



TRENDS IN PRODUCTION AND PRODUCTIVITY OF CASHEW INDUSTRY IN INDIA: AN ECONOMIC ANALYSIS

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Abstract:

India is one of the top cashew-producing nations of the world. The cashew sector is quite economically significant in India. India uses 0.7 million hectares of land for cashew farming, and it generates more than 0.8 million tonnes (MT) of the fruit annually. India's cashew nut production increased from 0.70 million tonnes (MT) to 0.77 million tonnes (MT) during 2019–20 and 2021–2022. In India, cashew cultivation expanded along the peninsula's coasts. States like Maharashtra, Kerala, Karnataka, Tamil Nadu, Andhra Pradesh, Goa, Orissa, West Bengal, and some areas of the North-Eastern states are where cashews are primarily farmed. Given that it employs more over 10 lakh people on farms and in factories in rural regions.

In addition to its extensive cashew output, India is renowned for developing cashew processing techniques and exporting cashew kernels around the world. Previously centered in Kerala, Karnataka, Goa, and Andhra Pradesh, now the cashew processing sector is found in several Indian states. India has become the world's center for cashew processing throughout the years.

Cashew processing is a highly labour intensive industry and has a long history of employing a large number of workers. One of the unique features of this industry is that an overwhelming majority (more than 90 per cent) of workers are women belonging to the economically and socially disadvantaged strata of society.

Key words: Cashew Industry, Production, Export-import.

Introduction:

The English word Cashew is derived from Portuguese word “Caju” which is derived from Tupi-Indian word “Acuji”. The botanical name of the cashew tree is ‘Anacardium Occidentale’. The cashew belongs to Anacardiaceae family of plants which also belongs to the mango, the pistachio nut, the noxious poison ivy, poison oak and poison sumac.

The cashew tree is an evergreen perennial grown in tropical areas. The tree can grow up to 40 to 50 feet height under favourable conditions. Cashew trees typically bear fruit after three years and produce mature yields after seven or eight years. The economic lifespan of cashew trees is 20–25 years, after which yields begin to drop.

The fruit is unusual in shape which has two connected parts. One part is a fleshy, pear-shaped stalk, known as the cashew apple. This apple is juicy and thin-skinned from two to four inches in length. The second part of the fruit is a kidney-shaped nut, one to one and a half inches long. The nut shell is smooth and oily and contains a toxic, resinous material. Contained within the nut is a white kernel- the cashew, approximately seven to eighths of an inch in length.

Cashew products can be made from the three (3) main parts of the cashew fruit:

1. Cashew Apple
2. Cashew Nut shell
3. Cashew Kernel with Testa skin

The raw cashew nut consists of:

Part of the cashew	Percentage
Shell	50 %
Cashew nut shell liquid (CNSL) contained in the shell	20 - 25 %
Kernel including the Testa skin	25 - 30 %

1. Cashew Apple Products

- a. Fresh cut cashew apples
- b. Cashew juice: different types of juices, Concentrated juice, Fresh juice, Ingredient for mixed juice, Sweetened juice, Unsweetened juice, Cajuina and Nectar
- c. Bakery products like Cake, Bread and Biscuit
- d. Alcohol like Wine, Beer, Brandy, Ethanol and Cachaça
- e. Syrup and jam: Honey, Cashew plums, Cashew pulp, Flour, Sorbet, Dried cashew apples

2.Cashew Nut shell

Products derived from the cashew nut shell are for industrial use and application.

- Cashew Nut Shell Liquid (CNSL) is used for: Phenolic resin (used as fillers for industrial products, glue, and coaters), Brake lining powder, Paint and varnish, Insecticide, Medication for leprosy, psoriasis, and ringworm,
- Shell cake is used as: Coal substitute, industrial fuel, if produced in large quantities.

3.Cashew Kernel Products:

- Roasted and flavoured cashew kernels: Raw, Sweet, Salted, Powdered and Coated
- Cashew nut paste: Cashew curry, Cashew curry, Cashew cookies cakes, Cashew ice cream. And others products.
- Cashew dried fruit and nut mixes, varieties of products.
- Cosmetics products, Oils, Hand and face creams

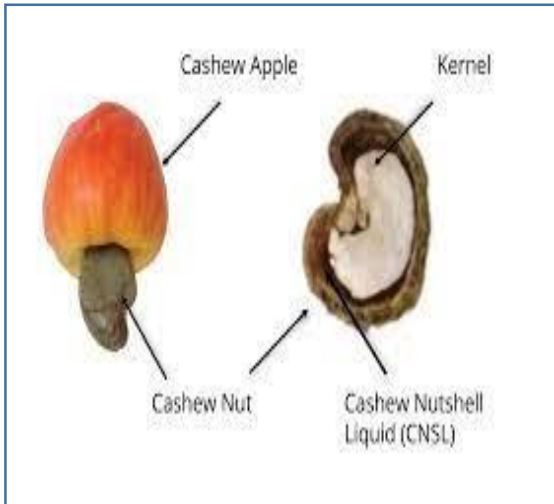
The following picture related cashew:



Cashew Tree



Cashew fruit



Cashew fruit with nut

Cashew Kernel

Source: <http://www.cashewindia.org/>

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Cashew processing is a more labour intensive industry and has a long history of employing a large number of workers. One of the important features of this industry is that an overwhelming majority (more than 90 per cent) of workers are women belonging to the economically and socially disadvantaged strata of society.

Objectives:

1. To study the trends in area, production and productivity trends of cashew processing Industries in India.

Methodology

The present paper is an attempt to analyze production, productivity, area under cultivation of cashew in India. To achieve these objectives, secondary data has been utilized. It has been collected published sources like ICAR-DCR, DCCD, APEDA and ECCI and Internet.

Cashew processing Industry:

In the Indian food processing sector, the cashew nut processing industry plays a critical role. Often, the cashew is considered as 'both a poor person's crop and a rich person's meal.' From the cultivators, traders, wholesalers, processors to supermarkets and retailers, the cashew processing sector is a vital source of income. Cashew processing is a labour intensive industry more than three lakh persons are directly employed of whom 95 percent are women from socially and economically backward communities in rural areas.

Kerala, Maharashtra, Madhya Pradesh, Karnataka, Tamilnadu, Goa, and West Bengal are main cashew producing states. The estimated area under cashew in India is 732 lakh hectares and the production has ranged between 3.5 – 4.7 lakh tones per annum in the recent past. The present installed capacity is over 8 lakh tones.

In fact, inter alia food processing sector, the first country to enter the global cashew trade was India and the country processed about 1.14 million tons of cashew in 3650 cashew processing mills strewn around the country. The number of processing mills increased from 170 units in 1959 to over 3500 units in 2008. Half a million people were employed in the Indian cashew industry and the unorganized sector accounts for 54% and the organized sector accounts for 46%.

Cashews from India are consumed in more than 60 nations around the world. In the worldwide market, Indian cashew is prized for its quality, look and flavor and it accounts for more than 65% of global cashew kernel exports.

Karnataka has put up a tremendous effort in collaboration with industry and farmers to become the country's largest raw cashew producer. Coastal Karnataka is responsible for 70% of State's cashew production. Though Mangalore was the birthplace of large-scale labor-intensive cashew processing units, the processing units are expanding and thriving in district like Udupi.

Global Scenario

The cashew tree, native to Brazil, was introduced to Mozambique and Tanzania and then India in the sixteenth century by the Portuguese, as a means of controlling coastal erosion. In the 17th century, cashew trees were first planted in West Africa to fight desertification and soil erosion. At that time, cashew was mainly planted to protect forest areas. It was spread within these countries with the aid of elephants that ate the bright cashew fruit along with the attached nut. The nut was too hard to digest and was later expelled with the droppings. Cashew was not planted for its economic value at that time. It was not until

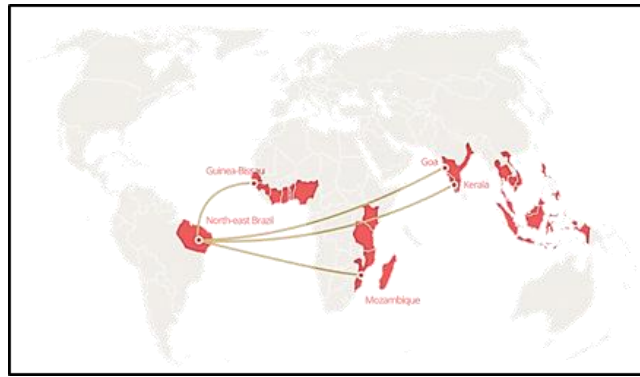
the nineteenth century that cashew considered as plantation crop. Business people and governments in West Africa only realized the commercial value of cashew nut production and processing in the 1990s. This was the start of cashew production and processing in Africa. And the tree then spread to a number of other countries in Africa, Asia and Latin America. The Cashew is cultivated primarily in India, Vietnam, Côte d'Ivoire, Guinea-Bissau, Tanzania, Benin, Brazil and other countries in East and West Central Africa and South East Asia. Plantings have also been established in South Africa and Australia. The cashew since spread to several countries primarily between latitudes 15 degree from north to south.

Table No:1: Cashew Nut producing countries in the world - production and area under cultivation [2019]

Country	Area(Hectares)	Production (Tonnes)	Yield(hg/ha)	Rank	World Share (%)
Côte d'Ivoire	1,913,073	792,678	4,143	1	20%
India	1,105,000	743000	6,724	2	18.75%
Burundi	276,365	607300	10,252	3	15.33%
Vietnam	743,192	283328	192,192	4	7.15%
Philippines	286,88	242329	84,471	5	6.11%
Tanzania	980,363	225106	2,296	6	5.68%
Benin	573,204	204302	3,564	7	5.15%
Mali	40,009	167621	41,896	8	4.23%
Guinea-Bissau	279,610	166190	5,944	9	4.19%
Brazil	426,417	138754	3,254	10	3.50%
Total world production	7,091,275	3960680	-	-	90.15%*

Source: <http://www.fao.org> FAO report

The analysis is about the top ten countries of the world producing cashew in 2019. Côte d'Ivoire has the highest area under cashew is 1,913,073 hectares and India has the second highest in the area of cultivation of cashew is 1,105,000 hectares. The total world area under cashew cultivation is 7,091,275 hectares. The total production of cashew in top ten Cashew Nut producing countries of world is 39606680 tonnes which accounts for 90.15% of global production of cashew. Côte d'Ivoire ranks first in terms of production of cashew accounts for 792,678 tonnes and India ranks second with total production of cashew 743000 tonnes. The average yield is measured in each hectogram of cashew per hectare of land. Vietnam positioned first in terms of yield is 192,192 hg/ha and India with 6724 hg/ha of yield. When it comes to world share, Côte d'Ivoire stands first in world share of 20% and India ranks second with 18.75% share. The Cashew Market size is estimated at USD 7.57 billion in 2023, and is expected to reach USD 8.91 billion by 2028, growing at a CAGR of 3.31% during the forecast period (2023-2028).



Indian scenario

Cashew after its introduction by Portuguese travelers in 16th century has very well adapted to the Indian climatic conditions. Cashew is an important plantation crop of India. It is presently grown in an area of 0.923 million hectares with production of about 0.700 million tonnes. Considerable progress has been made in cashew research since 1950. The potential of this crop in the international trade was first realized by India in the early 1900s through the export of cashew kernels. India has been exporting cashew kernels since the early part of the 20th century. Since cashew was considered as suitable for afforestation and soil conservation, the cashew plantations raised till recently received very little attention. Further, cashew was generally planted in the wasteland and marginal lands with poor fertility status.

Now, India has the largest area under cashew and stands as the second largest producer of cashew in the world. Vietnam, Ivory Coast and Brazil are the competitors to India for cashew production and export. The country exports about 0.100-0.115 million tonnes of cashew kernels annually worth over Rs. 2,905 crores. India exports about 0.11 million tonnes of cashew kernels. About Rs. 2,906 crores is earned as foreign exchange through export of cashew kernel, and an additional Rs. 24 crores by export of the Cashew Nut Shell Liquid (CNSL). Cashew kernels are exported to more than 65 countries of which the largest buyers of Indian cashew kernels are USA and The Netherlands. India was the first country in the world to exploit the international trade of cashew kernels in the early part of 20th century. India's share in world cashew area is 22.50 per cent and share in world cashew production is 20.74 per cent. Cashew is presently grown in an area of 0.923 million hectares with annual production of about 0.613 million tonnes of raw cashew nuts in the country (DCCD, 2011).

Table no 2: Area, Production of Cashew (2016-17)

Area – 000ha Production – 000 MT Productivity – kg/ha

State	Area (000 ha)	Production (000MT)	Productivity (Kg/ha)
Kerala	90.866	83.98	962
Karnataka	127.86	85.147	672
Goa	58.18	32.659	561
Maharashtra	186.2	256.61	1378
Tamil Nadu	141.58	67.65	478
Andhra Pradesh	185.57	111.39	600
Odisha	183.319	93.895	513
West Bengal	11.36	12.96	1140
Jharkhand	14.83	5.83	393
Chhattisgarh	13.7	9.33	681
Gujarat	7.22	6.5	900
Pondicherry	5.0	2.16	432
Assam	1.05	1.08	1028
Tripura	4.25	3.45	812
Meghalaya	8.5	5.83	686
Manipur	0.9	0.324	360
Nagaland	0.5	0.54	1080
Average	1040.89	779.335	753

Source: <https://cashew.icar.gov.in/>, ICAR-DCR Report

It is evident from the above table that in terms of area under cultivation of cashew, Andhra Pradesh stood at first place followed by Odisha and Karnataka. Assam, Manipur and Nagaland stood at last three places respectively. It was vast in traditional areas like east and west coast regions but low in Non-traditional areas like North Eastern regions of India. Top raw cashew producing states of India are Maharashtra, Andhra Pradesh and Odisha and bottom three states are Assam, Nagaland and Manipur. When it comes to Productivity in terms of kilogram per hectare, Maharashtra, west Bengal and Nagaland rank top and Pondicherry, Jharkhand and Manipur lay at bottom line.

Cashew growing districts in different states of India

State	Cashew growing districts
Kerala	Palakkad, Malappuram, Kozhikode, Kannur, Kasaragod
Karnataka	Kolar, Shivamogga, Belagavi, Uttara Kannada, Dakshina Kannada, Udupi, Kodagu, Gadag, Bidar, Chikmagalur, Tumkur, Hassan
Goa	Entire state
Tamil Nadu	Ariyalur, Cuddalore, Pudukkottai, Villupuram, Theni, Thirunelveli, Sivagangai
Andhra Pradesh	Sreeakulam, Vizianagaram, Vishakhapatanam, East Godavari, West Godavari, Guntur
Odisha	Baleswar, Cuttack, Dhenkanal, Ganjam, Kandhamal, Kendujhar, Koraput, Mayurbhanj, Puri, Sambalpur, Sundargarh, Angul, Khordha, Nayagarh, Malkangiri, Nawarangpur
Maharashtra	Thane, Raigad, Ratnagiri, Sindhudurg, Kolhapur, Nashi
Chhattisgarh	Bastar, Dantewada, Raigarh, Narayanpur
West Bengal	Burdwan, Birbhum, Bankura, Puruliya, Midnapore (W), Midnapore (E)
Meghalaya	East Garo Hills, West Garo Hills, South Garo Hills
Jharkhand	East Singhbhum, West Singhbhum, Saraikela
Tripura	South Tripura
Assam	Dhubri
Gujarat	Navsari, Valsad, Dong

Source: <https://cashew.icar.gov.in/> ICAR-DCR

In India, cashew is grown mainly in Maharashtra, Goa, Karnataka and Kerala along the west coast and Tamil Nadu, Andhra Pradesh, Orissa and West Bengal along the east coast. It is also grown to a limited extent in non-traditional areas such as Bastar region of Chhattisgarh and Kolar (Plains) region of Karnataka, Gujarat, and Jharkhand and in North Eastern Hilly (NEH) region including Meghalaya, Tripura and Assam. Andhra Pradesh has largest area under cashew, however, Maharashtra is ranking first in production and productivity of cashew in the country. Traditionally, cashew has been an important crop in the coastal region (western and eastern) of the country but has been recently spreading to non-traditional areas as well. There is great scope for expanding area under cashew in the plains of Karnataka, Chhattisgarh and non-traditional areas of Gujarat, Jharkhand, north eastern hilly region and Andaman and Nicobar Islands.

However, in India the large number of cashew processing units need about 1.3-1.4 million tonnes of raw cashew nuts per annum. India requires about 1.3-1.4 million tonnes of raw cashew nuts to cater the needs of large number of cashew processing units (1800 medium to large, and 1850 on-farm processing units) engaging over 5 lakh workers especially women. India is producing about 0.70 million tonnes of raw cashew nuts annually, the balance of 0.60 to 0.70 million tonnes of raw cashew nuts is imported annually by India from African and South East Asian countries. Besides increasing the area, productivity per unit area also has to be increased in order to make India self-sufficient in production of raw cashew nuts. This situation calls for increasing the domestic raw cashew nuts production and become self-sufficient to provide adequate raw cashew nuts to the processing industries.

Chart no 1: Sowing Area, Production and productivity of cashew in India

Product	2020-21		2021-22		2022-23	
	Qty	Value	Qty	Value	Qty	Value
Cashew kernel, whole	48,575.63	284,038.63	51,907.75	309,681.10	44,271.48	267,747.15
Cashew Nuts Fresh/Dried In Shell	19,831.59	19,975.15	21,652.75	20,221.00	14,322.04	14,283.04
Purified and distilled Cashew shell liquid (CNSL), Cardanol	3,306.09	1,826.87	3,575.59	2,558.95	6,607.05	5,708.32
Cashew shell liquid (CNSL), crude	429.82	145.29	1,368.06	692.03	10,641.81	5,638.61
Cashew kernel, broken	1,417.18	6,662.64	1,193.61	6,292.36	676.44	4,052.82
Other Cashew kernel	263.19	545.96	668.49	1,545.98	305.87	789.43
Total	73,823.50	313,194.54	80,366.25	340,991.42	76,824.69	298,219.37

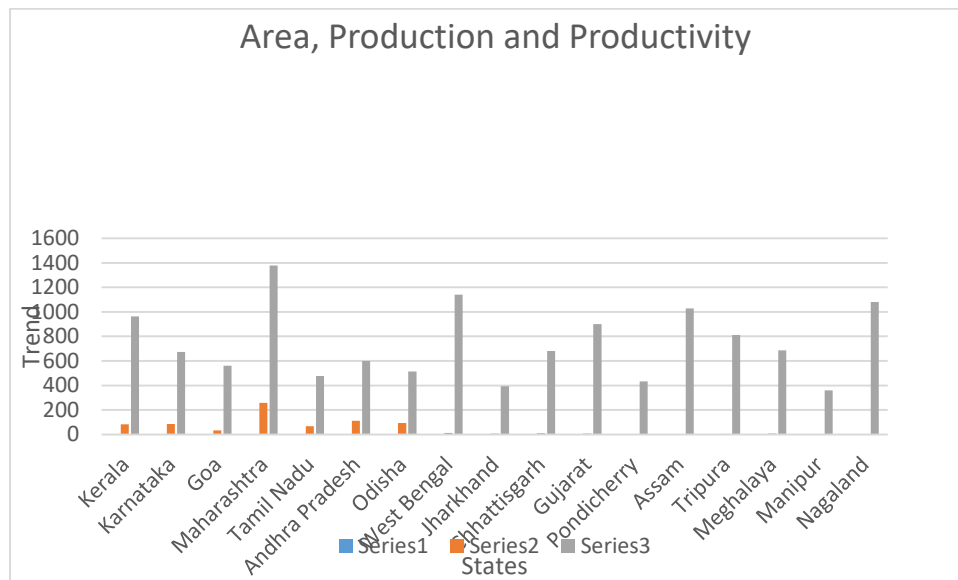


Table no 3: Production of Cashew in India (2020 to 2023)

Source: ICAR, Government of India

Conclusion:

India is one of the world's largest producers of raw cashew nuts, the largest importer of raw nuts and the largest exporter of processed cashew nuts. Cashew provides an important source of income for smallholder farmers and for low-income groups, particularly women, who are the overwhelming majority of workers in the processing sector. Efforts have been taken care of for the improvement in area, production, productivity and export of cashew and import substitution schemes have been introduced by the government of India,

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