

India's Foreign Trade of Agricultural Products: A Study of Composition and Direction of Trade

Afsha Afreen

Abstract

Indian economy is an agrarian economy. Agriculture contributes 16% towards the GDP of the country and provides employment to 49% population of country. India's trade with foreign countries is not of recent origin. This practice was followed even before the colonial rule. During the pre-colonial and the colonial period, India was a prominent exporter of agriculture products like spices, raw cotton, jute, food grain, tea etc. However due to change in the agricultural policies during the colonial rule, there was stagnation in the agricultural export. There has been a considerable change in the present scenario of agricultural trade of India. Present study aims at analyzing the composition of foreign trade of top 10 agricultural commodities and direction of agricultural trade with top 10 countries. The study finds that there has been a shift in the composition and direction of trade in past five years. The CAGR of commodities like Basmati rice, Cotton, and Buffalo meat has shown negative results and there is a need to take actions in this regard.

Keywords: Agricultural products, Foreign trade, Composition, direction

Introduction

Foreign trade has played a significant role in economic development of our country. It not only helps us in earning foreign exchange but also provides us with an opportunity of using diversified products produced in every corner of the world. The practice of conducting trade with foreign countries has been followed since ancient times. The history of India traces trade with countries like Greece, Germany, China, Japan, Java and Arabian countries since 1100 B.C. India's rich resources and comparative advantage in various products have attracted a lot of traders across the border.

India is popularly known for its diversity in crop cultivation, climate and plantation condition since ancient times. Agriculture commodities like raw cotton, spices, medicinal plants, black pepper, animals etc. were exported to foreign countries. Today, India plays a prominent role in world agricultural trade. The objective of the Indian Government is to occupy top 10 position in agricultural export.

The share of agriculture in total export of India is considerably low. During the post independence period, the share of primary sector was maximum in India's total trade. The advancement in the manufacturing and service sector has led to

a decline in the share of agricultural sector towards total trade. India's agricultural sector has huge potential for earning favorable foreign exchange and improving the current scenario of our economy. Recently, the government has proposed a separate policy for agricultural export which will help in this regard.

Objective of the study

The following are the objective of this research paper:-

- To study the share of agricultural export and import in India's total trade.
- To study the composition of export and import of top 10 agricultural products.
- To study the direction of export and import with top 10 countries.
- Suggestive measures to improve the scenario of agricultural foreign trade.

Literature review

Various studies have been conducted to analyze the performance of foreign trade of India:-

Thomas & Sheikh (2012): In this paper, the author has studied the growth performance of agricultural export in the reform era. There has been considerable increase in agricultural export due to globalization and liberalization. A slow rise in agricultural export as compared to national export has been witnessed. Growth performance of each commodity has improved except tea and coffee with negative growth rate.

Vishwakarma & Nath (2018): The researcher has compared the performance of agricultural sector and manufacturing sector in the post reform period. The CAGR of agricultural sector is lowest (3.02%) as compared to that of manufacturing sector (7.32%) in the post reform period calling for need to formulate appropriate policies for agricultural sector.

Sharma & Bugalya (2014): In this paper, the researcher has done a comparative analysis of cotton sector between USA and India. India has comparative advantage in production of cotton whereas USA has comparative advantage in export of cotton. This is because USA provides huge support to cotton through various programmes whereas such support is negative in India.

Gupta & Kumar (2016): A study of trade between India and Iran reveals a decline in import and export of India from Iran. The study also reveals negative trade balance of India calling for need to substitute Iranian oil.

Methodology

The study is based on data collected from secondary sources. Data has been collected from the database of APEDA, Ministry of Commerce and published reports of Government of India. To study the share of India's agricultural trade in total trade, time series data from year 2009-11 to 2017-18 has been used. To study the composition and direction, time series data from year 2013-14 to 2017-18 has been used. The statistical tool used here are CAGR, percentage and indices.

India's total trade

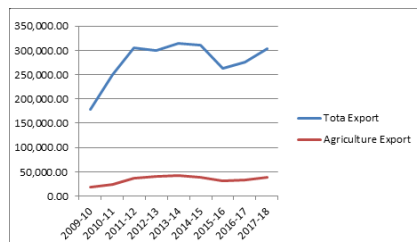
Table 1: Share of agricultural sector in India's total trade

US \$ million

Year	Total Export	Agricultural Export	Percentage of agricultural export	Total Import	Agricultural Import	Percentage of agricultural import
2009-10	178,751.43	17,906.24	10.02%	288,372.88	11,114.60	3.85%
2010-11	249,851.55	24,398.38	9.77%	369,769.13	11,061.93	2.99%
2011-12	305,963.92	37,098.79	12.13%	489,319.49	14,510.27	2.97%
2012-13	300,400.58	41,209.97	13.72%	490,736.65	17,464.75	3.56%
2013-14	314,405.30	42,837.22	13.62%	450,199.79	14,071.09	3.13%
2014-15	310,338.48	38,659.87	12.46%	448,033.41	18,779.28	4.19%
2015-16	262,290.13	32,089.43	12.23%	381,006.63	21,291.43	5.59%
2016-17	275,851.71	33,374.01	12.10%	384,355.56	24,380.25	6.34%
2017-18	303,376.22	38,214.00	12.60%	465,578.29	23,469.26	5.04%

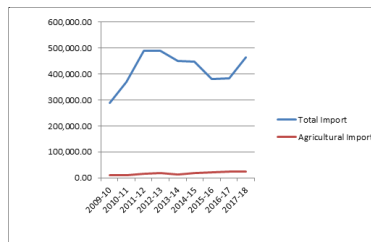
Source: Ministry of Commerce (Total Export & Import), APEDA (Agriculture Export and Import)

Table 1 shows information about the value of India's total export and import, agricultural export and import and share of agricultural export and import in total export and import. The share of agricultural export ranges between 9.77%-13.72%, being maximum in year 2012-13 and minimum in year 2010-11. On the other hand, share of agricultural import ranges between 2.97%-6.34%, being maximum in year 2016-17 and minimum in year 2011-12.



Source: Table 1

Figure 1: Total Export & Agriculture Export



Source: Table 1

Figure 2: Total Import & Agriculture Import

The above two figure clearly shows that the share of both agricultural export as well as import is very negligible in India's total export and import. The total export and import shows fluctuating trend whereas agricultural export and import has shown a steady trend.

Composition of export of top 10 commodities

To study the composition of agricultural export of top 10 commodities, data for five years from year 2013-14 to 2017-18 has been taken.

Table 2: Composition of export of top 10 agricultural products

US \$ million

SL. No.	COMMODITY	2013-14	2014-15	2015-16	2016-17	2017-18	CAGR
1	Marine Products	5016.37	5510.01	4761.96	5917.78	7387.39	8.05%
2	Basmati Rice	4864.89	4518.25	3477.35	3222.35	4165	-3.06%
3	Buffalo Meat	4350.38	4781.18	4068.66	3924.63	4029.88	-1.52%
4	Non-Basmati Rice	2925.13	3319.81	2307.72	2553.79	3558.11	4.00%
5	Spices	2497.23	2429.43	2502.48	2890.41	3104.35	4.45%
6	Raw Cotton	3637.72	1900.19	1937.87	1627.07	1887.44	-12.30%
7	Oil Meals	2796.44	1324.08	535.58	799.44	1081.72	-17.30%
8	Castor Oil	725.7	770.45	705.2	676.43	1043.99	7.54%
9	Coffee	797.19	811.93	780.31	843.57	968.6	3.97%
10	Cashew	842.32	909.25	768.07	790.62	922.42	1.83%

Source: APEDA

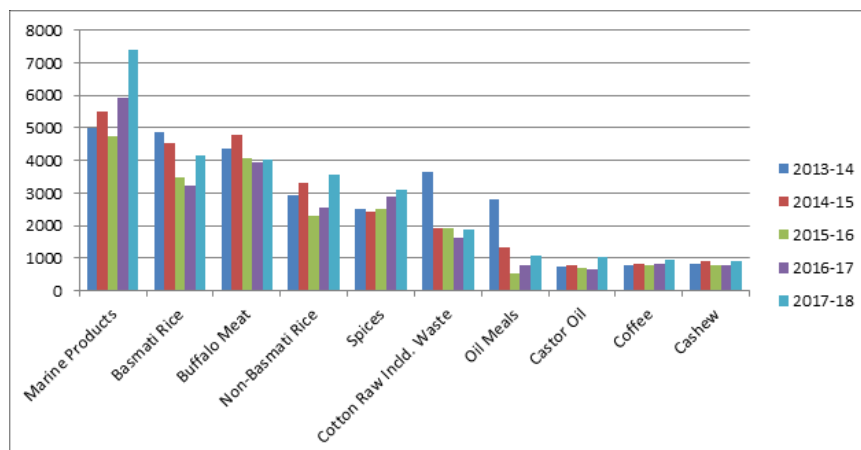
Table 2 gives information about the value of export of top 10 agricultural products. Marine Products occupies number one position with a positive growth rate of 8.05% followed by Basmati Rice(-3.06%), Buffalo Meat(-1.52%), Non-Basmati Rice(4%), Spices(4.45%), Cotton(-12.30%), Oil Meals(-17.30%), Castor Oil(7.54%), Coffee(3.97%) and Cashew(1.83%). Basmati Rice, Buffalo Meat, Cotton and Oil meals shows negative growth rate, rest having a positive CAGR.

Table 3 : Indices of export of top 10 agricultural products

SL. No.	COMMODITY	2013-14 (Base Year)	2014-15	2015-16	2016-17	2017-18
1	Marine Products	100%	109.84%	94.93%	117.97%	147.27%
2	Basmati Rice	100%	92.87%	71.48%	66.24%	85.61%
3	Buffalo Meat	100%	109.90%	93.52%	90.21%	92.63%
4	Non-Basmati Rice	100%	113.49%	78.89%	87.31%	121.64%
5	Spices	100%	97.28%	100.21%	115.74%	124.31%
6	Cotton Raw Includ. Waste	100%	52.24%	53.27%	44.73%	51.89%
7	Oil Meals	100%	47.35%	19.15%	28.59%	38.68%
8	Castor Oil	100%	106.17%	97.18%	93.21%	143.86%
9	Coffee	100%	101.85%	97.88%	105.82%	121.50%
10	Cashew	100%	107.95%	91.19%	93.86%	109.51%

Source: Author's calculation

Table 3 shows indices of export of top 10 products. The base year is 2013-14. Marine Products has shown an increasing trend except in year 2015-16. Basmati Rice has shown a declining trend with a little rise in index from 2016-17 to 2017-18. The performance of Buffalo Meat, as compared to base year, has also declined from year 2015-16. Raw Cotton has also witnessed a decline in its performance. There has been an adverse decline in the export of oil meal, especially in year 2015-16. Coffee, Cashew, Castor Oil and Non-Basmati rice has shown a fluctuating trend. On the other hand, Spices has shown a steady growth in its performance since 2015-16.



Source: Table 2

Figure 3 : Export of top 10 agricultural products

Figure 3 is a diagrammatical representation of table 2. It can be seen that there is huge difference in the value of export of commodities at 1st position and commodities at 8th, 9th and 10th position. Almost all commodities have witnessed changes in their value in the past five years.

Composition of import of top 10 commodities

To study the agricultural import of top 10 commodities data for five years, from 2013-14 to 2017-18 has been taken.

Table 4: Composition of import of top 10 agricultural products

US \$ million

SL. NO.	COMMODITY	2013-14	2014-15	2015-16	2016-17	2017-18	CAGR
1	Vegetable Oils	7250.06	9670.51	10492.08	10894.05	11637.48	9.93%
2	Pulses	1828.21	2786.11	3902.22	4244.24	2908.26	9.73%
3	Fresh Fruits	1273.48	1561.52	1694.84	1675.44	1942.92	8.82%
4	Cashew	773.81	1087.16	1339.34	1346.58	1418.63	12.89%
5	Spices	571.39	717.55	823.79	858.58	989.5	11.61%
6	Cotton Raw	394.48	508.66	394.1	946.88	979.22	19.94%
7	Sugar	392.19	601.17	612.24	1021.81	936.52	19.02%
8	Alcoholic Beverages	341.27	407.63	447.38	534.17	601.15	11.99%
9	Wheat	4.42	9.95	135.45	1268.64	364.5	141.69%
10	Misc Processed Items	244.48	286.06	277.2	315.67	347.11	7.26%

Source: APEDA

Table 4 gives information about the value of top 10 agricultural imports. The share of vegetable oil is maximum in total agricultural import with a growth rate of 9.93% followed by Pulses(9.73%), Fresh Fruits(8.82%), Cashew(12.89%), Spices(11.61%), Raw Cotton(19.94%), Sugar(19.02%), Alcoholic Beverages(11.99%),

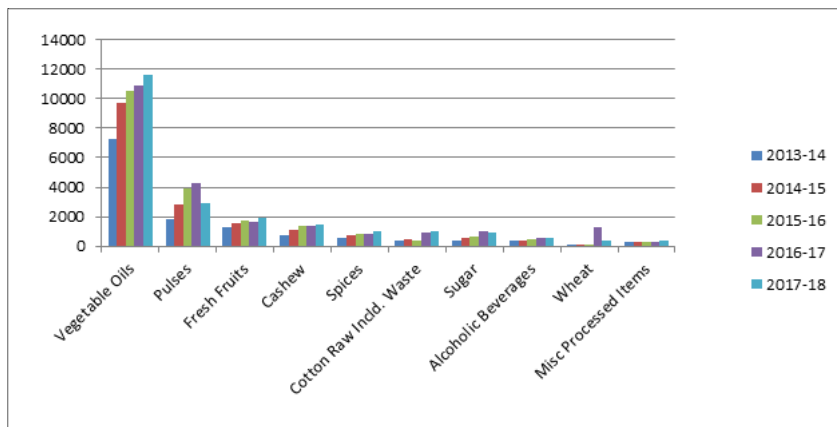
and Wheat(141.69%) and Processed items(7.26%). All the products have shown a positive growth rate, CAGR of wheat being maximum. The value of import of wheat is drastically increasing since 2015-16. The reason for this is adverse plantation condition and high price in domestic market as compared to international market. This also adversely affected the export (Commodity Profile of Wheat for March 2017).

Table 5: Indices of import of top 10 agricultural imports

SL. NO.	COMMODITY	2013-14 (Base Year)	2014-15	2015-16	2016-17	2017-18
1	Vegetable Oils	100%	133.39%	144.72%	150.26%	160.52%
2	Pulses	100%	152.40%	213.44%	232.15%	159.08%
3	Fresh Fruits	100%	122.62%	133.09%	131.56%	152.57%
4	Cashew	100%	140.49%	173.08%	174.02%	183.33%
5	Spices	100%	125.58%	144.17%	150.26%	173.17%
6	Cotton Raw	100%	128.94%	99.90%	240.03%	248.23%
7	Sugar	100%	153.29%	156.11%	260.54%	238.79%
8	Alcoholic Beverages	100%	119.45%	131.09%	156.52%	176.15%
9	Wheat	100%	225.11%	3064.48%	28702.26%	8246.61%
10	Misc Processed Items	100%	117.01%	113.38%	129.12%	141.98%

Source: Author's Calculation

Table 5 shows indices of top 10 agricultural imports. The base year is 2013-14. It has been seen the value of all the products has increased as compared to the base year. Products like Vegetable oil, Cashew, Spices and alcoholic beverages have shown a continuous growth each year. The value of import of wheat was increasing till 2016-17. In year 2017-18, its value declined to a great extent. There was a decline in import of cotton in year 2015-16 but again it increased in year 2016-17.



Source: Table 4

Figure 3: Import of top 10 agricultural products

Figure 3 is diagrammatical representation of table 4. It can be seen that there is huge difference in the value of import of rank 1 commodity and other commodities. Almost all the products have shown an increasing trend. Import of pulses, sugar and wheat declined in year 2017-18.

Direction of Export with Top 10 Countries

Table 6: Export of agricultural products with top 10 countries

US \$ million

SL. No.	COUNTRY	2013-14	2014-15	2015-16	2016-17	2017-18	CAGR
1	Vietnam Soc Rep	3720.79	4302.12	3507.76	4352.25	5277.74	7.24%
2	U S A	4293.6	4279.39	3265.19	3666.76	4646.6	1.59%
3	U A E	1912.5	2003.45	2003.25	2158.19	2182.98	2.68%
4	Bangladesh	2354.68	2019.07	1279.26	1348.05	2067.7	-2.57%
5	Saudi Arabia	2102.41	2147.57	1752.45	1461.63	1579.53	-5.56%
6	Iran	3172.78	1686.65	904.66	880.91	1316.26	-16.14%
7	China	3052.74	1633.25	945.37	1050.03	1174.48	-17.39%
8	Netherland	737.54	710.2	691.32	696.31	911.74	4.33%
9	Malaysia	1138.44	1099.4	974.28	869.75	909.23	-4.40%
10	Nepal	499.06	668.73	588.45	817.36	857.87	11.44%

Source: APEDA

Table 6 shows information about the direction of agricultural export with top 10 countries. India's export with Vietnam is maximum with a growth rate of 7.24% followed by USA(1.59%), UAE(2.68%), Bangladesh(-2.57%), Saudi Arabia(-5.56%), Iran(16.14%), China(17.39%), Netherland(4.33%), Malaysia(-4.40%) and Nepal(11.44%). Products like Buffalo Meat, Marine Products, Spices, Cotton and Oil Meal have maximum share in the export to Vietnam. Bangladesh, Saudi Arabia, Iran, China and Malaysia have a negative CAGR.

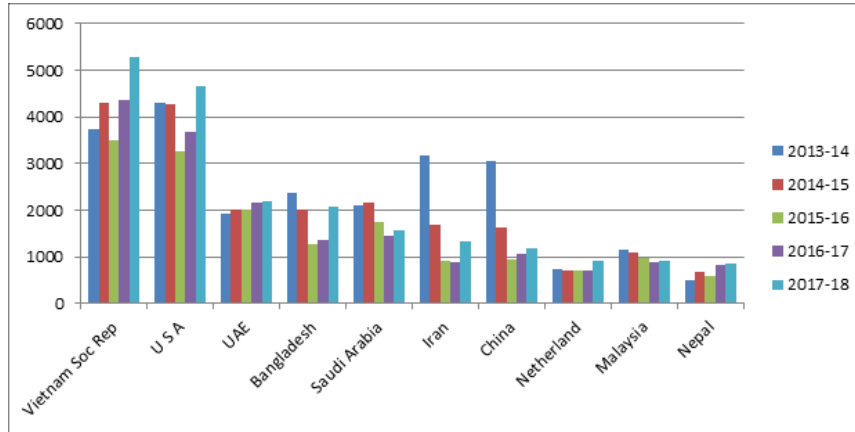
Table 7: Indices of agricultural export with top 10 countries

SL. No.	COUNTRY	2013-14 (Base Year)	2014-15	2015-16	2016-17	2017-18
1	Vietnam Soc Rep	100%	115.62%	94.27%	116.97%	141.84%
2	U S A	100%	99.67%	76.05%	85.40%	108.22%
3	UAE	100%	104.76%	104.75%	112.85%	114.14%
4	Bangladesh	100%	85.75%	54.33%	57.25%	87.81%
5	Saudi Arabia	100%	102.15%	83.35%	69.52%	75.13%
6	Iran	100%	53.16%	28.51%	27.76%	41.49%
7	China	100%	53.50%	30.97%	34.40%	38.47%
8	Netherland	100%	96.29%	93.73%	94.41%	123.62%
9	Malaysia	100%	96.57%	85.58%	76.40%	79.87%
10	Nepal	100%	134.00%	117.91%	163.78%	171.90%

Source: Author's Calculation

Table 7 shows information about the indices of export. The base year is 2013-14. Export with China and Iran showed a continuous decline till 2016-17 and

improved a little in year 2017-18 but still the export is very low as compared to base year. Export with Vietnam declined in year 2015-16. Export with Saudi Arabia started declining since 2015-16.



Source: Table 6

Figure 5: Export with top 10 countries

Figure 5 is a diagrammatical representation of table 6. It can be seen that export from Vietnam has shown fluctuating trend. Export with all the countries increased in year 2017-18 as compared to 2016-17.

Direction of import with Top 10 Countries

Table 8: Agricultural import with top 10 countries

US \$ Million

SL. No.	COUNTRY	2013-14	2014-15	2015-16	2016-17	2017-18	CAGR
1	Indonesia	3169.15	3352.31	3903.84	4464.39	5266.3	10.69%
2	Argentina	1129.6	1594.97	2291.58	2353.63	2120.33	13.42%
3	Ukraine	1144.56	1606.99	1350.09	2170.27	2073.38	12.62%
4	U S A	858.63	981.49	1195.94	1455.56	1833.83	16.39%
5	Malaysia	1461.78	2416.1	2330.01	1968.67	1633.19	2.24%
6	Brazil	644.83	1020.35	1242.9	1454.44	1382.58	16.48%
7	Australia	351.4	385.05	965.95	1845.7	1352.16	30.93%
8	Canada	765.11	1089.19	1421.35	1188.76	712.34	-1.42%
9	Myanmar	475.76	827.62	852.03	841.67	447.36	-1.22%
10	Afghanistan	203.44	255.99	301.38	285.78	424.67	15.86%

Source: APEDA

Table shows information about the value of agricultural import with top 10 countries. Indonesia ranks number one in import with a positive CAGR of 10.69%. Some products having maximum share in import from Indonesia are Vegetable oil, coffee, Coco Powder and Spices. Australia has maximum CAGR of 30.93%.

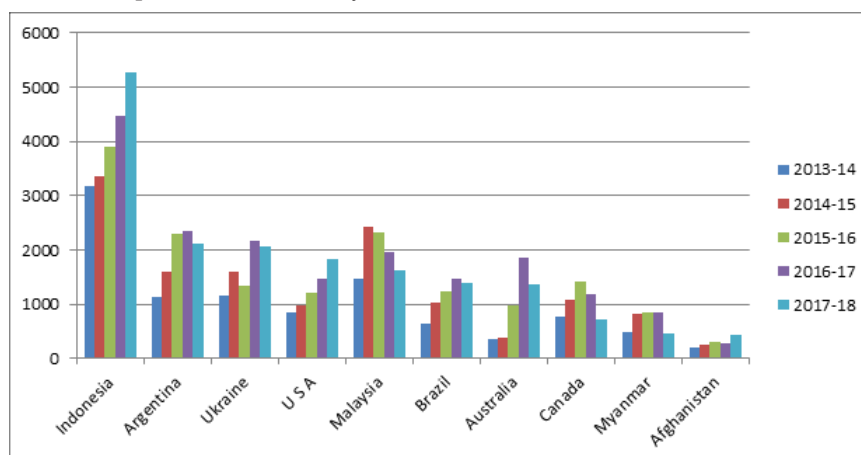
Products imported from Australia are Pulses, Cotton, and Fresh Fruits Wheat etc. Import with Canada and Myanmar has shown a negative growth rate.

Table 9: Indices of agricultural import with top 10 countries

SL. No.	COUNTRY	2013-14 (Base Year)	2014-15	2015-16	2016-17	2017-18
1	Indonesia	100%	105.78%	123.18%	140.87%	166.17%
2	Argentina	100%	141.20%	202.87%	208.36%	187.71%
3	Ukraine	100%	140.40%	117.96%	189.62%	181.15%
4	U S A	100%	114.31%	139.28%	169.52%	213.58%
5	Malaysia	100%	165.28%	159.40%	134.68%	111.73%
6	Brazil	100%	158.24%	192.75%	225.55%	214.41%
7	Australia	100%	109.58%	274.89%	525.24%	384.79%
8	Canada	100%	142.36%	185.77%	155.37%	93.10%
9	Myanmar	100%	173.96%	179.09%	176.91%	94.03%
10	Afghanistan	100%	125.83%	148.14%	140.47%	208.74%

Source: Author's Calculation

Table 9 gives idea about the indices of agricultural import taking base year 2013-14. Year 2014-15 has shown and increase in import of all the products. Import from Australia has shown a drastic increase in year 2015-16 and 2016-17 with reduction up to some extent in year 2017-18.



Source: Table 8

Figure 6: Agricultural import with top 10 countries

Figure 6 is a diagrammatical representation of Table 8. It can be seen that import from Indonesia, USA and Afghanistan has shown an increasing trend. Other countries have shown decline in import from year 2016-17 to 2017-18.

Conclusion

Export Promotion and Import Substitution has been the mantra for getting a positive trade balance. The study reveals negative impact on the export. The export of Basmati Rice, Buffalo Meat, Cotton, and Oil Meal has shown a negative CAGR of -3.06%, -1.52%, -12.30% and -17.30% respectively. Effort should be made to improve export of these products. Also, export from Bangladesh, Saudi Arabia, Iran, Malaysia and China has shown negative CAGR of -2.57%, -5.59%, -16.14%, -17.39% and -4.40% respectively. There is an immediate need to look after the reason for decrease in export from these countries. Import of all commodities has shown a positive CAGR. There is a need to reduce import of agricultural commodity in order to get favorable balance of payment. On the other hand, each year, the agriculture export is more than the agriculture import resulting into a favorable balance of payment from agricultural sector. Agricultural sector has a great potential for the upliftment of Indian economy. There was an immediate need to formulate separate agricultural export policy to enhance export. Agricultural Export Policy (Drafted) announced by the Government of India in March, 2018 will definitely help in improving the current scenario of agricultural trade.

Suggestive measures

It has been found from the above study that the share of agricultural sector is considerably low in India's total export. There is a need to take correct action in this regard. India is blessed by diversified plantation condition favorable for increasing production; thereby increasing export. Steps should be taken by the government to enhance export of agricultural products.

- Stress should be laid on improving the infrastructure of agriculture.
- Investment should be made for improving the information technology so that producers get correct and timely information about the demand, domestic prices and international prices.
- More and more Agro-based industries should be set up.
- Credit facilities should be provided to support investment in Agro-based units.
- Export procedure should be made simpler to enhance export.

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