India is a more prolific exporter of commodities than of value-added agriculture products -the country ranks 10th globally in processed meat, 18th in the export of processed fruits and vegetables, 35th in dairy and 61st in poultry and egg. Processed foods only constitute 16 per cent of India's agriculture exports; in comparison, 25 per cent of US exports and 49 per cent of Chinese exports are value-added. Reasons for low value addition include relative lack of private sector investment and adequate incentives. For example, the *fragmented nature of exporters for some commodities*, such as shrimp, make it easier to export a mass product to many markets as opposed to creating a processed product customised for the tastes of a few markets.

- Improved infrastructure can also in some instances help with value addition. For example, limited packhouses and grading and sorting infrastructure for mangoes make it hard to discriminate between the high-quality mangoes required for fresh fruit vs. the mangoes best suited for processed goods (e.g., juices). This causes processors to overpay for mangoes and farmers to under-earn for mangoes sold as fresh fruits.
- Although India lags other large exporters in terms of processed goods, it has recently been able to significantly enhance its exports. To further drive exports, India could benefit from innovating in productivity, mechanisation, fertilisation and other inputs, processing and value addition technology and infrastructure. Agriculture systems revolving around value addition have helped even countries without significant production to greatly raise exports.

In India, value addition could be even more transformative considering India has large natural agriculture endowments.

Export Promotion and Branding Challenges: While India has invested heavily in a broad range of export promotion schemes, India's export incentives have declined over time. As the country moves to respond to WTO compliance in export promotion, there is an opportunity to ramp up export incentives and to create a sharper, more coordinated investment strategy specifically for promotion of agricultural exports, with a focus on value addition.

Non-tariff Barriers: Indian agriculture exports also face non-tariff barriers in attractive markets such as Europe (e.g., more stringent shrimp inspections than for other top exporting countries and barriers related to foot and mouth disease for buffalo, which is actually rare in India). Non-tariff barriers and lack of strong trade agreement with target markets are key inhibitors to dramatically increasing Indian agriculture exports.

Quality Issues: Indian agriculture commodities meet the sanitary and phytosanitary (SPS) standards of the domestic market but encounter issues in US and EU. SPS issues lead to at-port rejections, especially for shrimps and spices and limit India's ability to significantly penetrate the European market. For instance, India has the highest number of US notifications and refusals between 2014 and 2018, underscoring the quality challenges India will need to grapple with to grow exports.

Measures taken to enhance the Agriculture Exports

The Government of India and other institutions have taken a slew of measures to increase the agriculture exports even during the COVID-19 pandemic and are given as under:

- Trade Infrastructure for Export Scheme (TIES), Market Access Initiatives (MAI) Scheme, Merchandise Exports from India Scheme (MEIS) and Transport and Marketing Assistance to promote trade infrastructure and marketing of agriculture products to boost agri-exports from India.
- The institutions such as Agriculture and Processed Food Products Export Development Authority (APEDA), The Marine Products Export Development Authority (MPEDA), various Commodity Boards such as Coffee Board, Tea Board, Rubber Board, Spices Board, etc., are authorized to promote the export of various agriculture related commodities. APEDA, MPEDA and the commodity boards also provided blanket extension of validity of various recognitions/accreditations, viz., pack house recognition, peanut units registration, registration-cum-membership certificates, integrated meat plant recognition, registration of plants for the export of rice to China and USA, certifications and accreditations under the National Programme for Organic Production to ensure uninterrupted exports.

- Arrangements were also made for the online issuance of various certificates required for exports.
- A 24*7 emergency response cell was created in APEDA/ Commodity Boards to help exporters in addressing their issues related to the movement of consignments/trucks/labour, issuance of certificates, lab testing reports, sample collection, etc.
- Virtual inspections were introduced for new pack house applicants. The validity of existing pack houses was extended, without inspections, based on the past performance. Around 216 pack houses have continued to function uninterrupted, without the process of physical inspections and compliances. During the second COVID-19 wave also, an automatic extension of recognition to the pack houses has been allowed. Around 100 pack houses, whose period of recognition was expiring, have benefited, providing relief to exporters of horticulture products.
- The Export Inspection Council and Export Inspection Agencies have ensured that the services offered to the exporters' fraternity, such as issuance of certificates for export, health certificates and certificate of origin, are delivered in a timely and smooth manner.
- To promote ease of doing business, the process of minimizing regulatory compliance and decriminalization of various offenses has been initiated.
- APEDA has developed, in-house, a platform for organising virtual trade fairs (VTF) to establish contact between Indian exporters and importers. Two VTFs namely 'India Rice and Agro Commodity Show' and India Fruits, Vegetables & Floriculture Show have been organised recently. APEDA has also planned to organise VTFs, Indian Processed Food Show; Indian Meat and Poultry Show; Indian Organic Products Show during 2021-22.
- APEDA opened Regional/Extension/Project offices during 2020-21 to facilitate exporters in various regions of the country.
- Operation Greens Scheme has been extended from 3 TOP crops (tomato, onion and potato) to 22 horticultural and perishable crops. This will lead to better price realisation to farmers, reduced wastages and affordability of products for consumers.
- KrishiUdan and Krishi Rail schemes were launched to ease out pressure of high freight rates resulting in smooth movement of perishables to the important Middle East, European Union and Southeast Asian markets. The Krishi Rail project has decisively helped exporters of fresh fruits and spices from the North Eastern States.
- During the COVID-19 pandemic, all the accredited Certification Bodies under the National Programme for Organic Production are operational through electronic mode to enable them to access and operate the online traceability system and issue certificates.
- The Agri-Exports Policy (2018) identifies the first two steps, i.e., identify commodities where India has a global comparative advantage and develop clusters in states to create global value chains for those. A Study conducted by

ICRIER revealed that 11 commodities, namely marine products, rice, meat, spices, cotton, fresh fruits and vegetables, sugar, coffee, groundnut, oil meals and cashew constituted more than 80 per cent of agri-exports basket in 2016-17. A study of 10 years data of 70 per cent of Indian agricultural output (20 commodities), shows that most Indian crops were globally price-competitive in most years. However, since 2013-14, many of these commodities suffered competitiveness loss due to falling global prices (Gulati, 2018).

- One District One Focus Product (ODOFP) programme under the Pradhan Mantri Formalisation of Micro Food Processing Enterprises Scheme cover products of agriculture and allied sectors for 728 districts of the country to reap the benefits of scale in terms of procurement of inputs, availing common services and marketing of products. The identified products have the potential for both export and fulfilling domestic demand. It envisages strengthening backward and forward linkages, provision of common facilities, incubation centres, training, research and development, marketing and branding. The enhanced capacity of processing and value addition in agriculture and allied sector products is for better price realization by the farmers. Besides the improvement and integration of agri value chains, the scheme is expected to reap many positive externalities like improved health and safety standards, integration with retail markets, improved incomes of farmers and also help in reaching untapped export markets.
- The comprehensive action plan for the promotion of agri-trade for product specific Export Promotion Forums (EPFs) has been created to lead agri exports to new heights.
- EPFs for eight agricultural and allied products-grape, mango, banana, onion, rice, nutri-cereals, pomegranate and floriculture have been constituted under the APEDA.
- Cluster activation for promotion of agri-exports through APEDA for linking Farmers producer Organisations and exporters.
- Emphasis is being given on strengthening the existing 'agri-clusters' and creating 46 product-specific/district clusters to fulfil the gap of bulk quantity and quality of supplies and export promotion.
- Agri Infrastructure Fund with an amount of Rs.1,00,000 crore has been initiated to provide funding for agriculture infrastructure projects at farm-gate & aggregation points (Primary Agricultural Cooperative Societies, Farmers Producer Organisations, Agriculture entrepreneurs, Start-ups, etc.). This will provide the necessary impetus for the development of farm-gate & aggregation points, affordable and financially viable post-harvest management infrastructure.
- To address the critical gaps in the fisheries value chain, GoI has launched the Pradhan Mantri Matsya Sampada Yojana (PMMSY) for integrated, sustainable, inclusive development of marine and inland fisheries with a layout of Rs.11,050 crore for activities in Marine, Inland fisheries and Aquaculture and Rs.9000 crore for Infrastructure such as fishing harbours, cold chain, markets, etc. The

PMMSY is expected to enhance fish production by an additional 70 lakh tonne and increase fisheries export earnings to Rs. one lakh crore by 2024-25, double the incomes of fishers and fish farmers, reduce post-harvest losses from 20-25 per cent to about 10 per cent and generate an additional 55 lakh direct and indirect gainful employment opportunities in the fisheries sector and allied activities.

- Animal Husbandry Infrastructure Development Fund (AHIDF) with a corpus of Rs.15,000 crore was set up to support private investment in dairy processing, value addition and cattle feed infrastructure. The scheme aims to provide incentives for establishing plants for the export of niche products. It is expected to leverage seven times the private investment and also motivate farmers to invest more in inputs thereby driving higher productivity leading to an increase in farmers' incomes.

Conclusion

The government of India has been providing several export incentives to promote the exports of agricultural commodities, despite the restrictions imposed by the WTO regime and other regional trade agreements. Growth trend analysis of agri-imports and agri-exports suggest that almost all the commodities/products showed a positive trend during 2009-10 to 2020-21. The study also revealed that despite the COVID-19 pandemic, agri-exports registered an impressive growth of 20.75 per cent in 2020-21 and 24.66 per cent in the first six months (April-September) of 2021-22 as compared to the same period in the previous year. The share of India's agri-exports in world agri-exports has increased from 0.94 per cent in 1990 to 2.03 per cent in 2019. India's agri-exports and agri-imports have grown at a much higher CAGR of 10.41 per cent and 12.74 per cent, respectively as compared to 6.28 per cent and 6.14 per cent of world agri-exports and agri-imports. The study further revealed that India's total imports have grown at a higher rate than that of the agri-imports (13.82% and 12.74%, respectively). Estimates indicate that Coefficient of Variation (CV) for world agri-exports and agri-imports was 53.76 per cent and 52.72 per cent, respectively. In the case of India's agri-exports and agri-imports it was 83.74 per cent and 88.75 per cent, respectively. Thus, variability in India's agri-trade is about 30 percentage points higher than that for the world agri-trade. Therefore, it may be concluded that India's trade in agriculture is highly volatile.

Suggestions for Enhancing the Export of Agricultural Commodities/Products

- a. There is a need to develop efficient global value-chains and encourage contract farming on a medium to long-term basis (Gulati, 2018). Exporters and processors must be encouraged to buy directly from farmer producer organisations (FPOs).

- b. Creating an export basket of low value and high value of agricultural commodities should be the goal, going forward. Attention should be given towards diversification of agricultural exports to more products and more destinations with improved infrastructure, trained human resources and support facilities to move up the value chain and meet international standards like sanitary and phytosanitary measures, etc. The efficiency at production level needs to be raised to make the product price competitive in the international market. The producers and exporters need to be educated and trained to maintain the quality of the products as per global standards
- c. Besides, India needs to focus upon exports of value added products with increased shelf life and improved packaging to compete in international markets. Concerted efforts to market especially in building international brands and establishing global marketing channels are also called for.
- d. As physical infrastructure and logistics remain a main impediment for exports of agricultural products from India, a holistic approach for overall enhancement of export logistics in terms of creating cold chain facilities for transportation and storage to reduce the logistic costs from the present 13 per cent of 8 per cent of GDP by 2025.
- e. India should have an effective and efficient market intelligence system to monitor developments in the world markets (price, subsidy levels, demand and supply) and link import tariffs to world prices.
- f. There is a need for an integration of various export promotion organisations such as Agricultural and Processed Food Products Export Development Authority, Ministry of Food Processing Industries, Concerned Industrial Associations, National Dairy Development Board, the Marine Products Export Development Authority, Federation of Indian Export Organisations, Export Promotion Councils, Food Safety and Standard Authority of India and Export Inspection Council so that collaborative efforts can be synergised with the objective of augmenting exports.
- g. Non-tariff barriers restrict agri-exports from India largely because of lack of harmonization of standards for products, stringent quarantine procedures, mandatory labelling and packaging, different minimum residual limits by countries for pesticides, drugs and other contaminants, including dispute with regard to definitions. To reduce compliance costs and minimize disputes, an institution like APEDA can play a crucial role in advocating a globally uniform set of accepted rules and regulations for various products at international forums.

- h. Under 'One District One Product' scheme, districts should be promoted as agri-export hubs to ensure that local goes global.

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