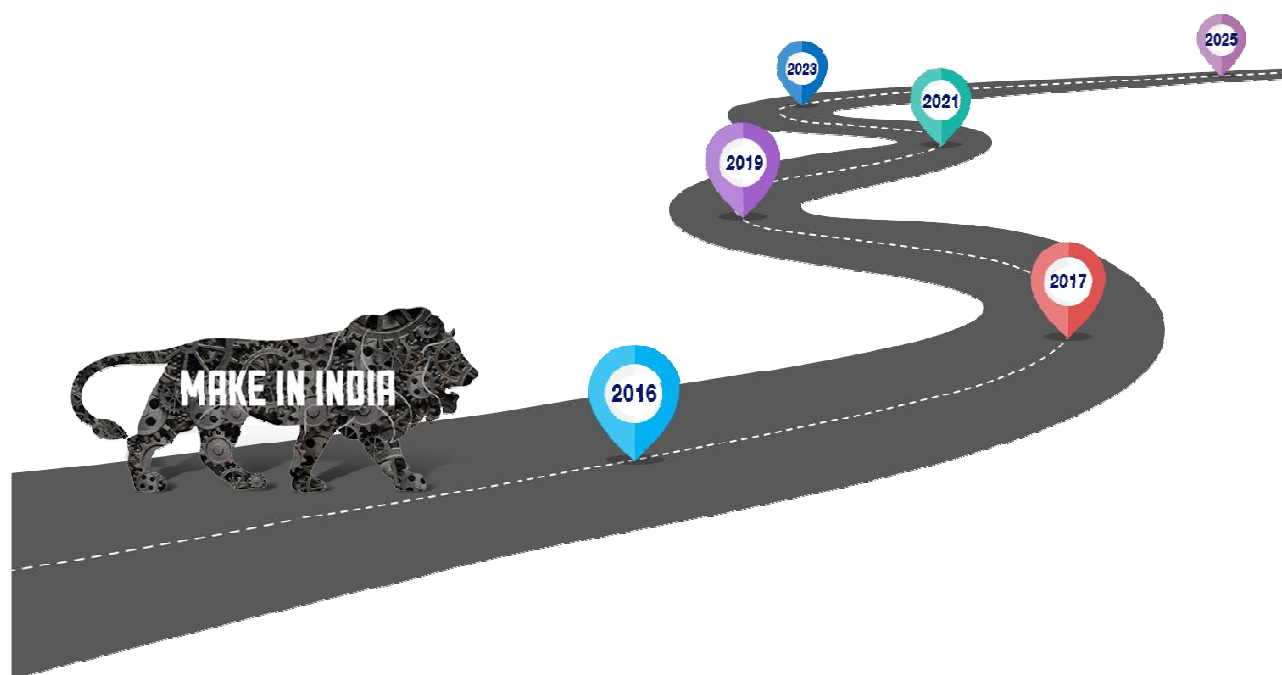


RAW CASHEW PRODUCTION IN INDIA

A ROADMAP FOR 20 LAKHS M.T. BY 2025

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A BRIEF HISTORY:

Cashew – a native of Brazil was introduced to the world by the Portuguese. Portuguese spread this tree to other parts of the world, including India. In India, Cashew was first introduced in Goa during 16th century – the then Portuguese colony. It was noticed that the tree grew on poor sandy soils along the coastal belt and was used by the Portuguese in Africa and India as an anti-soil erosion measure. (Russel,1969; McGovern ,2001). The tree has prospered and spread naturally, particularly in east Africa and India and the crop from the progeny of these wild cashew trees form the basis of the raw material for the cashew industry. Even though initially Cashew trees were planted for preventing soil erosion, later on it was discovered that Cashew Kernels extracted out of Raw Cashew Nuts (RCN) was a valuable food ingredient. In fact, India was the first country which started commercial processing of Cashew Nuts. Today, India has the largest crop of cashews in the world.

The Cashew Tree (Scientific Name - *Anacardium Occidentale*) produces cashew nut, a kidney shaped fruit, called the nut, born exteriorly attached to the swollen fleshy peduncle called the Cashew Apple. The cashew fruit (Figure 1) is unusual in comparison with other tree nuts since the nut is outside the fruit. In its raw state, the shell of the nut is leathery, not brittle. It is this Raw Nut which is used for extracting Cashew Kernels.



Figure 1: the Cashew fruit with nut outside the fruit

The Cashew Industry in India provides employment to more than 10 lakh people in farms and factories, most of them in the rural areas. Thus, apart from its economic significance, the cashew industry plays a leading role in social and financial upliftment of the rural India.

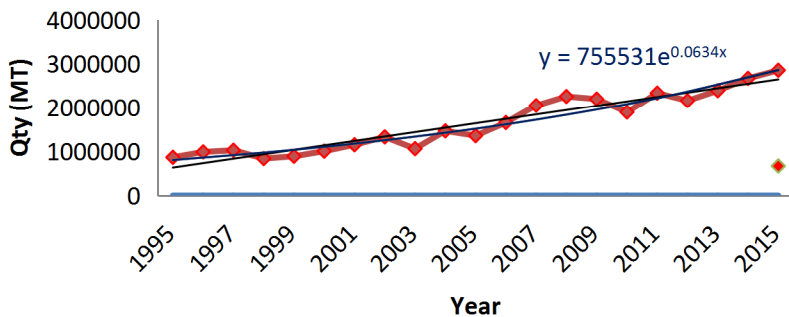
Raw Cashew Production and imports

In India, cashew cultivation spread along the coastal regions of the peninsula and presently cashew is seen growing mainly in Kerala, Karnataka, Tamil Nadu, Goa, Andhra Pradesh, Maharashtra, Odessa, West Bengal, interior tracts of North Eastern regions. The processing that was centered in Kollam (Kerala), Mangalore (Karnataka), Goa and Vettapalam (Andhra Pradesh) is now spread across 12 states of India. Slowly, India emerged out as the processing hub of cashew and nerve centre of the cashew industry world over.

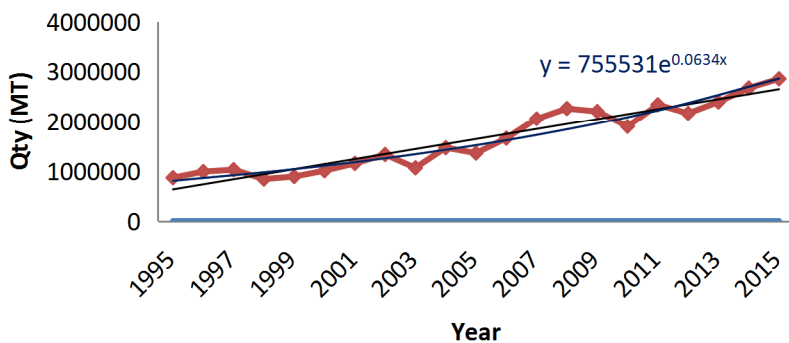
It was during 1960's that India started importing raw cashew nuts when the domestic production was not sufficient to meet the processing demands. That has given a boost to the Indian cashew industry and its production as well as exporting volumes started booming up. Bulk availability of raw cashew nuts for import had a negative impact on the cultivation side of cashew that the cultivation of cashew was either not given due importance or rather neglected. The impact of other cash crops like rubber has still worsened the case. With the enormous growth in the domestic consumption of cashew kernels, the processing demand started growing up steadily resulting in over-dependency on imported raw nuts. With other countries starting processing in a big way and entering the world raw nut market for sourcing their production as well, the share of raw cashew availability for India's production started declining. This is likely to hit out production in a big way as most of the raw nut producing countries started processing and the demand of cashew kernel is ever increasing world over with India continuing to be the World's largest consumer of cashew kernel.

Over the last 20 years , the domestic production of India has gone up from 4,18,000 MT in 1995 to 6,70,300 in 2015 registering a growth rate of CAGR 3.1% against the world production increasing from 8,67,324 M.Tons to 28,58,764 registering a CAGR of 6.3% during the same period. Obviously, the production growth of raw cashew nuts in India is far behind the world growth levels. Today, the cashew production in India occupies an area of 10 Lakhs Hectares of land , the growth of which is almost stagnant over the last decade. While the new high breeds cashew trees are capable of producing over 3000 Kg per Hectare, the average productivity in India is less than 700 Kg per Hectare. Senile trees and poor pre-harvest management attribute to the low productivity of cashew in India.

Indian Production of Raw Cashew Nuts

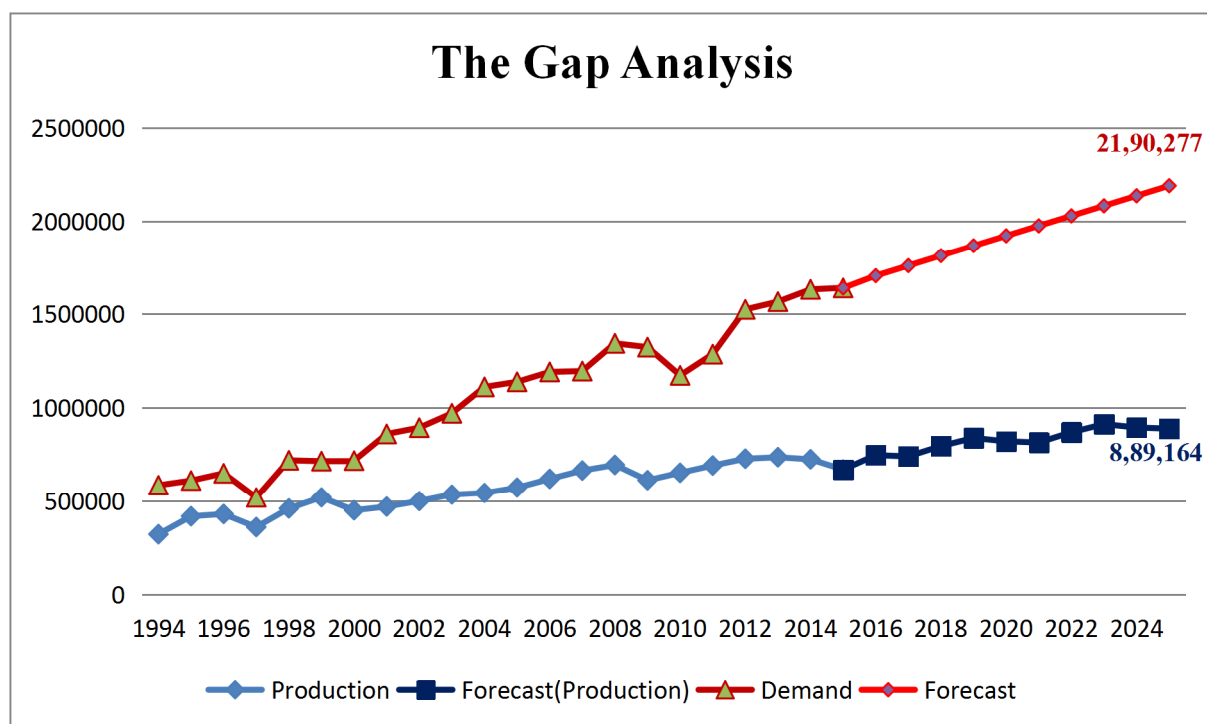


World Production of Raw Cashew Nuts



Forecast of Production and Demand

Given the same level of growth rates, ten years down the lane in 2025, the domestic production of India is estimated at 8,89,164 M.T. with the lower confidence level of 7,80,327 M.T. and the upper confidence level of 9,98,004 M.T. against the estimated demand of 21,90,277 M.T. with a lower confidence level of 18,89,106 M.T. and upper confidence level of 24,91,449 M.T. . As of now, an analysis over the last two decades reveals that the demand (for processing/ consumption) has been growing at an exponential level of 5.3% against the production of raw cashew nuts at a mere 3.1%, resulting in a huge shortage of raw cashew nuts for processing and a high dependency on imports . If this is allowed to continue, by 2015, a shortage of 13,01,113 M.T. of raw cashew nuts is estimated, which has to be supplemented by imports and/or enhanced domestic production. In view of the producing countries establishing processing facilities and the demand for raw nuts from other competing countries on the rise, the desirable option would be to augment the domestic production , keeping a specific road map to attain sustainability by 2025.



The Roadmap to 2025

While designing a road map for attaining sustainability in raw cashew nut productions in India, due care should be given for both area expansion as well as improvement on productivity. Research in the area reveals that proper watering and application of N_2 manure can increase the yield up to 750 grams per tree (*E.V.V.Bhaskara Rao; 2005*). As such, the first attempt in this regard should be to adopt improved Pre- Harvest Management. This should be followed along with area expansion and replanting old and senile trees with hybrid varieties. The basic assumption adopted while making this roadmaps are:

Pre-Harvest Management : Through improved Pre- harvest management yield increases by 15% on the projected yield of 7.47 Lakhs M.T in 2016. Up to 80% of the target can be achieved over a period of three years, ie 50% in 2017, 65% in 2018 and 80% in 2019 which would result in a total production of 8.03 Lakhs M.T in 2017, 8.20 Lakhs M.T in 2018 and 8.37 Laks M.T in 2019. The focus of this Pre-Harvest management program should have specific thrust on:

- Promoting Drip- irrigation
- Adequate manuring
- Pest & Disease management
- Changing the method of collection – from Plucking to Picking
- Technical advice through field officers
- Effective implementation through Cashew producers society / SHG

2020	20% Replanting	6.69	1.50	-	-	-	-	-	-	8.19
2021	40% Replanting	5.02	1.69	1.70	-	-	-	-	-	8.41
2022	60% Replanting	3.35	1.88	1.91	1.80	-	-	-	-	8.93
2023	80% Replanting	1.67	1.88	2.13	2.03	4.00	-	-	-	11.70
2024	80% Replanting	1.67	1.88	2.13	2.25	4.50	4.00	-	-	16.42
2025	80% Replanting	1.67	1.88	2.13	2.25	5.00	4.50	4.00	-	21.42
2026	80% Replanting	1.67	1.88	2.13	2.25	5.00	5.00	4.50	4.00	26.42
2027	80% Replanting	1.67	1.88	2.13	2.25	5.00	5.00	5.00	4.50	27.42
2028	80% Replanting	1.67	1.88	2.13	2.25	5.00	5.00	5.00	5.00	27.92

*All figures in Lakhs

Focus on Implementation:

The focus states of implementation of this road map are identified as Kerala , Maharashtra, Odessa, Jharkhand, Andhra Pradesh ,Tamil Nadu , Karnataka & Goa. The Directorate of Cocoa and Cashew Development, The cashew Research centers all across the country , The State Agricultural Department of the cashew growing States in India along with the Cashew Export Promotion council of India has the role to play in implementation of this road map for sustainability in cashew processing in India.