

Details of Products Coming under Technology Mission on Coconut for Availing Subsidy

1. Desiccated Coconut Powder

Desiccated Coconut Powder is obtained by drying ground or shredded coconut kernel after the removal of brown testa. It finds extensive use in confectioneries, puddings and many other food preparations as a substitute to raw grated coconut. It is available in coarse, medium and fine grades and also in special grades such as threads, strips, granules etc.

Investment in the range from 1 to 1.5 crore is needed to set up units of capacity 10,000 to 25,000 coconuts per day.

http://coconutboard.gov.in/DC_project_profile.pdf

2. Coconut Chips

Coconut chips, as any other chips, are a ready to eat snack food. Dehydrated mature coconut kernel slicers are dipped in osmotic medium like sugar syrup is called Coconut Chips. The major characteristics of coconut chips are as follows:

1. It is a ready to eat snack
2. Not fried in oil
3. No preservatives
4. No loss of flavor or nutrient in the kernel

It is a ready-to-eat snack product. For getting training on production of coconut chips, you may please contact to CTI, Aluva- Ph: 0484 2679680.

To start a unit of capacity 500 to 1,000 coconuts per day, an investment of Rs. 7.00 to 10.00 lakh is envisaged.

<http://coconutboard.gov.in/docs/coconutchips.pdf>

3. Virgin Coconut Oil

Virgin coconut oil (VCO), extracted from fresh coconut meat without chemical processes is said to be the "mother of all oils". It is rich in medium chain fatty acids, particularly lauric acid and is a treasure trove of minerals, vitamins, antioxidants and is an excellent nutraceutical.

The product is in high demand nowadays. The technology for production of cold pressed virgin coconut oil (centrifuge process) is available with CDB and the technology transfer fee is Rs. 50,000/- plus applicable service tax.

In order to setup a processing unit for this product, a total cost of Rs. 1.00 to 2.00 crore is estimated for a capacity of unit with 5000 to 20000 coconuts per day.

http://coconutboard.gov.in/VCO_project_profile.pdf

4. Coconut Oil

Coconut oil is an important cooking medium in Southern parts of the country especially in Kerala State. Besides, the oil has varied industrial applications. It is used in the manufacture of toilet soaps, laundry soaps, surface active agents and detergents, hair tonics, cosmetics, etc. It is

used throughout the country as a hair oil as it helps growth of the hair. As a massage oil it has a cooling effect on the body. Owing to these qualities coconut oil has a potential market in the country

For a capacity of 5 tons to 10 tons copra per day, an estimate of Rs. 75 lakh to 2.00 crore is envisaged.

<http://coconutboard.gov.in/oil.htm>

5. Copra

Two types of copra namely milling and edible are made in India. Milling copra is used to extract oil while edible grade of copra is consumed as a dry fruit and used for religious purposes.

To start a modern copra making unit for milling copra of capacity 10,000 coconuts per shift, an estimate of Rs. 25 to 30 lakh is expected.

<http://coconutboard.gov.in/docs/model-copra-dryer-project.pdf>

6. Coconut milk/ flavored coconut milk

Coconut milk is healthy, vegan alternative to dairy milk. Coconut milk does not contain lactose and is lower in carbohydrates than dairy milk, which can be consumed by people who are lactose-intolerant or just don't enjoy the taste of dairy milk.

CDB has developed the technology for coconut milk processing and the technology transfer fee is Rs. 50,000/- plus applicable service tax for private entrepreneurs and Rs.25,000/- plus applicable service tax for farmer producer organizations.

To start a unit for coconut milk processing with a capacity of 2000 liters to 4000 liters of coconut milk per day, an amount of Rs 75 lakh to 1.50 crore is estimated.

<http://coconutboard.gov.in/docs/flavoured-coconut-juice.pdf>

7. Coconut Milk Powder

The spray dried coconut milk powder is now available in convenient and ready to use packs with same freshness of a fresh coconut milk. It has a longer shelf life and is convenient to use. This can be used in place of fresh coconut milk for food preparations / beverages in households and food industries by dissolving it in water.

Central Food Technological Research Institute, Mysore with the financial assistance of the Board has developed the technology for spray dried coconut milk powder which is available to entrepreneurs at a total know-how fee of Rs.5 lakhs.

To start a unit for coconut milk powder processing with a capacity of 20000 to 50000 coconuts per day, an amount of Rs 2.00 to 4.00 crore is estimated.

<http://coconutboard.gov.in/milkpwr.htm>

8. Packaged Tender Coconut Water

Tender coconut water is a pure and nutritious beverage in the natural state. It is a natural source of electrolytes, minerals, vitamins, complex carbohydrates, amino acids and other nutrients. The natural carbohydrate content is between 4-5% of the liquid solution. This makes coconut water particularly suitable for the burgeoning sports drink market.

Defense Food research laboratory, Mysore with the financial assistance of the Board has developed the technology for processing and packaging of tender coconut water which is available to entrepreneurs at a total know-how fee of Rs.3.50 lakhs.

For setting up of unit with a capacity of 5000 to 15000 coconuts per day, an estimate of Rs. 1.25 to 1.75 lakh is envisaged.

http://coconutboard.gov.in/TCW_project_profile.pdf

9. Nata de coco

Nata-de-coco is a cellulosic white to creamy yellow substance formed by acetobacter acetii subspecies Xylinium, on the surface of sugar enriched coconut water / coconut milk / plant extract / fruit juices or other waste materials rich in sugar. It is popularly used as a dessert. It is also used as an ingredient in other food products, such as ice cream, fruit cocktails, etc.

For setting up of unit with a capacity of 20,000 to 40,000 liters of coconut water per day, an amount of Rs. 50.00 to 1.00 crore is envisaged.

<http://coconutboard.gov.in/nata.htm>

10. Coconut Vinegar

Coconut vinegar is made from fermented coconut water and is used extensively as a preservative and flavouring agent in pickles, salads, sauces and many other condiments. Coconut vinegar is also made from the sap of the coconut tree and is similar to the fresh coconut water. Naturally fermented coconut vinegar is rich in minerals and vitamins such as Beta carotene, calcium, iron, magnesium, phosphorous, potassium and sodium. It is a healthier alternative to synthetic vinegar.

The Board in collaboration with the CFTRI, Mysore has developed a technology for the production of coconut vinegar from matured coconut water using vinegar generators.

For training on coconut vinegar, you may please contact to CTI, Aluva- Ph: 0484 2679680.

<http://coconutboard.gov.in/vinegar.htm>

11. Shell Powder

Coconut shell powder is manufactured from matured coconut shells. The manufacture of coconut shell powder is not an organized industry in India. The product finds extensive use in plywood and laminated board industry as a phenolic extruder and as a filler in synthetic resin glues, mosquito coils and agarbathis.

Coconut shell powder is preferred to other alternate materials available in the market such as bark powder, furfural and peanut shell powder because of its uniformity in quality and chemical composition, better properties in respect of water absorption and resistance to fungal attack.

For setting up of unit with a capacity of 5MT to 10MT coconut shells per day, an estimate of Rs. 50.00 lakh to 1.00 crore is envisaged.

<http://coconutboard.gov.in/shelpwdr.htm>

12. Shell Charcoal

Shell Charcoal is an important product obtained from coconut shell. Shell charcoal is used widely as domestic and industrial fuel. It is also used by blacksmiths and goldsmiths and in laundries. Shell Charcoal is also used to produce activated carbon. Activated Carbon produced from coconut shell has certain specific advantages as the raw material can adsorb certain molecular species. Shell is carbonized by using methods like pit method, drum method, destructive distillation etc. The shell charcoal is the raw material required for the manufacture of activated carbon. The shell charcoal is manufactured by burning shells of fully matured nuts in limited supply of air sufficient only for carbonization, but not for complete destruction. The output of charcoal in the traditional pith method is just below 30 per cent of the weight of the original shells.

For setting up of unit with a capacity of 1MT to 5MT shell charcoal per day, an estimate of Rs. 50.00 lakh to 2.00 crore is envisaged.

<http://coconutboard.gov.in/charcoal.htm>

13. Activated Carbon

Activated carbon is a non-graphite form of carbon which could be produced from any carbonaceous material such as coal, lignite, wood, paddy husk, coir pith, coconut shell, etc. Activated carbon manufactured from coconut shell is considered superior to those obtained from other sources mainly because of small macropores structure which renders it more effective for the adsorption of gas/vapour and for the removal of colour and odour of compounds.

The activated carbon is extensively used in the refining and bleaching of vegetable oils and chemical solutions, water purification, recovery of solvents and other vapours, recovery of gold, in gas masks for protection against toxic gases, in filters for providing adequate protection against war gases/nuclear fall outs, etc.

For setting up of unit with a capacity of 1MT of activated carbon per day with simple kiln, an amount of Rs. 2.00 crore, for 3MT activated carbon per day with one jumbo kiln, Rs. 4.00 – 5.00 crore, for 6MT activated carbon per day with 2 jumbo kiln, Rs. 7.00 – 8.00 crore and for 9 MT activated carbon per day with 3 jumbo kiln, Rs. 9.00 – 10.00 crore is envisaged.

<http://coconutboard.gov.in/activatd.htm>