

Executive summary of Cashew Processing Units in state of Karnataka

Cashew nut is an important dry fruit grown in eight states in India namely Andhra Pradesh, Goa, Kerala, Karnataka, Orissa, Maharashtra, Gujarat, and Tamil Nadu. Cashew nut needs to be processed before selling to ultimate consumers. Therefore, cashew processing units play an important role in procurement of cashew from the farmers. A study of 40 Cashew Processing Units was undertaken by NABCONS in the four districts of Karnataka namely Udupi, Shimoga, Chikmagalur and Dakshins Kannada.

Year wise area, production and yield of cashew in India

Year wise area production and yield of cashew nut in India is presented in Table. During 2016-17, the area under cashew production was 1035.5 thousand ha with a production of 779.3 thousand MT and yield of 0.8 MT/ha. The GAGR for last 10 years in area of cashew was 1.9 per cent, while, the production of cashew grew at the rate of 2.3 per cent. The yield remain stagnate at 0.7-0.8 MT/ha. The growth in production may be accounted to better varieties of saplings planted, micro-irrigation, use of fertilizers and organized plantation.

Year wise area, production and yield of cashew in India

Year	Area ('000 Ha)	Production ('000 Ha)	Yield (MT/Ha)
2006-07	854	620	0.7
2007-08	868	665	0.8
2008-09	893	695	0.8
2009-10	923	613	0.7
2010-11	953	675	0.7
2011-12	979	725	0.7
2012-13	992	753	0.8
2013-14	1011	753	0.7
2014-15	1029.5	745	0.7
2015-16	1035.6	670.9	0.6
2016-17(Provisional)	1035.5	779.3	0.8
CAGR	1.9%	2.3%	0.7%

State wise area & production under cashew in India

State wise area and production under cashew for major producing states is given in Table. It may be observed that Maharashtra (1.86 lakh ha) was the leading producer of cashew nut followed by Andhra Pradesh (1.85 lakh ha), Odissa (1.82 lakh ha), Karnataka (1.26 lakh ha) and Kerala (0.87 lakh ha). India produces 7.79 lakh MT of cashew nut spread across more than 6 states.

Year wise area, production and yield of cashew in India

States	Area ('000 ha)	Production ('000 MT)
Maharashtra	186.2(18)	256.61(32.4)
Andhra Pradesh	185.57(18)	111.39(14)
Orissa	182.91(17.6)	93.5(11.8)
Karnataka	126.71(12.6)	85.15(10.9)
Kerala	87.29(8.30)	83.98(10.7)
Other States	266.81(25.5)	148.71(20.2)
Total(India)	1035.49	779.34

Source: Horticulture at a glance, 2017. Figures in parenthesis represent %

Major cashew producing clusters are given as under:

1. Maharashtra (Ratnagiri, Sindhudurg, Raipad, Kolhapur, Nashik etc.)
2. Andhra Pradesh (Srikakulam, East Godavari, West Godavari, Vixianagaram, Prakasam etc.)
3. Odisha (Koraput, Malkanpuri, Dhenkanal, Ganjam, Kordha etc.)
4. Karnataka (Dakshinkannad, Udupi, Belgaum, Uttar Kannad, Kolar etc.)
5. Kerala (Kannur, Kasaragod, Kozhikode, Malappuram, Palakkad etc.)

Import of raw cashew nut by India

High demand of cashew nut in India has resulted in growth of cashew processing industry in India. The installed capacity of cashew processing units presently (16.43 lakh MT8 / annum) is almost double (218 per cent) of the production (as per the production of 2016-17). Therefore, many of cashew processing units import raw cashew nut, process them and export the same after processing. India is the second largest importer of raw cashew nut in the world. It can be observed from Table that we import 0.70 to 0.90 million MT of raw cashew nut, which is almost 50 per cent of total world imports of raw cashew.

Import of cashew by India and world

Year	Cashew-nut(with shell) imported by India (in mMT)	Cashew imported (with shell) all over the world in mMT)	Cashew (with shell % imported by India of the total worlds imports of cashew (with shell)
2006	0.58	0.61	95.1
2007	0.57	0.78	73.6
2008	0.66	0.73	89.9
2009	0.66	0.72	92.4
2010	0.56	0.67	84.4
2011	0.80	0.97	82.6
2012	0.82	1.21	67.9
2013	0.83	1.58	52.7
2014	0.91	1.53	59.4
2015	0.97	1.93	50.4
2016	0.73	1.43	50.8
Total	2.30%	9.00%	-

Source:www.trademap.org, International trade Centre

The raw material availability is the major challenge for cashew processing units. The domestic production of cashew nut meets half of the demand by cashew processing units. The import of raw cashew nut lead to higher raw material cost and low margins to the processors forcing processors forcing processors to keep their units shut due to non-availability of raw cashew.

Consumption of cashew in India

In this section, consumption data calculated for years 2017 up till 2020 is indicated. The following factors were taken into consideration for calculation of the same:

- As per NSSO, the per capita consumption of cashew kernel was 1 gm/ month for rural population and 8 gm for urban population for the year 2011-12. Hence, the annual consumption of cashew for rural population was 12 gm / annum and 96 gm / annum for urban population.
- As per census 2011, the rural population was 0.83 billion followed by urban population of 0.38 billion. Annual growth rate of urban population was 0.031 and 0.0123 for rural population.
- The growth of consumption of cashew was assumed to be 5 per cent / annum.

Year wise projected population (in million) & consumption of cashew (in MT)

Year	Rural Population	Urban Population	Total Porulation	Rural Consumption	Urban Consumption	Total Consumption
2011	0.8	0.4	1.2	10,002	36,202	46,204
2012	0.8	0.4	1.2	10,502	38,012	48,514
2013	0.9	0.4	1.3	11,027	39,913	50,940
2014	0.9	0.4	1.3	11,578	41,909	53,487
2015	0.9	0.4	1.3	12,157	44,004	56,161
2016	0.9	0.4	1.3	12,765	46,204	58,969
2017	0.9	0.5	1.4	13,403	48,514	61,917
2018	0.9	0.5	1.4	14,073	50,940	64,013
2019	0.9	0.5	1.4	14,777	53,487	68,264
2020	0.9	0.5	1.4	15,516	56,161	71,677

As per field level discussion and assessment if secondary data, on an average the cashew nuts required for processing 1 kg of kernels of cashew was 3.5 kg. The total consumption of cashew kernels in 2017 was 61,917 MT. Hence, the total requirement of raw cashew for 2017 was 2.16 lakh MT.

Export of cashew nut from India

India Imports raw cashew for processing and marketing in India and also export a considerable quantities of shelled cashew of different countries. India's export of shelled cashew is given in Table. It can be observed that India has consistently exported 0.10-0.12 million MT of shelled cashew – nut during last 10 years. The exports declined during 2016 due to high domestic consumption. India's share in world import of cashew is more than 50 per cent, while the share in export is below 10 per cent.

Export of cashew by India and world

Year	Cashew (shelled) exported by India (in mMT)	Cashew (shelled) exported by the world (in MMT)	Cashew (shelled) % exported by India of the total world exports of cashew (Shelled)
2006	0.12	1.51	8
2007	0.11	1.63	6.8
2008	0.12	1.76	7
2009	0.13	2.24	5.7
2010	0.11	1.52	7.4
2011	0.13	2.53	5.3
2012	0.10	2.07	4.9
2013	0.13	2.60	4.9
2014	0.12	3.30	3.5
2015	0.10	2.97	3.5
2016	0.08	3.07	2.7
CAGR of Exports	(-) 3.70%	7.30%	-

Demand supply of cashew – nut for the year 2016

The export of cashew by India is indicated in Table in 2006, the total domestic production of raw cashew nuts was 0.78 million MT, cashew nuts imported was 0.73 million MT. Hence, the total raw cashew nut available was 1.51 million MT. As per secondary review and field based discussion, the recovery rate of kernels from raw cashew nuts was 30 per cent i.e. from 1.5 mMT cashew, 0.453 kernels was obtained. The domestic consumption of cashew was estimated to be 0.058 million MT and India exported 0.08 million MT to various countries. It can therefore be concluded that a major portion (0.32 mMT) of cashew nut is going for value addition to confectionary, bakery, hotel & restaurants etc.

Demand & supply of cashew during 2016

Particulars	Quantity (million MT)
Domestic Production of raw cashew nut	0.78
Import of with shell cashew nut	0.73

Particulars	Quantity (million MT)
Total raw material available	1.51
Output shelled cashew nut (30%)	0.45
Domestic consumption (as per NSS 68 th round)	0.058
Export of shelled cashew nuts	0.08
Value added particulars from cashew	0.32

State wise share of processing units and installed capacities

State wise share of the processing units and installed capacity is indicated in Table. Overall, there were 3940 cashew processing units across the country with an installed capacity of 1643 thousand MT and average installed capacity of 0.4 thousand MT. The majority of them were from Maharashtra (55.8%). However, the highest installed capacity was in Kerala (36.5%)

State wise share of processing units and installed capacity

State	Processing Units (Nos)	Share of processing units (%)	Installed capacity (000 MT)	Share of installed capacity (%)	Average installed capacity
Kerala	432	11.0	600	36.5	1.4
Karnataka	266	6.8	300	18.3	1.1
Goa	45	1.1	50	3.0	1.1
Maharashtra	2200	55.8	50	3.0	0.0
Tamil Nadu	417	10.6	400	24.3	1.0
Andhra Pradesh	175	4.4	100	6.1	0.6
Orissa	350	8.9	120	7.3	0.3
West Bengal	30	0.8	8	0.5	0.3
Chhattisgarh	3	0.1	5	0.3	1.7
North Eastern States	22	0.6	10	0.6	0.5
Total	3940	100	1643	100	0.4

Major findings of the study

- SFAC had extended a VCA to the tune of Rs.575.05 crore to 1962 projects between 10th FYP, 12th FYP and beyond up-to 31.01.2018.
- Overall, 124 cashew processing units were supported under VCA scheme. Of the total cashew processing units supported, the highest cashew units were from Karnataka (80.6%) followed by Maharashtra (12.9%), Gujarat (2.4%), Haryana (1.6%), Andhra Pradesh (0.8%), Meghalaya (0.8%) and Punjab (0.8%).
- There were 3940 cashew processing units across the country, with an installed capacity of 1643 thousand MT and average installed capacity of 417 MT.
- The total capacity of sample units was 215 MT/day. On an average, the total numbers of working days in the processing units were 300 days/ annum. Hence, total annual processing capacity was estimated to be 64,500 MT. The average installed capacity being utilized by the units was 61.81 per cent.
- The overall average cost of projects across selected districts was Rs.224 lakh.
- Overall, 3,729 farmers were linked with processing units financed under VCA scheme of SFAC. Average numbers of farmers linked with processing units were 39.
- All sample farmers sold raw cashew nuts to the processing units in selected districts. All of them sold it directly to cashew processing units. None of them had entered into contract farming or any other kind of contract with processing units.
- The ex-factory price of 1 kg of cashew kernel was Rs.731 and the average price of 4 kg of raw cashew nuts was calculated to be Rs.592 (for realization of 1 kg of cashew

kernels, 4.2 kg of RCNs was required). Hence, the farmer's share in price of per kg processed cashew was estimated as 80.9 per cent.

- The sample farmers had benefitted due to the VCA scheme. Of all the sample farmers, 74.5 per cent of them indicated that they had assured market and received timely payment for the same. The farmers (20%) indicated that they were provided with pick up facility for collection of raw cashew nuts.
- All of the sample farmers responded that they were not a part of any Farmers Producer Organization (FPO) for cashew nuts.
- In total, VCA was provided to 100 units in Karnataka having aggregate installed capacity of 438.60 MT/day. The units on an average operated for 300 working days. Hence, the total installed capacity that was supported under VCA scheme of SFAC in Karnataka was estimated to be 1.315 lakh MT.
- Average duration of project completion or expansion of existing capacity was 12.2 months for overall units.
- Of all the processors covered, 84 per cent of them mentioned that the amount they received under VCA scheme was sufficient while, 16 per cent had indicated that the amount of assistance received was not sufficient.
- The average expected VCA amount was Rs.23.4 lakh, while the beneficiaries had received Rs.22.5 lakh.
- Of all the bankers covered during field visits, 50 per cent of them had indicated that they did not face any issue regarding lending, whereas, 16.6 per cent of them indicated that no new units were interested in approaching the banks for financial assistance, 16.7 per cent of them indicated that they lacked assurance for repayment from cashew units and 16.6 per cent of them indicated that there was absence of credit from banks branches.
- Of all the bankers covered during field visits, 50 per cent of them said that they did not face any issue regarding recovery, whereas, 33.3 per cent of them indicated that they were facing problems in realization of properties and 16.7 per cent of them indicated that cashew processing units were not inclined to repay the VCA extended.

Impacts of the VCA scheme

- Due to round the year availability of raw cashews nuts both from domestic production or import, the working cycle of processing units is annual and creates year round employment in the region around it.
- Though the seasonal availability of raw cashew is not an issue, raw material prices sometimes go up affecting the viability of the processing units. However, it benefits farmers, as they get better price due to a level playing field of import price of raw cashew.
- The increase in price of RCNS was calculated to be 67 per cent (increase from Rs.9000 to Rs.16, 000 per quintal). The change in the price of raw cashew nuts impacted the price received by the farmers and subsequently their income too.
- Value addition takes place at every stage of cashew processing; from harvesting till the final sale of kernels. After harvesting of cashew, it is sun dried, then steam boiled, de-shelled, steam roasted, peeled, sorted, graded and packaged. Almost 4

per cent of value was added in all after sun drying till packaging on the value of Rs.712 (final price after packaging without margins of processor).

- Cashew processing units covered during the field study were mainly manual. It was observed that women were dominant in the labour force. The average number of women out of the average number of persons directly employed in processing units were 90 per cent (i.e. 52 of the 58 employees were women)
- In the case of cashew value chain, the integration was of farmers to the processors, wherein, the units purchased raw cashew nuts from the local growers. The farmers did not find any issue related to marketing of cashew as processors, were the end consumers for them and they could not do away without selling it or storing it. Hence, processors were an important link of the cashew value chain. Therefore, VCA though give to processors has ensured better realization to farmers for their produce indirectly.

Employment generation

The cashew processing is a labour intensive activity. Average 58 permanent and 89 seasonal labour were engaged directly by a unit, The unit also resulted in indirect employment around it for 605 persons.