

# FAQs

## **1. Write a note on cashew grow in India.**

Cashew is one of the important tropical crops called as “poor man’s crop, rich man’s food”. The cashew nut is native of Brazil from where Portuguese travelers took the cashew plants to India. In India Cashew plant first recorded in Cochin by 1578, in Goa by 1598.

The crop is grown mainly in peninsular states of India particularly along the coastal states like Kerala, Karnataka, Goa, Maharashtra, Tamil Nadu, Andhra Pradesh, Orissa and West Bengal.

India processed about 1.18 million MT of raw cashew seeds through 3650 cashew processing industries scattered in many states of country and providing employment to over half million people.

## **2. Name the general steps involved in the processing of cashew nuts.**

The general processing steps involved in cashew processing are,

- Drying
- Soaking of seed
- Steam cooking or roasting
- Decortications
- Separation
- Kernel
- Peeling and Packaging.

## **3. Write a note on roasting process**

The roasting of cashew seeds is carried out in a manually rotating open drum of diameter 600 mm and 2.5m length, with an inclination of axis 15°–20° to facilitate the flow of the material from inlet to outlet by rotation of the drum and gravity.

The drum is placed in a ‘dog- house’ (means that cage like house). Initially the drum is heated externally by firing about 25 to 30 kg of roasted cashew shell for about 15 to 20 minutes. Once the drum is heated up, the cashew nuts are fed manually through an elevated hopper into the inlet of the hot drum. The drum is rotated manually, so that the cashew nuts are moved from inlet to outlet of the drum. Due to the high temperature of the drum, the Cashew Nut Shell Liquid in the cashew nut catches fire spontaneously and the

nuts are roasted through the entire length of the drum without any supporting fuel.

#### **4. Write a note on Cashew Nut Cooker.**

A cylindrical steam cooker with provision of cashew nut feeding at the top and discharging of cooked nuts from the side near bottom, has a capacity of holding 4 bags (80 kg each) of cashew nut in a batch. Once the cashew nut is loaded, steam from a boiler is introduced into cooker at a pressure of 7.0–8.5 kg/cm<sup>2</sup>. The cashew nuts in the cooker are steam cooked and when all the nuts are sufficiently cooked, the excess steam starts releasing near the bottom outlet. The steam is injected into the cooker till the steam starts escaping from the outlet mouth of the cooker. This process takes about 10–20 minutes time. Then the steam injection into the cooker is stopped and the condensed water at the bottom of the cooker is discharged in to a container and disposed on ground through septic tank.

#### **5. What are the Waste water Discharge Standards for cashew nut processing ?**

The wastewater generation from different sources of cashew nut roasting and cooking process are as follows:

Quenching operation in roasting process: 200 liters/day. In this process 2–4 hrs of operation in a day.

Cooking Process: 70-80 liters/day

In view of such infrequent nature of wastewater generation, this water with Biochemical oxygen demand of 5000 ppm, Chemical oxygen demand of 10000 ppm and Oil & Grease Extractable, mostly in the form of phenolics compounds at 2000 ppm.

#### **6. What are the alternatives are recommended to wastewater discharge standards for disposal?**

The following alternatives are recommended to comply with following wastewater discharge standards for disposal on land Solid Waste Disposal Practices

- The use of cashew shell generated especially by roasting process, as fuel, has to go through bio gasification route to convert into less polluting fuel gas as a long-term measure

- The ash generated at the bottom of 'Borma' air heater as well as the Steam Boiler and excess ash from initial firing of the roasting drum, have to be properly condensed using with necessary precautions so that there are no secondary air emissions.
- The cashew shell or de-oiled cake should not be sold to retail users for domestic and commercial firing purposes due to their obnoxious odor.

### **7. Write a note on placing cashew nut processing industries.**

1. Cashew Seed Processing Industry shall be established at least 1.0 km away from residential area, hospital, schools, public building or a place where flammable substances are stores / processed.
2. Cashew Seed Processing Industry shall be established 5.0 km away from notified municipal limits of any town/city or airport.
3. Cashew Seed Processing Industry shall not be constructed within 200 m from the middle of Railway Tracks, National Highway and State Highway and 50 m from the middle of other roads.
4. In normal circumstances, installation of new cashew seed processing industry shall not be allowed in sensitive areas notified by the State Pollution Control Boards / Pollution Control Committees under the provisions of the National Air Quality Guidelines using coal as fuel.
5. The distance between two Cashew Seed Processing Industries should not be less than 500 meter to avoid clustering of Cashew Seed Processing Industry in an area.

### **8. write a note on Decortications**

Decortications either by shelling or cutting

**Shelling**—roasted nuts have to be shelled by breaking shells with wooden mallets

**Cutting** – Steamed nuts have to be cut with blades mounted on wooden tables. Raw nuts after conditioning and cooling are to be shelled to remove kernels with the help of hand cum pedal operated shell cutter. After shelling the kernels and shell pieces are separated manually.

## **9. Write a brief note on health benefits of the cashew nut.**

### **1. Prevents Cancer:**

Proanthocyanidins are a class of flavonols which fight against tumor cells by stopping them to divide further. These proanthocyanidins and high copper content in cashew nuts help fight against cancerous cells and keeps you away from colon cancer. This is one of the major cashew nut benefits.

### **2. Healthy Heart:**

Cashews contain low fat content when compared to other nuts and that too in the oleic acid form which is very healthy for heart. They are cholesterol free and the antioxidants present keeps you away from heart diseases.

**3. Lowers High Blood Pressure:** Cashew nuts lower your blood pressure with the help of magnesium present in them.

**4. Helps Hair:** Copper is the mineral which helps your hair get that color. So if you take cashews which are full of copper content, you can get that black hair that you always wished for.

**5. Healthy Bones:** Like calcium, magnesium is also important for bone health which is the main content in cashew nuts.

**6. Healthy Nerves:** Magnesium is stored on the bones surface which prevents calcium from entering the nerve cells and thus keeps the blood vessels and muscles relaxed. Insufficient amount of magnesium can lead calcium to enter the blood vessels leading them to contract. It also leads to high blood pressure, migraine headache etc.

**7. Prevents Gallstones:** Daily intake of cashew nut can reduce the risk of developing gallstones up to 25%.

**8. Helps in Weight Loss:** Even though cashew nuts are considered as fats, it contains good cholesterol. So contrary to popular belief, those who eat cashews at least twice a week gain less weight when compared to those who eat less.

**9. Anti-oxidants:** Selenium, copper, magnesium etc. act as co-factors for many enzymes.

### **10. Helps Digestion:**

Cashew nuts help in growth and development, nucleic acid synthesis and digestion

### **11. High on Vitamins:**

Cashew nuts are rich in vitamins like riboflavin, pantotheonic acid, thiamin, niacin etc. These vitamins keep you safe from sideroblastic anemia, pellagra, etc.

### **12. Healthy Gums and Teeth:**

As mentioned before, the magnesium content present in cashew nuts is very good for bones. So it gives healthy teeth as well as strong gums to hold them.

### **13. Pleasant sleep:**

After menopause, these cashew nuts can give you relaxed and pleasant sleep during nights.

### **14. Free Radicals:**

Cashew nuts help our body to utilize iron properly and eliminate free radicals which cause health problems.

**15. Macular Degeneration:** Macular degeneration is the leading cause of severe vision loss in people over age 60, Cashew nuts have the ability to filter Sun's UV rays and protect us from macular degeneration.

### **10. Write a note on Peeling of cashew nuts**

The brown skin cashew nuts are peeled off and initial grading by wholes, pieces and color takes place.

The peeling process involved removal of testa from the kernel with the help of sharp knife

### **11. Write a note on Grading of cashew nuts**

The kernels are graded by Cashew Export and Promotion Council specifications are adopted for grading of cashew kernels

### **12. Write a note on Filling of cashew nuts**

The graded kernels are:

- (a) Vita packed in 25lbs tins – after vacuuming and infusing carbon dioxide, or
- (b) Packed in 25lbs or 50lbs gas infused flexi packs.

### **13. Write a note on Packing of cashew nuts**

- (a) Two 25lbs tins are packed in a corrugated box. Or
- (b) Two 25lb or one 50lb flexi pack/s are packed in a corrugated box

### **14. Write a note on Roasting of cashew nuts**

There are two type of roasting in the process

1. Drum Roasting - Nuts passed through heated drum where it catches fire for 2-3 minutes
2. Oil-Roasting: Dried nuts conditioned with water passed through a hot oil bath by conveyer. In this condition, the nuts come out.

### **15. Write a note on Steaming of cashew nuts**

This method now a day's adopted widely all over India. The dried nuts are steam cooked. Well dried raw nuts are subjected for steam boiling which is commonly adopted method of nut conditioning in India.

The raw nuts are steamed conditioned about 90-100 lb pressure for 25-30 minutes and then allowed for 24 hrs cooling.