# **Export And Comparative Analysis Of Agricultural Products In India-With Reference To Saarc Countries**

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# Abstract

**Aim:** This study has the purpose of informing future exports of agricultural products of SAARC countries on how they can be invigorated following declines in both quantity and value of exports since the year 2015-16. An effort has been made to identify and assess the magnitude and effects of critical determinants of the exports of agricultural products from India for 2015-16 to 2019-20.

**Study Design:** The study includes a separate consideration of the quantity and value of exports as explained variables, as well as the sourcing of ways in which the beneficial implications noted could be maximized for both variables while minimizing negative ones in the process.

**Objectives:** This study exclusively involves the use of secondary data and own-computations on the quantity and value of agricultural products and the comparative export performance of agricultural products.

**Methodology:** The Linear Forecast Model Equation was used to estimate separate rank with quantity and value of exports as explained variables, and the Pearson co-efficient of correlation was tested for appropriateness.

**Results:** The results show India's export and comparative analysis of agricultural products in SAARC countries. Both the quantity and value of exports are positively related to export and comparative. Much as the value of exports increases with the export price faced by exporters, the volume exported is significant.

Stimulating the export of agricultural products requires increasing production (to be achieved through the creation of favourable production conditions), improvement in the quality of products exported, improvement in the country's openness to shipping, and minimization or avoidance of domestic market capture and tariff jumping.

Keywords: Agricultural Products, Growth of Exports, SAARC Countries, and Comparative Analysis.

# INTRODUCTION

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Export means selling the home country's goods and services to a foreign country. If goods made in India are sold in Bangladesh, then those goods are exported to Bangladesh. It involves the marketing of goods produced in a country's domestic market in another country. Export is a product designed for a single country. a vital part of any economy. Export marketing is the first step of international marketing. India has seen a great spurt in exports after 1991 owing to the liberalisation of the economy. All the major sectors of the economy have undergone basic policy changes, leading to positive steps toward globalization.

Exporting is the most traditional and safest way of entering a foreign market. Exports are not restricted to only products. Other categories of exports include the export of services and project exports. Export can be either direct or indirect. In direct export, the organization generally uses an agent, distributor, or acts through a government agency. Indirect methods of exporting include using export management companies and trading companies.

Agriculture is one of the areas generally influenced by continuous environmental change. Rural efficiency is a critical factor for the prosperity of ranchers, the agricultural industry, and humanity on the loose. In India, the greater part of the populace, directly or by implication, relies upon farming for business. The agriculture area of India is going through a powerful stage in the new time of advancement. It gives 65% of the business freedoms to the functioning populace of India.

The farming area keeps on assuming a pivotal part in being developed, particularly in low-pay nations where the area is huge both as far as total pay and overall workforce. It is also the second-biggest maker of rice, wheat, sugar, cotton, natural products, and vegetables. Agriculture and the United Areas contribute around 17% to GDP. In any case, other than APEDA, there are organisations like the Spices Board, Coconut Development Board, Tobacco Board, Coffee Board, and Rubber Board that additionally contribute generously to the country's agrarian fares.

From undertaking practicality studies to setting up enterprises that stick to global norms spread over 14 item classifications that incorporate leafy foods, dairy and poultry items, gardening, and cereals, the public authorities have been assuming a vital part in pushing up exports.

# LITERATURE REVIEW

Sheeba and Reena (2019) stated in their paper entitled "Export and Import Performance of Agriculture in India" that agriculture has faced a very challenging period in recent years on account of expansion arising from the global financial crisis of 2008-2009. There is an unenthusiastic growth rate. It is observed that the volume of import of these grains increased by 14% to 20% in the years 2009-2010. The goods imported fluctuate in trend from 15% in the year 2010-11, 12% in the year 2011-12, 9% in the year 2012-13, 8% in the year 2013-14, and 5% in the year 2014-15. It is concluded that the mounting trend in the value of exports from 2010 to 2018 was a triumphant one in terms of agricultural exports in both value and quantity. The Indian government should take some efficient steps to lift its agricultural exports while serving the exporters.

According to their article titled "An Analysis of India's Trade Relationship with SAARC Countries: A Review," India's trade with preferred SAARC countries has seen a general increase in overall trade in recent times. It is highlighted that SAARC has not been capable of developing at par with other developed organisations like the European Union (EU). It is also worth noting that the gross capital formation (% GDP) in 1990 was 27 percent, and it has since been significantly increased to an average of 34.3 percent between 2007 and 2016.It has been determined that India should increase its exports and imports with neighbouring countries such as Bangladesh, Nepal, and Sri Lanka.

# **OBJECTIVES OF THE STUDY**

The purpose of the present study is to examine the existing exports to seven countries. It also explores the possibilities of relations between these countries. More specifically, the main objectives are: The study's primary goals are to assess the SAARC country-by-country export performance of agricultural products in India and

to make policy recommendations. The secondary objectives are a comparative analysis of the various agricultural products of SAARC countries.

# **RESEARCH METHODOLOGY**

The research methodology provides a systematic approach to fulfil the desired objectives as mentioned in the study. It is both a descriptive and analytic study based on the secondary data. The secondary sources were collected from published articles, government websites, books and journals. The secondary sources were obtained from the Agricultural and Processed Food Products Export Development Authority (APEDA). The present study covers the period from 2015-16 to 2019-20.

# HYPOTHESES OF THE STUDY

• There is no significant relationship between Afghanistan's export quantity and its export value.

- There is no significant relationship between Bangladesh's export quantity and Bangladesh's export value.
- There is no significant relationship between Bhutan's export quantity and Bhutan's export value.
- There is no significant relationship between the quantity of Maldives exports and the value of Maldives exports.
- There is no significant relationship between Nepal's export quantity and Nepal's export value.
- There is no significant relationship between Pakistan's exports and Pakistan's export value.
- There is no significant relationship between Sri Lanka's exports and Sri Lanka's export value.

#### **Results and Discussion**

Product	Quantity(Mts)	Rank	Value(Rs in Crore)	Rank	Price/Quantity	Rank
Groundnuts	23579.95	3	139.67	3	0.0059232525938	14
Processed Fruits, Juices & Nuts	6306.45	7	119.72	4	0.0189837388705	4
Miscellaneous Preparations	3795.24	9	94.65	5	0.0249391342839	2
Buffalo Meat	7381.8	6	55.66	6	0.0075401663550	13
Other Fresh Fruits	9748.09	5	33.19	8	0.0034047695497	20
Dairy Products	14552.85	4	262.53	2	0.0180397654067	6
Fruits & Vegetables Seeds	1193.68	14	10.89	13	0.0091230480530	11
Other Cereals	1412	13	5.65	14	0.0040014164305	18
Processed Vegetables	2337.25	11	18.82	10	0.0080521980960	12
Cereal Preparations	3879.76	8	36.32	7	0.0093614037981	10
Basmati Rice	2352.51	10	12.83	11	0.0054537493995	16
Other Fresh Vegetables	645.36	15	1.33	16	0.0020608652535	23

# Table – 1 India's Export Performance of Agricultural Products to Afghanistan during the period of 2015-16 to 2019-20 – Product wise

Jaggery & Confectionery	202.64	17	0.61	19	0.0030102645084	21
Cocoa Products	4.9	22	0.38	20	0.0775510204081	1
Others (Betel Leaves & Nuts)	37.66	19	0.66	17	0.0175252257036	7
Walnuts	4.00	24	0.20	22	0.05	8
Fresh Mangoes	10.49	21	0.04	24	0.0038131553860	19
Floriculture	4.25	23	0.08	23	0.0188235294117	5
Guargum	65.25	18	0.63	18	0.0096551724137	9
Fresh Onions	0.20	25	0.00	25	0	25
Pulses	2167.12	12	12.81	12	0.0059110709143	15
Poultry Products	78882.96	2	26.48	9	0.0003356872003	24
Wheat	109661.00	1	265.25	1	0.0024188179936	22
Non Basmati Rice	490.00	16	2.55	15	0.0052040816326	17
Natural Honey	14.05	20	0.27	21	0.0192170818505	3

From table-1, reveals that rank analysis, it can be interpreted that the most exported agricultural products from India to Afghanistan in terms of quantity [metric tonne] are wheat [109661.00 MT] between the years 2015-16 to 2019-20 and also followed by the least exported agricultural products from India to Afghanistan in terms of

quantity [metric tonne] are fresh onions [0.20 MT]. Wheat [265.25 Rs.Crore] is the most highly exported agricultural product from India to Afghanistan in terms of price [Rs.Crore], while fresh onions [almost 0 Rs.Crore] is the least exported agricultural product from India to Afghanistan in terms of price [Rs.Crore].

 Table-2 India's Export Performance of Agricultural Products to Afghanistan during the period of

 2015-16 to 2019-20 – Year wise

Year	Linear Forecast Equation Model	Quantity (Mts)	Value (Rs in Crore)
2015-16	150000	57614.95	100.38
2016-17	100000	33972.46	99.31
2017-18	50000	120926.17	448.78
2018-19		29741.28	236.40
2019-20	0 2015-16 2016-17 2017-18 2018-19 2019-20	26475.00	216.35
2020-	Export Quantity = [53745.972-6651.108(3)];	33792.648	330.953
21(Forecasted Value)	Export Price = $[220.244 + 36.903(3)]$		

2021- 22(Forecasted Value)	Export Quantity = [53745.972-6651.108(4)]; Export Price = [220.244+ 36.903(4)]	27141.54	367.856
2022- 23(Forecasted Value)	Export Quantity = [53745.972-6651.108(5)]; Export Price = [220.244+ 36.903(5)]	20490.432	404.759

# Source:APEDA

# Interpretation

Frome the table-2 shows the estimated Linear Regression model for the forecast of:

✓ Export Quantity = [53745.972 (Period) - 6651.108];

✓ Export Price = [220.244(Period) + 36.903]As per the Linear Regression equation obtained:

It is expected that India's agricultural product exports in terms of quantity to Afghanistan during the years 2020–21 would be 33792.648 MT, 2021–22 would be 27141.54 MT, and 2022–23 would be 20490.432 MT. The agricultural product export performance of India

with respect to Afghanistan is expected to decrease in forthcoming years in terms of quantity in comparison with the current year, i.e., 2019-20.

It is expected that India's agricultural product exports in terms of price to Afghanistan during the years 2020–21 would be 330.953 Rs. Crore, 2021–22 would be 367.856 Rs. Crore, and 2022–23 would be 404.756 Rs. Crore. The agricultural product export performance of India with respect to Afghanistan is expected to increase in forthcoming years in terms of price in comparison with the current year, i.e., 2019-20.

		Afghanistan-Export-	Afghanistan-Export-
		Quantity	Value
	Pearson Correlation	1	.754*
Afghanistan-Export-	Sig. (2-tailed)		.141
Quantity	Ν	5	5
	Pearson Correlation	.754*	1
Afghanistan-Export-	Sig. (2-tailed)	.141	
Value	Ν	5	5

\*. Correlation is significant at the 0.05 level (2-tailed).

The Pearson Correlation estimated significance value for the variables, Afghanistan-Export-Quantity (Metric Tons) and Afghanistan-Export-Value (Rs.Crore) 0.141, which is greater than 0.05, so there is no significant relationship between the variables. The calculated correlation (R) value is 0.754, which indicates that there is a strong positive relationship between the considered variables; Afghanistan-Export-Quantity (Metric Tons) and Afghanistan-Export-Value (Rs.Crore). Hence, we can perceive that when India's export to Afghanistan increases considerably.

 Table – 4 India's Export Performance of Agricultural Products to Bangladesh during the period of

 2015-16 to 2019-20 – Product wise

Product	Quantity(Mts)	Rank	Value(Rs in Crore)	Rank	Price/Quantity	Rank
Fresh Onions	2439592.62	2	4133.85	2	0.0016944837290	33
Other Fresh Fruits	405281.47	5	1388.86	3	0.0034269022958	27
Cereal Preparations	56607.54	9	1294.41	4	0.0228663884705	7

		-	1			
Buffalo Meat	16438.79	17	275.12	13	0.0167360249750	9
Pulses	58578.85	8	301.72	12	0.0051506644462	22
Fresh Grapes	130173.85	7	489.28	10	0.0037586658149	24
Maize	603405.91	3	1277.44	5	0.0021170492015	32
Other Fresh	172505.2	6	502.15	0	0.0004066540000	26
Vegetables	172595.2	6	593.15	8	0.0034366540900	26
Non Basmati	000000		<b>555</b> ( 10		0.000504(010(50)	20
Rice	2770570.26	1	7576.49	1	0.0027346319670	28
Miscellaneous		10		_		
Preparations	50683.97	10	612.11	7	0.0120769939687	13
Fruits &						
Vegetables	31370.49	14	406.32	11	0.0129523000756	12
Seeds	010/0119	11	100.02		0.012/02000/00	12
Groundnuts	18908.38	15	114.64	14	0.0060629202501	21
Wheat	478084.77	4	773.62	6	0.0016181649124	35
Processed	470004.77		115.02	0	0.0010101047124	55
Fruits, Juices &	38129.9	11	102.16	16	0.0026792622063	29
Nuts	30129.9	11	102.10	10	0.0020792022005	29
Others (Betel						
	34467.15	13	79.44	18	0.0023048032691	31
Leaves & Nuts)	2022.00	22	105 71	15	0.00004550004550	(
Cocoa Products	3923.09	23	105.71	15	0.0269455964558	6
Basmati Rice	11686.51	19	80.58	17	0.0068951295125	20
Jaggery &	7399.04	21	52.48	19	0.0070928120404	19
Confectionery						
Other Cereals	15274.11	18	35.54	22	0.0023268131498	30
Processed	5520.29	22	41.32	20	0.0074851140066	18
Vegetables						
Fresh Mangoes	9224.23	20	31.93	23	0.0034615355428	25
Dairy Products	37801.89	12	559.23	9	0.0147937047592	10
Natural Honey	2939.91	24	39.54	21	0.0134493913078	11
Floriculture	714.35	26	5.51	26	0.0077133058024	17
Guargum	155.3	28	2.8	29	0.0180296200901	8
Mango Pulp	1319.37	25	6.24	25	0.0047295300029	23
Poultry	100.00	20	2.26	20	0.020(217004702	4
Products	109.69	29	3.36	28	0.0306317804722	4
Milled Products	16756.18	16	27.2	24	0.0016232816787	34
Alcoholic						
Beverages	522.91	27	4.69	27	0.0089690386490	16
-						
Cucumber and						
Gherkins	20.52	30	0.19	31	0.0092592532592	15
Prepd.&Presvd)	< <b>- ^</b>		0.15	<u> </u>		
Processed Meat	6.79	32	0.46	30	0.0677466863033	1
Albumin	4.19	34	0.15	34	0.0357995226730	2
(Eggs& Milk)						
Casein	7.36	31	0.2	33	0.0271739130434	5
Walnuts	2.64	35	0.03	35	0.0113636363636	14
Sheep/Goat	6	33	0.19	31	0.0316666666666	3
Meat	5	55	0.17	51	0.001000000000	5

From the table-4 reveals that rank analysis, it can be interpreted that the most exported agricultural products from India to Bangladesh in terms of quantity [metric tonne] are Non-Basmati Rice [2770570.26 MT] between the years 2015-16 to 2019-20 and also the least exported agricultural products from India to Bangladesh in terms of quantity [metric tonne] are Walnuts [2.64 MT]. Non-basmati rice [7576.49 Rs.Crore] is the most highly exported agricultural product from India to Bangladesh in terms of price [Rs.Crore], followed by fresh onions [4133.85 Rs.Crore], and walnuts [0.03 Rs.Crore] is the least exported agricultural product from India to Bangladesh in terms of price [Rs.Crore].

Table-5 India's Export Performance of Agricultural Products to Bangladesh during the period of 2015-16 to 2019-20 – Year wise

Year	Linear Forecast Equation Model	Quantity (Mts)	Value (Rs in Crore)
2015-16		1496130.64	3815.36
2016-17	3000000 2500000 2000000	1255232.88	2692.77
2017-18	1500000 1000000 Qty Value	2411006.84	6529.45
2018-19	500000 0 2015-16 2016-17 2017-18 2018-19 2019-20	1620491.29	4888.94
2019-20		635421.87	2489.44
2020-21	Export Quantity = [1483656.704 (3) -135615.913];	1076808.96	3946.49
(Forecaste	Export Price = $[4083.192(3) - 45.567]$	5	1
d Value) 2021-22	Export Quantity = [1483656.704 (4) -135615.913];	941193.052	3900.92
(Forecaste	Export Quantity = $[1483030, 704 (4) -153013.913];$ Export Price = $[4083.192 (4) -45.567]$	741175.032	3900.92 4
d Value)	Exponence = [1005.152(4) + 0.507]		, r
2022-23	Export Quantity = [1483656.704 (5) -135615.913];	805577.139	3855.35
(Forecaste d Value)	Export Price = [4083.192 (5) -45.567]		7

Source: Computed

# Interpretation

The estimated linear regression model for the forecast of:

Export Quantity[1483656.704 (period)-135615.913].

Export Price[4083.192 (period)-45.567].

As per the linear regression equation obtained:

It is expected that India's agricultural product exports in terms of quantity to Bangladesh during the years 2020–21 would be 1076808.965 MT, 2021–22 would be 941193.052 MT, and 2022–23 would be 805577.139 MT. The agricultural product export performance of India with respect to Bangladesh is expected to decrease in forthcoming years in terms of quantity in comparison with the current year, i.e., 2019-20.It is expected that India's agricultural product export in terms of price to Bangladesh during the year 2020-21 would be 3946.491Rs. Crore, 2021-22 would be 3900.924 Rs. Crore, 2022-23 would be 3855.357Rs. Crore.The agricultural product export performance of India with respect to Bangladesh is expected to decrease in forthcoming years in terms of Price in comparison with the current year i.e. 2019-20.

 Table – 6 Correlations

		Bangladesh-Export-	Bangladesh-Export-
		Quantity	Value
Bangladesh-Export-	Pearson Correlation	1	.942*
Quantity	Sig. (2-tailed)		.017
	Ν	5	5
Bangladesh-Export-	Pearson Correlation	.942*	1
Value	Sig. (2-tailed)	.017	
	Ν	5	5

\*. Correlation is significant at the 0.05 level (2-tailed).

The Pearson Correlation estimated significance value for the variables, Bangladesh-Export-Quantity (Metric Tons) and Bangladesh-Export-Value (Rs.Crore) 0.017, which is less than 0.05, so there is a significant relationship between the variables. The calculated correlation (R) value is 0.942, which indicates that there is a strong positive relationship between the considered variables; Bangladesh-Export-Quantity (Metric Tons) and Bangladesh-Export-Value (Rs.Crore). Hence, we can perceive that when India's export to Bangladesh increases considerably.

 

 Table – 7 India's Export Performance of Agricultural Products to Bhutan during the period of 2015-16 to 2019-20 – Product wise

Product	Quantity(Mts )	Rank	Value(Rs in Crore)	Rank	Price/Quantity	Rank
Dairy Products	32192.56	2	567.54	1	0.0176295392475	11
Cereal Preparations	25127.89	5	367.59	2	0.016287650893	12
Non Basmati Rice	81239.9	1	174.28	4	0.0021452512866	26
Miscellaneous Preparations	27501.57	4	182.58	3	0.0066388937067	18
Maize	28247.84	3	52.48	7	0.0018578411659	27
Poultry Products	6208.71	7	71.5	6	0.0115160798297	15
Other Meat	1902.21	12	30.31	10	0.0159340977074	13
Processed Fruits, Juices & Nuts	3833.13	9	33	8	0.0086091523115	18
Jaggery & Confectionery	8425.55	6	87.5	5	0.0103850787188	16
Pulses	2209.07	11	14.3	13	0.0064733122988	19
Buffalo Meat	761.72	17	13.72	14	0.0180118678779	9
Milled Products	4392.72	8	15.97	12	0.0036355606549	23
Cocoa Products	826.08	16	30.59	9	0.0370303118342	7
Alcoholic Beverages	3050.23	10	26.27	11	0.0086124652895	17

			1	1	1	
Basmati Rice	917.43	15	4.47	18	0.0048723063339	21
Processed Vegetables	654.95	20	7.91	16	0.0120772578059	14
Natural Honey	202.53	22	3.63	19	0.0179232706265	10
Processed Meat	78.19	24	1.66	21	0.0212303363601	8
Others (Betel Leaves & Nuts)	14.27	26	0.67	23	0.0469516468114	5
Fruits & Vegetables Seeds	1.68	27	0.64	24	0.3809523809523	1
Mango Pulp	1514.23	14	8.69	15	0.0057388903931	20
Floriculture	33	25	0.31	27	0.009393939393939	16
Other Fresh Vegetables	760.48	19	0.78	22	0.0010256679991	29
Casein	1.45	28	0.11	28	0.0758620689655	4
Other Fresh Fruits	773.57	18	2.11	20	0.0027276135320	25
Other Cereals	1876.09	13	5.6	17	0.0029849314265	24
Walnuts	0.4	32	0.1	29	0.25	2
Groundnuts	0.59	30	0.1	29	0.1694915254237	3
Cucumber and Gherkins((Prepd .&Presvd)	0.66	29	0	32	0	30
Wheat	220.33	21	0.32	26	0.0014523669041	28
Albumin ( Eggs&Milk )	0.23	33	0.01	31	0.0434782608695	6
Fresh Mangoes	144.95	23	0.53	25	0.0036564332528	22
Fresh Onions	0.51	31	0	32	0	30
Animal Casings	0.04	34	0	32	0	30
DOOID						

From Table 7, it can be interpreted that the most highly exported agricultural products from India to Bhutan in terms of quantity [metric tonne] are Non-Basmati Rice [81239.9 MT] between the years 2015-16 to 2019-20, and alsofollowed by the least exported agricultural products from India to Bhutan in terms of quantity [metric tonne] are Animal Casings [0.04 MT]. Dairy products [567.54 Rs.Crore] are the most highly exported agricultural products from India to Bhutan in terms of price [Rs.Crore], while animal casings [almost 0 Rs.Crore] are the least exported agricultural products from India to Bangladesh in terms of price [Rs.Crore].

Year	Linear Forecast Equation Model	Quantity (Mts)	Value (Rs in Crore)
2015-16	80000 70000	47177.81	277.19
2016-17	60000 50000	47368.78	306.28
2017-18	40000 Quantity 30000 Value	33669.12	301.15
2018-19		35432.75	343.36
2019-20	2015-16 2016-17 2017-18 2018-19 2019-20	70186.30	477.23
2020-21 (Forecasted Value)	Export Quantity = [46766.952 (3) 3408.095]; Export Price = [341.042 (3) 43.716]	56991.237	472.19
2021-22 (Forecasted Value)	Export Quantity = [46766.952 (4) 3408.095]; Export Price = [341.042 (4) 43.716]	60399.332	515.906
2022-23 (Forecasted Value)	Export Quantity = [46766.952 (5) 3408.095]; Export Price = [341.042 (5) 43.716]	63807.427	559.622

Table – 8 India's Export Performance of Agricultural Products to Bhutan during the period of 2015-16 to 2019-20 – Year wise

#### **Source: Computed**

## Interpretation

The estimated Linear Regression model for the forecast of:

✓ Export Quantity = [46766.952 (Period) 3408.095];

✓ Export Price = [341.042 (Period) 43.716]As per the linear regression equation obtained:

It is expected that India's agricultural product export in terms of quantity to Bhutan during the years 2020–21 would be 56991.237 MT, 2021–22 would be 60399.332 MT and 2022–23 would be 63807.427 MT. The agricultural product export performance of India

with respect to Bhutan is expected to increase in forthcoming years in terms of quantity in comparison with the current year, i.e., 2019-20.

It is expected that India's agricultural products export in terms of price to Bhutan during the years 2020–21 would be 472.19 Rs. Crore, 2021–22 would be 515.906 Rs. Crore, and 2022–23 would be 559.622 Rs. Crore. The agricultural product export performance of India with respect to Bhutan is expected to increase in forthcoming years in terms of price in comparison with the current year, i.e., 2019-20.

#### Table – 9 Correlations

	Bhutan-Export-	Bhutan-Export-Value
	Quantity	
Pearson Correlation	1	.783*

Bhutan-Export-	Sig. (2-tailed)		.117
Quantity	Ν	5	5
Bhutan-Export-Value	Pearson Correlation	.783*	1
	Sig. (2-tailed)	.117	
	Ν	5	5

\*. Correlation is significant at the 0.05 level (2-tailed).

The Pearson Correlation estimated significance value for the variables, Bhutan-Export-Quantity (Metric Tons) and Bhutan-Export-Value (Rs.Crore) 0.117, which is greater than 0.05, so there is no significant relationship between the variables. The calculated correlation (R) value is 0.783, which indicates that there is a strong positive relationship between the considered variables; Bhutan-Export-Quantity (Metric Tons) and Bhutan-Export-Value (Rs.Crore). Hence, we can perceive that when India's export to Bhutan increases considerably.

 Table – 10 India's Export Performance of Agricultural Products to Maldives during the period of

 2015-16 to 2019-20 – Productwise

Product	Quantity (Mts)	Rank	Value(Rs in Crore)	Rank	Price/Quantity	Rank
Non Basmati Rice	124679.3	2	362.32	1	0.0029060226662	29
Poultry Products	613647.74	1	284.93	2	0.0004643217621	32
Other Fresh Vegetables	68687.23	3	270.21	3	0.0039339321851	25
Buffalo Meat	8722.98	7	195.44	4	0.0224051872181	5
Other Fresh Fruits	30836.56	5	122.9	6	0.0039855288657	24
Fresh Onions	49859.16	4	127.31	5	0.0025533923957	30
Others (Betel Leaves & Nuts)	4066.21	10	117.85	7	0.0289827628184	4
Basmati Rice	8773.7	6	67.08	9	0.0076455771225	21
Cereal Preparations	4751.8	8	76.92	8	0.0161875499810	13
Sheep/Goat Meat	876.2	14	2.71	20	0.0030929011641	28
Miscellaneous Preparations	2536.15	11	36.21	10	0.0142775466750	15
Cocoa Products	436.77	17	32.09	11	0.0734711633124	2
Processed Fruits, Juices & Nuts	966.73	13	16.11	13	0.0166644254341	12
Floriculture	994.4	12	17.25	12	0.0173471440064	10
Processed Vegetables	564.78	16	9.48	16	0.0171394171181	11
Milled Products	4079.9	9	13.49	14	0.0033064535895	27
Alcoholic Beverages	569.64	15	10.26	15	0.0180113756056	9
Dairy Products	289.57	21	4.3	18	0.0148496045861	14
Fresh Mangoes	376.81	20	3.84	19	0.0101908123457	19
Jaggery & Confectionery	417.89	18	7.69	17	0.0184019718107	8
Pulses	263.03	22	2.37	21	0.0090103790442	20

Other Cereals	396.6	19	1.56	22	0.0039334341906	26
Fresh Grapes	102.11	23	1.31	24	0.0128293017334	16
Natural Honey	13.53	27	0.42	25	0.0310421286031	3
Cucumber and	48.1	26	0.33	26	0.0068607068607	22
Gherkins						
(Prepd.Presvd)						
Mango Pulp	2.51	30	0.03	30	0.0119521912350	17
Groundnuts	1.78	31	0.02	32	0.0112359550561	18
Animal Casings	3.1	29	0.06	28	0.0193548387096	6
Maize	70.98	25	0.15	28	0.0021132713440	31
Fruits &	6.66	28	0.03	30	0.0045045045045	23
Vegetables						
Seeds						
Wheat	0.75	32	0	33	0	33
Walnuts	0.22	34	0.3	27	1.3636363636363	1
Processed Meat	71.75	24	1.37	23	0.0190940766550	7
Guargum	0.2	35	0	33	0	33
Albumin	0.6	33	0	33	0	33
(Eggs&Milk)						

From table 10, it can be interpreted that the most highly exported agricultural products from India to Maldives in terms of quantity [metric tonne] are poultry products [613647.74 MT] followed by between the years 2015-16 to 2019-20, and alsoagricultural products from India to Maldives in terms of quantity [metric tons] are guargum [0.2 MT]. Non-Basmati Rice [362.32 Rs.Crore] is the most highly exported agricultural product from India to Maldives in terms of price [Rs.Crore], while Albumin (Eggs & Milk) [almost 0 Rs.Crore] is the least exported agricultural product from India to Maldives in terms of price [Rs.Crore].

 Table – 11 India's Export Performance of Agricultural Products to Maldives during the period of

 2015-16 to 2019-20 – Year wise

Year	Linear Forecast Equation Model	Quantity (Mts)	Value (Rs in Crore)
2015-16	250000	166681.38	331.57
2016-17	200000	170298.36	306.71
2017-18	100000	174142.26	332.46
2018-19	50000 0 2015-16 2016-17 2017-18 2018-19 2019-20	204663.64	408.09
2019-20	Qty —Value	211329.18	431.61

2020-21 (Forecasted Value)	Export Quantity = [185422.964 (3) 12366.088]; Export Price = [362.088 (3) 30.146]	222521.228	452.526
2021-22 (Forecasted Value)	Export Quantity = [185422.964 (4) 12366.088]; Export Price = [362.088 (4) 30.146]	234887.316	482.672
2022-23 (Forecasted Value)	Export Quantity = [185422.964 (5) 12366.088]; Export Price = [362.088 (5) 30.146]	247253.404	512.818

# Source: Computed

**Table – 12 Correlations** 

# Interpretation

The estimated Linear Regression model for the forecast of:

✓ Export Quantity = [185422.964 (Period) 12366.088];

✓ Export Price = [362.088 (Period) 30.146]As per the Linear Regression equation obtained:

It is expected that India's agricultural product export in terms of quantity to Maldives during the year 2020-21 would be 222521.228 MT, 2021-22 would be 234887.316 MT and 2022-23 would be 247253.404 MT.The agricultural product export performance of India

with respect to Maldives is expected to increase in forthcoming years in terms of quantity in comparison with the current year i.e.2019-20.

It is expected that India's agricultural product export in terms of price to Maldives during the year 2020-21 would be 452.526 Rs.Crore, 2021-22 would be 482.672 Rs. Crore, 2022-23 would be 512.818 Rs.Crore.The agricultural product export performance of India with respect to Maldives is expected to increase in forthcoming years in terms of Price in comparison with the current year i.e. 2019-20.

		Maldives-Export-	Maldives-Export-Value
		Quantity	
Maldives-Export-	Pearson Correlation	1	.974**
Quantity	Sig. (2-tailed)		.005
	Ν	5	5
Maldives-Export-Value	Pearson Correlation	.974**	1
	Sig. (2-tailed)	.005	
	N	5	5

\*\*. Correlation is significant at the 0.05 level (2-tailed).

The Pearson Correlation estimated significance value for the variables, Maldives-Export-Quantity (Metric Tons) and Maldives-Export-Value (Rs.Crore) 0.005, which is less than 0.05, so there is a significant relationship between the variables. The calculated correlation (R) value is 0.974, which indicates that there is a strong positive relationship between the considered variables; Maldives-Export-Quantity (Metric Tons) and Maldives-Export-Value (Rs.Crore). Hence, we can perceive that when India's export to Maldives increases considerably.

 

 Table – 13 India's Export Performance of Agricultural Products to Nepal during the period of 2015-16 to 2019-20 – Productwise

Product	Quantity(Mts)	Rank	Value(Rs in Crore)	Rank	Price/Quantity	Rank
Non Basmati Rice	3190583.8	1	7925.09	1	0.0024838996549	27
Maize	1913938.19	2	3071.07	2	0.0016045815983	34

		1				
Other Fresh Vegetables	1717310.52	3	1888.44	3	0.0010996497010	36
Cereal Preparations	104372.37	8	1638.92	4	0.0157026232134	12
Wheat	847622.53	4	1463.31	5	0.0017263698736	32
Miscellaneous Preparations	141500.45	7	1289.82	6	0.0091153067004	16
Other Fresh Fruits	510013.15	6	853.37	7	0.0016732313666	33
Jaggery & Confectionery	86007.06	9	543.74	9	0.0063220391442	20
Fresh Onions	529513.93	5	744.14	8	0.0014053265794	35
Groundnuts	49863.51	11	272.76	13	0.0054701323673364	22
Cocoa Products	9637.65	22	335.77	10	0.0348394058717633	3
Dairy Products	19086.83	19	320.6	11	0.0167969222757262	9
Pulses	31082.97	17	152.67	16	0.0049116928015	23
Processed Fruits, Juices & Nuts	41974.59	13	280.79	12	0.0066895233521	19
Alcoholic Beverages	37625.67	15	261.25	14	0.0069433979514	18
Basmati Rice	17712.6	20	105.71	19	0.0059680679290	21
Processed Vegetables	39760.94	14	194.69	15	0.0048965140160	24
Other Cereals	70020.26	10	121.06	18	0.0017289281702	31
Fresh Mangoes	44948.43	12	86.54	20	0.0019253175249	30
Fresh Grapes	33330.37	16	81.15	21	0.0024347164462	28
Fruits & Vegetables Seeds	1538.13	25	42.79	22	0.0278194951011	5
Others (Betel Leaves & Nuts)	11737.05	21	146.54	17	0.0124852497007	14
Milled Products	19239.5	18	44.16	23	0.0022952779438	29
Natural Honey	2539.53	24	32.72	24	0.0128842738616	13
Floriculture	790.19	27	7.59	29	0.0096052848049	15
Buffalo Meat	502.65	29	8.02	28	0.0159554361882	10
Poultry Products	599.19	28	9.43	27	0.0157379128490	11
Albumin( Eggs& Milk)	47.65	34	1.65	32	0.0346274921301	1
Guargum	330.81	30	2.6	31	0.0078594963876	17
Walnuts	839.92	26	15.38	26	0.0183112677397	8
Mango Pulp	5778.78	23	27.83	25	0.0048158953966	25
Other Meat	54.92	33	1.25	33	0.0227603787327	6
Processed Meat	21.04	36	0.4	36	0.0190114068441	7
Cucumber and Gherkins( Prepd.&Presvd)	158.64	31	0.46	35	0.0028996469994	26

Sheep/Goat Meat	24.15	35	0.69	34	0.0285714285714	4
Casein	138.17	32	5.27	30	0.0381414199898	2
Animal Casings	0.02	37	0	37	0	37
Saumaan DCCIS						

From table 13, reveals that rank analysis, it can be interpreted that the most exported agricultural products from India to Nepal in terms of quantity [metric tonne] are Non-Basmati Rice [3190583.8 MT] between the years 2015-16 to 2019-20 and also he least exported agricultural products from India to Nepal in terms of quantity [metric tonne] are Animal Casings [0.02 MT].

Non-Basmati Rice [7925.09 Rs.Crore] is the most highly exported agricultural product from India to Nepal in terms of price [Rs.Crore], while Animal Casings [almost 0 Rs.Crore] is the least exported agricultural product from India to Nepal in terms of price [Rs.Crore].

 

 Table – 14 India's Export Performance of Agricultural Products to Nepal during the period of 2015-16 to 2019-20 – Year wise

Year	Linear Forecast Equation Model	Quantity (Mts)	Value (Rs in Crore)
2015-16	2500000	1514149.42	3449.65
2016-17	1500000	1921808.57	4397.85
2017-18	1000000Qty 	1942838.73	4284.48
2018-19	0 2015-16 2016-17 2017-18 2018-19 2019-20	2204533.85	5055.24
2019-20		1896915.53	4790.45
2020-21 (Forecasted Value)	Export Quantity = [1896049.22 (3) 104825.75]; Export Price = [4395.534 (3) 333.899]	2210526.47	5397.231
2021-22 (Forecasted Value)	Export Quantity = [1896049.22 (4) 104825.75]; Export Price = [4395.534 (4) 333.899]	2315352.22	5731.13
2022-23 (Forecasted Value)	Export Quantity = [1896049.22 (5) 104825.75]; Export Price = [4395.534 (5) 333.899]	2420177.97	6065.029

# Source: Computed

# Interpretation

The estimated Linear Regression model for the forecast of:

- ✓ Export Quantity = [1896049.22 (Period) 104825.75];
- ✓ Export Price = [4395.534 (Period) 333.899]

As per the Linear Regression equation obtained:

It is expected that India's agricultural product export in terms of quantity to Nepal during the years 2020–21 would be 2210526.47 MT, 2021–22 would be 2315352.22 MT and 2022–23 would be 2420177.97 MT. The agricultural product export performance of India with respect to Nepal is expected to increase in forthcoming years in terms of quantity in comparison with the current year, i.e., 2019-20.

It is expected that India's agricultural products export in terms of price to Bangladesh during the years 2020–21 would be 5397.231 Rs. Crore, 2021–22 would be 5731.13 Rs. Crore, and 2022–23 would be 6065.029 Rs. Crore. The agricultural product export performance of India with respect to Nepal is expected to increase in forthcoming years in terms of price in comparison with the current year, i.e., 2019-20.

Table – 15 Correlations

		Nepal-Export-Quantity	Nepal-Export-Value
Nepal-Export-Quantity	Nepal-Export-Quantity Pearson Correlation		$.926^{*}$
	Sig. (2-tailed)		.024
	Ν	5	5
Nepal-Export-Value	Nepal-Export-Value Pearson Correlation		1
	Sig. (2-tailed)	.024	
	Ν	5	5

\*. Correlation is significant at the 0.05 level (2-tailed).

The Pearson Correlation estimated significance value for the variables, Nepal-Export-Quantity (Metric Tons) and Nepal-Export-Value (Rs.Crore) 0.024, which is less than 0.05, so there is no significant relationship between the variables. The calculated correlation

(R) value is 0.926, which indicates that there is a strong positive relationship between the considered variables; Nepal-Export-Quantity (Metric Tons) and Nepal-Export-Value (Rs.Crore). Hence, we can perceive that when India's export to Nepal increases considerably.

Table – 16 India's Export Performance of Agricultural Products to Pakistan during the period of 2015-16 to 2019-20 – Productwise

Product	Quantity(Mts)	Rank	Value(Rs in Crore)	Rank	Price/Quantity	Rank
Other Cereals	130098.43	2	411.68	5	0.0031643733133	27
Fruits & Vegetables Seeds	17517.29	8	431.4	4	0.0246270969995	5
Maize	15683.94	11	222.67	7	0.0141973254169	8
Buffalo Meat	36831.31	7	211.97	8	0.0057551577720	19
Processed Vegetables	16920.62	9	136.64	10	0.0080753542127	14
Miscellaneous Preparations	35486.51	6	131.77	11	0.0037132420178	26
Cereal Preparations	11727.28	13	141.13	9	0.0120343336221	10
Groundnuts	107948.87	4	593.87	3	0.0055014008020	20
Processed Fruits, Juices & Nuts	11988.24	12	75.01	13	0.0062569651591	16
Jaggery & Confectionery	59998.21	5	119.37	12	0.0019895593551	30

Pulses	130012.59	3	764.74	1	0.0058820457311	17
Other Fresh Fruits	9649.97	14	47.43	14	0.0049150411866	21
Cocoa Products	518.2	19	23.32	15	0.0450019297568	3
Dairy Products	15915.89	10	287.56	6	0.0180674784759	7
Poultry Products	537.5	18	2.31		0.0042976744186	23
Others (Betel Leaves & Nuts)	412.58	20	4.84	18	0.0117310582190	11
Non Basmati Rice	545.18	17	4.77	19	0.0087494038666	13
Guargum	966.05	15	7.44	16	0.0077014647274	15
Natural Honey	52.31	22	0.71	20	0.0135729306060	9
Walnuts	15.78	28	0.30	24	0.0190114068441	6
Casein	2.59	30	0.1	28	0.0386100386100	4
Other Meat	0.03	34	0	31	0	32
Fresh Mangoes	0.10	32	0	31	0	32
Fresh Onions	264.87	21	0.52	22	0.0019632272435	31
Sheep/Goat Meat	0.1	33	0	31	0	32
Processed Meat	14	29	0.69	21	0.0492857142857	2
Milled Products	22.81	26	0.05	30	0.0021920210434	28
Mango Pulp	17.20	27	0.07	29	0.0040697674418	24
Other Fresh Vegetables	312993.97	1	640.18	2	0.0020453429182	29
Fresh Grapes	0.02	35	0	31	0	32
Albumin (Eggs&Milk)	2.1	31	0.12	27	0.0571428571428	1
Basmati Rice	921	16	5.41	17	0.0058740499457	18
Floriculture	44.64	23	0.49	23	0.0109767025089	12
Animal Casings	28	25	0.13	26	0.0046428571428	22
Cucumber and Gherkins (Prepd.&Presvd)	37.02	24	0.15	25	0.0040518638573	25

From table 16, it can be interpreted that the most highly exported agricultural products from India to Pakistan in terms of quantity [metric tonne] are Other Fresh Vegetables [312993.97 MT] between the years 2015-16 and 2019-20 and also the least exported agricultural products from India to Pakistan in terms of quantity [metric tonne] are Fresh Grapes [0.02 MT]. Pulses are the most highly exported agricultural products from India to Pakistan in terms of price [Rs.Crore], while sheep and goat meat are the least exported agricultural products from India to Pakistan in terms of price [Rs.Crore].

Year	Linear Forecast Equation Model	Quantity (Mts)	Value (Rs in Crore)
2015-16	400000 350000	337424.03	1462.33
2016-17	300000 250000 200000	309537.43	1180.18
2017-18	150000	116669.80	749.62
2018-19		97513.23	697.75
2019-20	2015-18 2016-17 2017-18 2018-19 2019-20	26476.73	176.96
2020-21 (Forecasted Value)	Export Quantity = [177524.244 (3) -83391.88]; Export Price = [853.368 (3) -305.317]	-72651.396	-62.583
2021-22 (Forecasted Value)	Export Quantity = [177524.244 (4) -83391.88]; Export Price = [853.368 (4) -305.317]	-156043.276	-367.9
2022-23 (Forecasted Value)	Export Quantity = [177524.244 (5) -83391.88]; Export Price = [853.368 (5) -305.317]	-239435.156	-673.217

Table – 17 bIndia's Export Performance of Agricultural Products to Pakistan during the period of 2015-16 to 2019-20 – Year wise

#### Source:

#### Interpretation

The estimated Linear Regression model for the forecast of:

- ✓ Export Quantity = [177524.244 (Period) -83391.88];
- ✓ Export Price = [853.368 (Period) 305.317]

As per the Linear Regression equation obtained:

It is expected that India's agricultural product exports in terms of quantity to Pakistan during the years 2020–21 would be -7265.196 MT, 2021–22 would be -156043.276 MT, and 2022–23 would be -239435.156 MT. The

agricultural product export performance of India with respect to Pakistan is expected to decrease in forthcoming years in terms of quantity in comparison with the current year, i.e., 2019-20.

It is expected that India's agricultural products export in terms of price to Pakistan during the years 2020–21 would be -62.583 Rs. Crore, 2021–22 would be-367.9 Rs. Crore, and 2022–23 would be-673.217 Rs. Crore. The agricultural product export performance of India with respect to Pakistan is expected to decrease in forthcoming years in terms of price in comparison with the current year, i.e., 2019-20.

Pakistan-Export-	Pakistan-Export-
Quantity	Value

9080

Pakistan-Export-Quantity	Pearson Correlation	1	.963**
	Sig. (2-tailed)		.008
	Ν	5	5
Pakistan-Export-Value	Pearson Correlation	.963**	1
_	Sig. (2-tailed)	.008	
	Ν	5	5

\*\*. Correlation is significant at the 0.05 level (2-tailed).

The Pearson Correlation estimated significance value for the variables, Pakistan-Export-Quantity (Metric Tons) and Pakistan-Export-Value (Rs.Crore) 0.008, which is less than 0.05, so there is a significant relationship between the variables. The calculated correlation (R) value is 0.963, which indicates that there is a strong positive relationship between the considered variables; Pakistan-Export-Quantity (Metric Tons) and Pakistan-Export-Value (Rs.Crore). Hence, we can perceive that when India's export to Pakistan increases considerably.

 Table – 19 India's Export Performance of Agricultural Products to Srilanka during the period of

 2015-16 to 2019-20 – Productwise

Product	Quantity(Mts)	Rank	Value(Rs in Crore)	Rank	Price/Quantity	Rank
Fresh Onions	990050.92	1	1925.93	2	0.0019452837839	32
Jaggery & Confectionery	122853.89	5	323.06	5	0.0026296277635	28
Pulses	51863.97	6	685.64	3	0.0132199675420	14
Miscellaneous Preparations	38708.43	7	311.25	7	0.0080408841174	18
Other Fresh Vegetables	181344.72	3	446.96	4	0.0024646981726	30
Cereal Preparations	28427.48	8	322.12	6	0.0113312893017	17
Others (Betel Leaves & Nuts)	2547.81	19	53.67	17	0.0210651500700	9
Processed Fruits,Juices& Nuts	15884.76	12	125.63	10	0.0079088384086	19
Other Fresh Fruits	6870.9	15	79.52	14	0.0115734474377	16
Groundnuts	17027.16	11	129.48	9	0.0076043215662	20
Milled Products	27120.56	9	72.12	15	0.0026592371248	27
Fresh Grapes	8124.45	14	102.92	13	0.0126679344447	15
Cocoa Products	1723.82	22	110.01	12	0.0638175679595	5
Alcoholic Beverages	5858.91	16	116.7	11	0.0199183807226	11
Other Cereals	18190.41	10	55.12	16	0.0030301680940	26
Non Basmati Rice	771176.49	2	1977.97	1	0.0025648733145	29
Dairy Products	1547.37	23	44.83	18	0.0289717391444	8
Processed Vegetables	4363.64	18	28.06	22	0.0064304113079	23

Fruits & Vegetables Seeds	347.02	26	40.9	19	0.1178606420379	4
Basmati Rice	5167.79	17	34.09	20	0.0065966302810	22
Wheat	13309.87	13	28.59	21	0.0021480299957	31
Guargum	2230.16	20	15.32	23	0.0068694622807	21
Mango Pulp	1355.35	24	7.65	24	0.0056442985206	24
Natural Honey	141.1	28	2.93	28	0.0207654145995	10
Floriculture	457.12	25	6.57	26	0.0143725936296	13
Cucumber and Gherkins (Prepd.&Presvd)	1786.77	21	6.97	25	0.0039008937915	25
Casein	9.21	30	0.31	30	0.0336590662323	7
Maize	126542.53	4	199.72	8	0.0015782836015	33
Albumin (Eggs&Milk)	0.39	33	0.07	32	0.1794871794871	3
Poultry Products	207.1	27	3.84	27	0.0185417672621	12
Buffalo Meat	9.38	29	0.42	29	0.0447761194029	6
Other Meat	1.3	31	0.3	31	0.2307692307692	2
Walnuts	0	36	0	34	0	34
Fresh Mangoes	0.07	35	0	34	0	34
Sheep/Goat Meat	0.5	32	0.2	33	0.4	1
Processed Meat	0.1	34	0	34	0	34

From table 19, reveals that rank analysis, it can be interpreted that the most highly exported agricultural products from India to Sri Lanka in terms of quantity [metric tonne] are fresh onions [990050.92 MT] between the years 2015-16 to 2019-20 and also he least exported agricultural products from India to Sri Lanka in terms of quantity [metric tonne] are walnuts [almost 0 MT].

Non-Basmati Rice [1977.97 Rs.Crore] is the most highly exported agricultural product from India to Sri Lanka in terms of price [Rs.Crore], while Fresh Mangoes [almost 0 Rs.Crore] is the least exported agricultural product from India to Sri Lanka in terms of price [Rs.Crore].

Year	Linear Forecast Equation Model	Quantity	Value(Rs
		(Mts)	in Crore)
2015-16	1000000	396158.14	1268.98
2016-17	800000 700000 600000	538946.59	1364.30
2017-18	500000 400000 300000	895092.52	2535.19
2018-19	200000	418464.74	1147.30
2019-20	0 2015-16 2016-17 2017-18 2018-19 2019-20	257815.12	942.47
2020-21 (Forecasted Value)	Export Quantity = [501295.422 (3) -39716.789]; Export Price = [1451.628 (3) -86.982]	382145.055	1190.682
2021-22 (Forecasted Value)	Export Quantity = [501295.422 (4) -39716.789]; Export Price = [1451.628 (4) -86.982]	342428.266	1103.7
2022-23 (Forecasted Value)	Export Quantity = [501295.422 (4) -39716.789]; Export Price = [1451.628 (4) -86.982]	302711.477	1016.718

Table –20 India's Export Performance of Agricultural Products to Srilanka during the period of 2015-16 to 2019-20 – Year wise

#### **Source: Computed**

## Interpretation

The estimated Linear Regression model for the forecast of:

- ✓ Export Quantity = [501295.422 (Period) -39716.789];
- ✓ Export Price = [1451.628 (Period) -86.982]

As per the Linear Regression equation obtained:

It is expected that India's agricultural product exports in terms of quantity to Sri Lanka during the years 2020–21 would be 382145.055 MT, 2021–22 would be 342428.266 MT and 2022–23 would be 302711.477 MT. The

agricultural product export performance of India with respect to Sri Lanka is expected to decrease in forthcoming years in terms of quantity in comparison with the current year, i.e., 2019-20.

It is expected that India's agricultural product exports in terms of price to Sri Lanka during the years 2020–21 would be 1190.682 Rs. Crore, 2021–22 would be 1103.7 Rs. Crore, and 2022–23 would be 1016.718 Rs. Crore. The agricultural product export performance of India with respect to Sri Lanka is expected to decrease in forthcoming years in terms of price in comparison with the current year, i.e., 2019-20.

Table – 21 Correlations

	Srilanka-Export- Quantity	Srilanka-Export- Value
Pearson Correlation	1	.978**

Srilanka-Export-	Sig. (2-tailed)		.004
Quantity	Ν	5	5
Srilanka-Export-	Pearson Correlation	.978**	1
Value	Sig. (2-tailed)	.004	
	Ν	5	5

\*\*. Correlation is significant at the 0.05 level (2-tailed).

The Pearson Correlation estimated significance value for the variables, Srilanka-Export-Quantity (Metric Tons) and Srilanka-Export-Value (Rs.Crore) 0.004, which is less than 0.05, so there is a significant relationship between the variables. The calculated correlation (R) value is 0.978, which indicates that there is a strong positive relationship between the considered variables; Srilanka-Export-Quantity (Metric Tons) and Srilanka-Export-Value (Rs.Crore). Hence, we can perceive that when India's export to Srilanka increases considerably.

# CONCLUSION

The study has analyzed the export and comparative analysis of agricultural products in India with reference to SAARC countries. The study has focused on agricultural products, exports and comparative studies. The total agricultural export of India was 2411006.84 Mts in 2017-18 to Bangladesh and the highest export of agricultural products was 6529.45 Rs in 2017-18 to Bangladesh. The growth of India's agricultural exports is a fluctuating trend among the SAARC countries.

The highest export of agricultural products to Sri Lanka was through Pearson correlation analysis of 0.458 from India. India is the largest exporter of non-Basmati rice, fresh onions, and maize. Exports are one of the largest determinants of monetary improvement in a nation. Through exports, India can build a strong relationship with other SAARC countries.

# REFERECES

- Anisul M. Islam (2019), Bangladesh Trade with India: Trends and Patterns, Athens Journal of Business & Economics, Athens Institute for Education and Research (ATINER), April - 2019, Vol - 5, Issue - 2, DOI: 10.30958/ajbe.5-2-2, Pp. 123 – 140
- 2. Dr. Prakash G. Patel (2019), Study of Impact of Provisions of WTO on Indian Agricultural

Exports with Special Focus on Rice: A Causal Research, Research Review International Journal Of Multidisciplinary, May - 2019, Vol - 4, Issue - 5, ISSN: 2455-3085, Pp. 2186 - 2189.

- Mr. Sumit Saini, Komal (2019), Impact of FDI on Agriculture Sector in India: An Analytical Approach, International journal of basic and applied research, April - 2019, Vol - 9, Issue - 4, ISSN 2249-3352, Pp. 677-683
- Dr.S.Gopalsamy., And M.Arul Kumar.(2020), "Export Of Wheat In India-With Reference To Middle East Countries" CLIO An Annual Interdisciplinary Journal Of History, ISSN:0976-075X, 6(2), Pp.509-518.
- Devi, R. S. (2018), "SPECIAL ECONOMIC ZONES IN INDIA: GROWTH OF EXPORTS, INVESTMENT AND EMPLOYMENT". INDIAN JOURNAL OF APPLIED RESEARCH, ISSN No 2249-555X,8(12),Pp.48-50.
- Dr.Prakash G. Patel (2019), Study of Impact of Provisions of WTO on Indian Agricultural Exports with Special Focus on Rice: A Causal Research, Research Review International Journal Of Multidisciplinary, May - 2019, Vol - 4, Issue - 5, ISSN: 2455-3085, Pp. 2186 - 2189.
- Dr. V. V. Narsi Reddy, S.M. Reddy (2018), Trends in Agricultural Product's Exports and Imports of Major SARRC Countries, International Journal of Advance Engineering and Research Development, International Conference of Trends in Information, Management, Engineering and Sciences, Feb -2018, Vol - 5, Special Issue -2, ISSN (O): 2348-4470, Pp. 1 - 6.
- Kris Johnson Ferriera, Joel Goh, Ehsan Valavi (2017), Intermediation in the supply of Agricultural Products in Developing Economies, Harvard Business School, Working Paper 18 - 033. pp.2-6.

- David Boansi, Boris Odilon, John Appah (2014), Determinants of Agricultural Export Trade: Case of Fresh Pineapple Exports from Ghana, British Journal of Economics, Management & Trade, Vol. 4, Issue 11, ISSN: 1736-1754, pp. 1 – 19
- Bansal, R. K., Gondaliya, V. K., Shaikh, A. S., & Macwan, J. (2017). Export status of processed agricultural food products in India. Indian Journal of Economics and Development, 13(2a), 557-562.
- 11. www.apeda.gov.in