

## Analysis of the Cashew nut processing industries in Western Maharashtra.

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**Abstract :** The agriculture sector is vital for any nation, and in India, it is the principal source of livelihood for more than 58 per cent of the population. The Indian food industry is projected to grow from \$100 billion to \$300 billion by 2015, according to a report by a leading industry body and Technopak. During the period, the share of processed food in terms of value is expected to increase from 43 per cent to 50 per cent of the total food production. The food processing industry is of enormous significance for India's development, as it has efficiently and effectively linked the nation's economy, industry and agriculture.

### Introduction :

The linking of these three pillars has synergised the development process and promoted the growth of the nation to a great extent. The Cashew nut processing industries are playing vital role in the Indian food processing industry. Cashew (*Anacardium Occidentale L.*), often referred to as 'wonder nut', is one of the most valuable processed nuts traded on the global commodity markets and is also an important cash crop. It has the potential to provide source of livelihood for the cashew growers, empower rural women in the processing sector, create employment opportunities and generate foreign exchange through exports. India has the largest area harvested under raw cashew nuts in the world.

### Nutritional Value of Cashew nut:

See the table below for in depth analysis of nutrients:

Cashew nut (*Anacardium occidentale*),  
Nutrition value per 100 g.  
(Source: USDA National Nutrient data base)

Principle	Nutrient Value	Percentage of RDA
Energy	553 Kcal	28%
Carbohydrates	30.19 g	23%
Protein	18.22 g	32.5%
Total Fat	43.85 g	146%
Cholesterol	0 mg	0%
Dietary Fiber	3.3 g	8.5%
<b>Vitamins</b>		
Folates	25 µg	6%
Niacin	1.062 mg	6.5%
Pantothenic	0.864 mg	17%

acid		
Pyridoxine	0.417 mg	32%
Riboflavin	0.058 mg	4.5%
Thiamin	0.423 mg	35%
Vitamin A	0 IU	0%
Vitamin C	0.5 mg	1%
Vitamin E	5.31 mg	35%
Vitamin K	4.1 µg	3%
<b>Electrolytes</b>		
Sodium	12 mg	1%
Potassium	660 mg	14%
<b>Minerals</b>		
Calcium	37 mg	4%
Copper	2.195 mg	244%
Iron	6.68 mg	83.5%
Magnesium	292 mg	73%
Manganese	1.655 mg	72%
Phosphorus	593 mg	85%
Selenium	19.9 µg	36%
Zinc	5.78 mg	52.5%
<b>Phyto-nutrients</b>		
Carotene-β	0 µg	--
Crypto-xanthin-β	0 µg	--
Lutein-zeaxanthin	22 µg	--

Cashew kernel is known for its delicious, pleasant taste and for balanced nutritive profile. Cashew is a perfect food with zero per cent cholesterol. The cashew kernel is the main commercial product of the cashew tree. The kernel, which is the edible part of the nut, contains 47% fat (of which 87% are unsaturated fatty acids); 21% protein, 22% carbohydrates, and the remaining 10% made up of other substances including calcium, phosphorus, iron and various vitamins, the main ones being A, D and E. The cashew kernel has a high percentage of polyunsaturated fatty acids, in particular linoleic acid, and is an important source of sodium, calcium, potassium, magnesium, phosphorous, iron, copper, zinc, chlorine and selenium. According to medical sources, cashew nuts may help to lower the cholesterol level in blood and to control diabetes.

Every part of the Cashew tree is useful so called as “milky cow” of the farmer.

- Cashew leaves are used in a mouth freshener.
- Cashew apple is used in preparation of fruit juice, syrup, candy, jelly, pickles, cashew wine fenny & used as a bio-fuel also.
- Cashew Nutshell oil (CNSL) which is a valuable raw material for preparation of oil paints, varnishes, water proofing agents, adhesive ingredients, pigments of gums, typewriter rolls, automobile break lining and lubricants in aircraft.

**World Scenario for Cashew nut industry:**

In the world total 49.35 lakhs area is under cashew cultivation & production is 41.47 lakhs tones. Vietnam ranks No.1 in the world by contributing 12.37 lakhs ton production on 3.40 lakh area i.e. contributing 28 % in the worlds production. India ranks 2<sup>nd</sup> by contributing 15 % in the total world's production.

The major Cashew nut growing countries are as follows:-

Sl. No	Country	Area (lakh ha)	Production (Lakh Ton)	% of Production
1	Vietnam	3.40	12.37	28
2	India	9.82	7.28	15
3	Ivory coast	6.60	3.93	9.1
4	Brazil	7.58	2.31	5.3
5	Nigeria	3.30	5.80	6.0

**Indian Scenario :**

India is the largest area holder of this crop. Cashew ranks as one of the five top agricultural export commodities. Cultivation of cashew in India confines mainly to the coastal areas. It is grown in Kerala, Karnataka, Goa, Maharashtra along the west coast and Tamil Nadu, Andhra Pradesh, Orissa and West Bengal along the east coast. To a limited extent it is being cultivated in Chattisgarh, North Eastern States (Assam, Manipur, Tripura, Meghalaya and Nagaland) and Andaman & Nicobar Islands.

In India total 9.82 lakhs ha area is under Cashew nut cultivation. In that area total production is 7.28 lakhs Ton. So the productivity is 685 kg/ha which gives the employment to the 5 lakh people directly or indirectly. Majority rural women are involved in the cashew nut processing industry.

In the world scenario, India occupies a premier position contributing about 43 per cent of the cashew nut production. Despite India being the largest producer and exporter of cashew nut, the production of raw cashew nut in the country is far below the requirement of the processing sector.

There is a need to expand and fully utilize the potential if India has to keep pace with growing global demand, retain market share and stay ahead of the rapidly emerging competition in the world market.

**Maharashtra State Scenario:**

Maharashtra is ranking 1<sup>st</sup> for the production of Cashew in India. In Maharashtra total area under cultivation of Cashew is 195762 ha. Within that western Maharashtra i.e Ratnagiri, Sindhudurg, Raigad, Kolhapur area covered is 188,790ha.

Sl.No.	District	Area in Ha	Production in M.T	Total processing units	Capacity of Processing Units (M.T)	Processing at Present (M.T.)
1	Ratnagiri	91,350	67179	141	40000	24000
2	Sindhudurg	56225	66003	111	36000	22700
3	Raigad	21351	20733	11	3000	1500
4	Kolhapur	19864	45728	119	22450	17395
5	Others	6972	19721	37	6460	3250
	Total	195762	225000	419	108110	68845

In Maharashtra the major areas contributing in the Cashew production are from Kokan region. Other than Kokan region Kolhapur district is contributing more followed by Pune district which is a non Cashew zone where there are 30 processing units are sustained. The new upcoming non Cashew zone is in Chandrapur & Gadchiroli dist.

In Cashew processing Maharashtra is earning more than Rs.1750 cr/year.

#### **Marketing structure of Cashew nut in Western Maharashtra as compare to Kerala & Goa:-**

Marketing in respect of cashew involved several players and channels. Marketing begins from the sale of raw cashew nuts by farmers and reaches the level of exporters/ retailers for selling of processed and graded kernels to the ultimate consumers.

There was no regulated market for raw cashew nuts in India. Even with the existence of regulated market for cashew, raw nuts were sold by the farmers to the traders/ commission agents. Payment of cess and taxes in regulated markets deterred the producers from resorting to regulated markets.

Marketing of raw cashew nuts in India has not yet been organized in a systematic manner except in Kerala & Goa where co-operative marketing societies have a major stake in raw nuts trade. These co-operatives, where the producers were the major stakeholders acted as intermediary between the producers and the processors. The society had collection centers located in the production areas and procured cashew nuts from the growers. The sales price was fixed at Rs. 1.50 per kg above the procurement price and the processors had to lift the produce and bear the transportation cost from the society/ collection centers. There was another co-operative set up, which directly procured raw nuts from producers and also had a processing unit on lease. Through this mode, the supply chain was further shortened and was beneficial both to producers and processors.

In Maharashtra also, the Cashew nut processing industry as well as the marketing system is not well organized as it is in Kerala and Goa. Many farmers sell the collected and dried nuts to the traders in the local market. The traders sell the raw Cashew Nuts further to the processing industry owners. The processing industries process the Cashew Nuts and send to the distributors in nearby cities as well as in local market either by creating their own brand or in loose.

Cashew kernels are high value commodity. In order to compete directly in the world market, high level of standards, branding and marketing is required to be maintained by the processors. Standards for raw nut quality like moisture content, and cleanliness of nuts are needed to improve trade.

#### **Export –Import Scenario of Cashew nut in India:**

In order to fulfill the raw material requirement India have to import the raw material from different countries. Following fig. will highlight the export- import scenario of India in brief:-

Sr. No	Export- Import Particulars	Quantity (Lakh Ton)	Value in Crores)
1	Import of raw Cashew nuts	8,922	5331.12
2	Export of Cashew kernels	1.040	4067.21
3	Export of cashew CNSL (OIL)	9192	2984

In India more than 60% cashew kernels are exported to the different countries of the world. Western Maharashtra is prominently contributing in the export of Cashew kernels as the taste of Western Maharashtra Cashew kernels is more in demand in international market.

#### **Scope for the Cashew nut processing industries:-**

- The country accounts for about 65 per cent of the world's total exports.
- India exports kernels to more than 60 countries across the world.
- Vietnam's area under Cashew nut cultivation is 10% of the world & production is 34 % of the world.

- In Indian context area under Cashew nut cultivation is 24% of the world & production is 19% of the world. It means we have lot of scope to decrease the import of raw cashew nut by increasing the crop productivity.
- Still in Maharashtra 5 lakh ha area can be brought under the cultivation of Cashew nut.
- In next 5 years Maharashtra can earn more than Rs. 3825 cr/year through Cashew nut industry.
- The domestic market is consistently in a position to absorb the extra production of cashew nuts without much change in the price of Cashew Nut.
- In Maharashtra there is a wastage of cashew apple more than 10 Lakh Ton every year. This can be utilized for the preparation of fruit juice, syrup, candy, jelly, pickles, cashew wine fenny & used as a bio-fuel also. This will be the value addition for the cashew.

**Need & importance of the research:**

India & Maharashtra have the abundant potential for raw cashew nut production. In Maharashtra the Kokan region is enriched with the raw Cashew nuts cultivation due to the suitable climatic condition. Even though the maximum Indian market is captured by the cashew nut processors from Kerala & Mangalore the taste & quality of this Cashew nut is considered secondary as compare to Cashew nut of Maharashtra & Goa.

This study helps to analyse the current status of Cashew nut industries in Western Maharashtra, the challenges Cashew nut growers are facing while producing & marketing the product.

This will be beneficial for the Nation by decrease in the import & increase in the domestic as well as international market which results into increase in the national income.

It is also beneficial to the Cashew nut growers to boost their profitability in the processing of product & increase in the crop cultivation area.

For the society this study is useful because the customer will be able to purchase the quality cashew nut good in taste & available in adequate quantity throughout the year.

**OBJECTIVES:**

1. To study the nature of cashew nut industry in Western Maharashtra
2. To study the opportunities of Cashew nut processing industries in western Maharashtra.
3. To analyze the current status of Cashew nut industries in Western Maharashtra.
4. To analyze the challenges Cashew nut growers are facing while producing & marketing the product.

**HYPOTHESIS:**

When a prediction or a hypothesized relationship is to be tested by scientific method, it is termed as research hypothesis. The research hypothesis is a predictive statement that relates an independent variable to a dependent variable.

**RESEARCH METHODOLOGY**

Primary Data:

The primary data are those which are collected afresh and for the first time, and thus happen to be original in character.

During the project work following will be the methods of primary data collection:

- Observation Method
- Interview Method
- Questionnaires Method
- Data Collection through Schedules

**Secondary Data:**

Secondary data means data that are available i.e., they refer to the data which have already been collected and analyzed by someone else.

During the Research work following will be the methods of secondary data collection:

Various Publications of the central, State and District Government and Universities.

Various publications of foreign governments or of international bodies and their subsidiary organizations  
Technical and Trade Journals, Books, Magazines and News Papers Reports and Publications of various associations connected with business and industry, banks, stock exchange, etc. Reports prepared by research scholars, universities, economists etc. in different fields Public Records and Statistics, historical documents and other sources of published information and Data from direct companies in the field of Food Processing in Maharashtra.

**Sample Size:** In this field studies are undertaken in practical life, considerations of time and cost almost invariably lead to a selection of respondents i.e., selection of only a few items. The respondents selected should be as representative of the total population as possible in order to produce a miniature cross-section. The selected respondents constitute what is technically called a 'sample size' and the selection process is called 'sampling technique'. The survey so conducted is known as 'sample survey'. Therefore population is selected according to some rules for studying some characteristics of the population, the group consisting of units is known as 'sample'. During the project work, the samples are nothing but food processing industries in Western Maharashtra. The sample size will be 30 for the said project work to understand the Feasibility of Foreign direct Investment Food Processing Industries in India.

**Conclusion :**

The role of statistics in research is to function as a tool in designing research, analysis its data and drawing conclusions there from. Here the inferential statistics will be used where it is required to estimate the population parameters and testing the statistical hypotheses. With the help of Confidence level approach sample size can be determined. As per the requirement during project work, Measures of Central Tendency, Chi-Square Test, etc can be used.

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