External Trade of Cashew Industry in India and Strategies for Cashew Development

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Abstract

India is the largest grower, processor and exporter of cashew in the world. Cashew is grown in India, Brazil, Mozambique, Tanzania, Kenya, Vietnam, Indonesia and some other African and Asian countries. Now cashew is grown in more than 30 countries in the world. The area under cashew is 43.23 lakh ha in the world with the total production of 16.41 lakh MT. India occupies first place in the area and production of cashew in the world. The per cent change over base year was 107.79 with the production of 613000 MT which amounts to 37.35 per cent to the total world production in 2015. In the year 2014-15 the area under cashew was 991 thousand ha with the total production of 7.14 lakhs MT of raw nuts and productivity of 749 kg ha^{-1} in India. The average productivity in Maharashtra is 1317 kg ha^{-1}. In the year 2014-15 the largest quantity of cashew kernel is exported to USA i.e. 47611 MT followed by UAE, The Netherlands, Japan and Saudi Arabia. There was 37.85% increase in the quantity of cashew kernel exported and 41.67% increase in cashew nut shell liquid (CNSL) quantity exported during 2014-15 compared with to that of 1990-91. In 1990-91 the total import of raw cashew was 82639 MT at a cost of ₹ 134.00 crores and the total import in 2014-15 is 809371 MT contributes the value of ₹ 2337.76 crores.

Keywords: External trade, cashew industry, cashew development.

Introduction

The cashew tree (*Anacardium occidentale*), locally known as 'kaju', is a tropical evergreen native to the Americas but is now widely cultivated in Asia and Africa. It is a short, stocky, low-spreading, evergreen tropical tree. Nearly four centuries ago, the adventurous Portuguese came sailing down the Indian coasts and brought with them this valuable tree nut "Cashew", the favourite nut of the world. Cashew came, conquered and took deep roots in the entire coastal region of India. Cashew found the Indian soil more homely than its homeland. Later it spread as a popular crop to other parts of India.

Cashew seed is found in the lower portion of the cashew apple. Cashew in its natural form is a soft, white, meaty kernel covered by a testa membrane contained within the thick hard outer shells of kidney-shaped seeds, which protects the tasty kernel from the ravages of nature until it is processed. India is the largest grower, processor and exporter in the world. It is also interesting to note that the new statistics of consumer interests done during 2009 has proved that India leads the list of consumers of cashew kernels in the world ahead of USA Cashew kernel is consumed all over the world as a premium snack; besides, it is used more as a preferred ingredient of foods like sweets, dates, ice-creams due to its excellent flavour and unique texture in large array. It can be dry or oil roasted, salted, coated with chocolate, spices, and honey.

Global Scenario

Cashew is grown in India, Brazil, Mozambique, Tanzania, Kenya, Vietnam, Indonesia and some other African and Asian countries. Now recently cashew is grown in more than 30 countries in the world. The area under cashew is 43.23 lakh ha in the world with the total production of 16.41 lakh MT. The average productivity is the highest in Vietnam with 2700 kg ha^{-1}. India leads in the area and production of cashew in the world.

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Recent available information of major countries on production was gathered and compared to know the share of production of raw cashew. The per cent change over base year is also estimated. The information of world's production of raw cashew nuts is presented in table 1.

In 1991 India's share in the world production was 40.7 per cent with the production of 295000 MT followed by Brazil. The per cent change over base year was 107.79 with the production of 613000 MT which shares 37.35 per cent to the total world production in 2010. The per cent change over base year in the world's production was highest in Indonesia which is 368.88 per cent.

Table 1 : World's production of raw cashewnuts 2014-15 (Values in MT).

Rank	Country	Production (MT)
2	Vietnam	1237300
3	Nigeria	836500
4	India	680000
5	Cote-dlvoire	450000
6	Benin	170000
7	Phillipines	132541
8	Guina	130000
9	Tanzania	122274
10	Indonesia	117400
	Brazil	80630

Source: DGCI&S, Kolkata (2013) and FAOSTAT

Indian Scenario:

In the 2014-15 the area under cashew was 1027.2 thousand ha with the total production of 7.25 lakhs MT of raw nuts and productivity of 725.42 kg ha^{-1}. Maharashtra occupies first place in area, production and productivity of cashew in 2014-15. In Maharashtra the per cent change over base year in terms of area, production and productivity of cashew is 28.81%, 129.32% and 49.65% respectively. The Average productivity in the state of Maharashtra is 1262 kg ha^{-1}. The state wise area, production and productivity is shown in table 2.

In India, out of total area of 1027.2 thousand ha of cashew plantation, nearly 400 thousand ha area is developed from the 8th plan onwards by using high yielding varieties. The most important limiting factor towards the low productivity is increasing senile status of existing plantation. The Indian cashew industry contributes valuable foreign exchange to our national exchequer and it is the most potential industry which provides employment to nearly 1.5 million people in industrial sector.

Export and Import

India occupies the first place in the world to export cashew kernels. Indian cashew kernels are appreciated in other countries for their appearance, taste and quality. From India the cashew kernels are directly exported to

Table 2 : Indian Production scenario of Cashew

State	2001-02			2014-15			% change over base year		
	Area (000 ha)	Production (000 MT)	Productivity (kg ha^{-1})	Area (000 ha)	Production (000 MT)	Productivity (kg ha^{-1})	Area (000 ha)	Production (000 MT)	Productivity (kg ha^{-1})
Kerala	100	87	870	84.53	80	946	-15.09	-7.63	4.59
Karnataka	90	40	470	124.71	80.50	645	37.9	101.52	59.57
Goa	55	30	590	58.17	32	550	5.45	7.83	32.20
Maharashtra	143	103	880	186.20	235	1262	28.81	129.32	49.65
Tamil Nadu	90	46	570	140.2	67	478	54.91	46.5	17.36
Andhra Pradesh	135	86	720	185.45	100	539	37	16.76	-10.27
Orissa	110	59	570	180.41	85.50	474	51.73	45.27	19.12
others	18	12	760	56.15	32.42	658	166.66	158.33	13.28
Total	741	463	639	1027.2	725.42	706	33.67	54.16	???

Source : DGCI&S, Kolkata (2016)

Table 3 : Major Indian Export Markets

Countries	2009-10		2010-11		2011-12	
	Quantity	Value	Quantity	Value	Quantity	Value
	(MT)	(000)	(MT)	(000)	(MT)	(000)
U S A	32540	765.29	35236	911.31	47611	1470.47
U A E	19727	494.19	12295	393.31	14173	606.11
Netherlands	10498	258.43	11178	289.02	11517	365.57
Japan	5896	155.37	5944	159.16	7054	237.45
Saudi Arabia	4030	95.29	3386	107.53	5136	207.01
U K	5212	108.89	2798	71.76	3717	109.45
Others	40088	924.14	34918	887.3	42552	1394.62
Total	117991	2801.6	105755	2819.39	131760	4390.68

Source : DGCI&S, Kolkata (2016)

Table 4 : Export of Cashew Kernels and CNSL:

Year	Cashew Kernel Export		C N S L Export		Total value
	Quantity	Value	Quantity	Value	
	MT	₹.Crore	MT	₹.Crore	₹.Crore
1990-91	49874	4422.4	5658	5.56	447.96
1991-92	47738	6690.9	4542	4.02	6694.92
1992-93	53436	7454.9	4258	3.81	7458.71
1993-94	69884	1046.02	3525	2.90	1048.42
1994-95	77000	1246.02	3807	2.4	1248.42
1995-96	70334	1240.50	760	1.45	1241.65
1996-97	68663	1285.50	1735	2.77	1288.27
1997-98	76593	1396.10	4446	7.17	1403.87
1998-99	15026	1609.90	1572	3.26	1613.16
1999-00	92461	2451.45	764	1.84	2453.29
2000-01	89155	2049.75	2246	38.94	2088.69
2001-02	97550	1776.80	1814	4.19	1780.99
2002-03	104137	1933.02	7215	9.25	1942.27
2003-04	100828	1804.42	6926	7.03	1811.45
2004-05	126667	2709.24	7474	7.91	2717.15
2005-06	114143	2514.86	6405	7.09	2521.95
2006-07	118540	2455.15	5589	10.29	2165.44
2007-08	114340	2288.90	7813	11.97	2300.37
2008-09	109522	2988.40	9099	26.06	3014.46
2009-10	108120	2801.60	11227	27.62	2829.22
2010-11	105755	2819.39	12051	33.77	2853.16
2011-12	131760	4390.68	13575	59.46	4450.14
2012-13	104015	4067	9192	29.84	4097.84
2013-14	114791	5058.53	9480	38.61	5095.26
2014-15	118852	5432.85	1093.80	55.81	5483.50

Source : DGCI&S, Kolkata (2016) and CEPC, Kochin

more than 60 countries in the world. The major Indian export market, there quantity and value is shown in table 3.

In the year 2011-12 the largest quantity of cashew kernel is exported to USA i.e. 47611 MT followed by UAE, The Netherlands, Japan and Saudi Arabia. Due to high domestic prices, the domestic consumption was not very impressive. Cashew was treated purely as luxury item and most of the cashew kernels manufactured was exported. In the early years India monopolized cashew kernel market all over the world with more than 90% of the total market share.

Export of Cashew Kernels and Cashew nut Shell Liquid (CNSL):

India is the leading exporter of cashew kernels and CNSL (Cashew Nut Shell Liquid), which earns sizable amount of foreign exchange. ₹ 5483.50 crores was the highest record in 2014-15 by exporting the cashew kernels to other countries. Whereas, the raw cashew nut valued ₹ 5432.85 crores was imported for processing unit during 2014-15.

There was 37.85 % increase in the quantity of cashew kernel exported and 41.67% increase in CNSL quantity exported during 2014-15 compared with to that of 1990-91.The detail export of cashew nut kernels and CNSL during last 21 years is given in table 4.

Import of raw Cashew:

In India the local production of raw cashew nut is almost 50% of the domestic demand, hence India depends on import of raw nuts from Asian and African countries. In 1990-91 the total import of raw cashew was 82639 MT at a cost of ₹134.00 crores and the total import in 2014-15 was 939912 MT contributes the value of ₹6576.93 crores. The details of import of raw cashew of last 21 years are given in table 5.

Projected growth and demand

The raw cashew nuts processed in India during 2011-12 has gone up to about 15 lakh tons of which the indigenous raw nuts production is of 6.92 lakh tons. During 1994-95 the extent of processing of raw cashew nuts was 5.53 lakh tons of which 3.22 lakh tons was indigenously produced and 2.31 lakh tons was imported. Thus, in the last 10 years, the quantity of raw nuts processed in India has increased three times. If the same trend continues for next 10 years, the requirement shall be at least 22 lakh tons by 2021. Hence, it is expected that India will be able to keep pace with the increasing demand of raw cashew nuts from cashew processing units and will become self-sufficient by 2020. The estimated demand and anticipated production of raw cashew nuts during next decade is presented in table 6.

Table 5 : Import of raw cashew in India

Year	Quantity MT	Value ₹.Crore
1990-91	82639	134.00
1991-92	106080	266.68
1992-93	134985	376.33
1993-94	191322	482.70
1994-95	228109	690.94
1995-96	222819	760.08
1996-97	192285	640.60
1997-98	224968	744.00
1998-99	181009	680.24
1999-00	200584	953.52
2000-01	249318	960.80
2001-02	356566	960.01
2002-03	400659	1236.57
2003-04	452898	1400.93
2004-05	578884	2183.24
2005-06	565400	2162.95
2006-07	592604	1811.62
2007-08	605970	1746.80
2008-09	605850	2632.41
2009-10	752894	3037.35
2010-11	529370	2649.56
2011-12	809371	5337.76
2012-13	892160	8331.12
2013-14	771356	3563.99
2014-15	939912	6576.93

Source: DGCI&S, Kolkata (2016) and CEPC, Kochin

Table 6 : Projected growth and demand of Cashew production

Year	Estimated demand of raw cashewnut (lakh MT)	Anticipated production of raw cashewnut (lakh MT)
2012	15.00	8.00
2015	16.50	13.50
2020	21.00	21.00
2021	22.00	22.00

Simple and compound growth rates of total export.

A) Cashew kernel

It can be seen from table 7, that the simple growth rate of total quantity of kernel was maximum i.e. 4141 MT during post liberalisation which indicated that during the second period, the per annum quantity exported increased significantly by 4141 MT. At overall level, the quantity of cashew kernel exported increased significantly by 6.51 per cent during post-liberalisation period. However, the percentage increase was 3.18% during pre-liberalisation period and at overall level the quantity exported significantly by 6.08 per cent.

At constant prices, the simple growth rate was maximum during the post-liberalisation period i.e. ₹ 2072 lakh, which indicated that during, the post-liberalisation period the per annum value received at constant prices increased significantly by Rs.2072 lakh. At overall level, the value increased significantly by ₹1491 lakh.

B) Cashewnut Shell liquid (CSNL)

It can be seen from table 7 that, the quantity of CSNL exported, decreased by 456.20 MT and 426.20 MT during the pre and post-liberalisation periods. At the current prices, the value received was decreased by ₹. 1721 lakh per annum during pre-liberalisation period. However, during the post-liberalisation period, the value decreased by ₹. 10.07 lakh per annum. Overall the value received at the current prices increased by 1.61 per cent.

At a constant price, the simple growth rate of value received for the post-liberalisation period was ₹. 12.36 lakh which indicated that the value was decreased by ₹. 12.36 lakh per annum during this period. So also, during the pre-liberalisation period it was decreased by ₹. 36.31 lakh per annum. Overall, the value decreased by ₹. 14.15 lakh per annum. In terms of percentage, during the post-liberalisation and pre-liberalisation periods the value at constant prices decreased by 11.38 and 11.80, respectively (Table 7).

The Multiple linear regression equation

The Multiple linear regression equation was used to study the factors influencing the export performance of cashew. The factors affecting the export performance of

Table 7 : Simple and compound growth rates of total cashew export for the pre-liberalisation period and post-liberalisation period.

Particulars	Simple Growth Rate			Compound Growth Rate %		
	Pre-Lib. period	Post-lib. period	Overall	Pre-Lib. period	Post-lib. period	Overall
Cashew kernel quantity (MT)	1160.60*	4140.94**	3081.83**	3.18*	6.51**	6.08**
Valueat current prices (₹. Lakh)	2509.00**	16153.71**	954472**	11.69**	15.97**	16.62**
Valueat constant prices (₹. Lakh)	201.95NS	2072.67**	1491.05**	1.32NS	7.28**	6.45**
CSNL Export quantity (MT)	456.20NS	-426.20*	-207.50**	-9.24*	-15.50*	-6.43**
Valueat current prices (₹. Lakh)	-17.22NS	-10.07NS	3.20NS	-3.05NS	-4.21NS	1.61NS
Valueat constant prices (₹. Lakh)	-36.31NS	-12.36NS	-14.15**	-11.80NS	-11.38NS	-7.54**

**Significant at 1% level NS: Non-signifiant; Significant at 5% level

cashew was studied by considering export of cashew kernels as dependent variable (Y) and other factors viz. domestic production (X_1), Export price (X_2), domestic price (X_3), domestic consumption (X_4) and the world export (X_5) as independent variables. From the table 8 it can be observed that regression coefficient for cashew production was 0.005 thousand MT and it was non-significant (Table 8). The regression coefficient for domestic price was 0.03 thousand MT, domestic consumption (0.016) thousand tonnes and found to be non-significant. The regression coefficient for world export was 0.615 thousand MT and was highly significant, which indicated that when the world export was increased by 1 thousand tones, the contribution of Indian export was 0.615 thousand MT. The coefficient of multiple determinations (R^2) indicated that about 96 per cent of the variations in the export of cashew were explained by the variables specified in the equation.

Table 8 : Estimates of regression equation.

Variables	Regression coefficients	t- value
Intercept	9.5248	-
X1	0.005NS	0.19
X2	0.003NS	0.10
X3	0.002NS	0.28
X4	0.016NS	0.28
X5	0.615**	4.95
R2	0.96	

Constraints in Cashew production.

Cashew is blessed with huge wealth of research technology, vast network of processing industries and elite private processing sector and most congenial climatic parameters to cultivate it in 15 states. However, constraints in cashew industry are mainly because of inherited factors developing cashew plantation within descript seedling progenies, now poses a problem of senile and totally unproductive plantation. The cashew sector may need to address the issues viz.

i) Lack of priority to this crop by State Horticulture Departments,
ii) Mainly grown on marginal lands,
iii) Lack of intensive transfer of technology programmes and
iv) Procurement of quality planting materials through tender relegates quality parameters a much lower importance.

Strategies to accelerate production.

The development of cashew in India has gained momentum from 8th five year plan. The objectives of 8th and 9th plan was to increase the domestic production of raw cashew nut to meet the needs of the industry by reducing dependence on import and to augment the export trade, in addition to the demand for domestic consumption. Special impetus was given in the clonal plantation development and to productive technology dissemination centering the various practices needed for clonal plantation development. It was also planned to provide priority for replanting programme under private sector.

Since 2000, the development of cashew in India, especially programmes like New Plantation Development and Replantation Programme are kept under the purview of state work plan by Government of India. The main aim was to give more flexibility to the State Development Departments in order to prioritize developmental strategies for important horticultural crops.

However, the indication arrived by analysing the developmental strategies adopted by various State Development departments and Directorate of Cashewnut and Cocoa Development has not yet given the desired yield in order to completely depend upon the domestic raw nut production for domestic industry and for export. As on today, India is the lead player in the global cashew production scenario, but its position is not sustainable for the years to come. Small countries like Vietnam and Tanzania are developing their own industries by manifold and now they are the tough competitors to India's position in the cashew world market. In this context, it is almost necessary to select and prioritize the important components for the development of cashew in India, in order to meet the demands of domestic industry, as well as to maintain India's prime position in the global cashew scenario (Venkatesh *et al 2012*).

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