

COCONUT WATER IN PET BOTTLE

1. INTRODUCTION

Coconut water is the clear liquid inside coconut (fruits of the coconut palm). Coconut water has long been a popular drink in the tropical countries where it is available as fresh, canned, or bottled. Coconuts for drinking are served as fresh, chilled or packaged in many places. They are often sold by street vendors who cut them open with machetes or similar implements in front of customers. Processed coconut water for retail can be found in ordinary cans, Tetra Paks, or plastic bottles, sometimes with coconut pulp or coconut jelly included. Coconut water can be fermented to produce coconut vinegar. Coconut water is low calorie (19 Kcal) drink but rich source of minerals.

2. PRODUCTS AND ITS APPLICATION:

During the early 21st Century, coconut water has been marketed as a natural energy or sports drink having low levels of fat, carbohydrates, and calories, and significant electrolyte content. Coconut water is a natural isotonic beverage, with the same level of electrolytic balance as we have in our blood; hence it is compare with our blood plasma. Further, marketing claims attributing health benefits to coconut water are not based on science and are disallowed by certain regulatory agencies.

Product-Mix & Plant Capacity:

It is proposed to have to process 10,000 green coconut of suitable variety per day which will produce 3500 lit of coconut water per day, i.e., approximately 350 ml water per coconut fruit. One can go for exotic flavours like fruit flavours (mango, guava, strawberry), spice flavours (cumin, dill, etc.) and sparkling coconut water (i.e. carbon dioxide dosing). Here, it is considered plain, natural coconut water.

3. DESIRED QUALIFICATION FOR PROMOTER:

Packed coconut water is a tricky business and need adequate skills in procuring, processing, packing and marketing of products as being a perishable in nature. The entrepreneur must get acquainted with all these vital aspects of the project before setting up it. An engineering graduate with business management is a preferable qualification is preferable.

4. INDUSTRY OUTLOOK/ TREND

Beverages and refreshment drinks trend is increasing day by day with changing life style, disposable income and GDP growth of the country. The growth rate of the industry is about 10% per annum. Moreover increased production of tender coconut and health benefits of coconut water will drive demand in medium to long term.

5. MARKET POTENTIAL AND MARKETING ISSUES, IF ANY:

Coconut water refers to the inside liquid of coconut that are extensively found across the world. It is a fresh fruit juice extracted from tender, unripe (green) coconut. It is a popular refreshing juice widely consumed in tropical countries due to its amazing health benefits. Global coconut water market to cross US\$ 5 billion by 2021, growing at a CAGR close to 21%

India, with a vast coastline of 7,517 km, is the third largest coconut producer in the world. While branded and packaged coconut water consumption in India is still at a nascent stage, it has a big market in developed countries. In the USA, coconut water drunk by consumers has shot up from less than 5 lakh liters in 2004 to around 200 million liters in 2014, according to a study. In Brazil, packaged coconut water accounted for around 20% of its total juice market in 2003 and by 2010 it had grown to around 65%. An estimated 700 million liters of branded coconut water had been consumed worldwide in 2015, excluding unbranded coconut water consumed in India and globally. Most of India's coconut drink market is in unorganized and non-branded sector.

Global organic coconut water market is also growing at the remarkable pace, e.g, UK consumed 25-25 million liters organic coconut water in last year. In India coconut water is mainly obtained from tender coconut and consumed. Recently Simbhaoli Sugars have launched spray dried coconut water in powder form. It is packed in sachet and can be served in portion. Moreover, Pure N Fresh Food has also launched 100% natural tender coconut water in tetra pack.

6. RAW MATERIAL REQUIREMENTS:

Fresh coconut fruits are needed per day around 10,000 nos. to yield 3500 lit (approx.) coconut water per day. Besides that preservative, natural or artificial sweeteners (if one wish to add) and carbon dioxide generator for making sparkling coconut water (if wish to add in a product-mix). Besides that one can go for different mode of packing the coconut water, e.g., multi-layer poly pouch or PET/Glass Bottles, Tetra Pak packing for packing for coconut water. Here, 200 ml PET bottles are considered for packing coconut water and such 24 bottles will be shrink wrapped.

7. MANUFACTURING PROCESS:

Fresh coconut fruits received from suppliers are store properly either in heavy duty plastic crates or drum to carry them into processing area by trolley or otherwise need to install a conveyor from unloading dock to coconut washer machine or tank. Coconut fruits are washed thoroughly to remove adhering dirt, dust or any foreign material in potable water. Thus washed fruits are sanitized by using chlorinated water for 15 min., and then subject to air drying. Coconut fruits are cut either manually using sanitized knives or board or otherwise mechanically supported by high drain conveyor. Thus extracted coconut water is sieved, filtered and pasteurized. (also in alternative process: coconut water chilled to 4° C, sanitized, filled rapidly in sanitized bottles and stored at 4° C.). The pasteurization follows by cooling and packing into pre-cleaned and sanitized PET bottles which are then either shrink wrapped or cartooned for dispatch.

8. MANPOWER REQUIREMENT:

Sr. No.	CATEGORIES	Nos.
1	Technical Staff	8
2	Administrative Staff	4
3	Marketing Staff	6
4	Labour	20
	Total	38

9. IMPLEMENTATION SCHEDULE:

Project Stages	MONTHS									
	1	2	3	4	5	6	7	8	9	10
Purchase of Land	Yellow	Yellow								
Completion of Building	Green	Green	Green							
Ordering of Machinery	Grey	Grey								
Delivery of Machinery			Orange	Orange	Orange					
Term/Wkg Loan Sanction	Blue	Blue								
Installation of Machinery						Green	Green			
Commissioning of Plant							Red			
RM/Inputs Procurement							Yellow			
Manpower Appointments				Blue						
Commercial Production							Green			

10. COST OF PROJECT:

Sr. No	Costing Heads	Qty	Rate/Unit	Rs. Lakh
1	Land in Sq. M. + Expenses	1,000.00	1,000.00	10.00
2	Building	500.00	9,000.00	45.00
3	Plant & Machinery			56.59
4	Contingency			10.00
	Total Cost of Project			121.59

11. MEANS OF FINANCE:

Sr. No	Means Heads	Rs. Lakhs
1	Promoters Capital	0.00
2	Term Loan	72.50
3	MFPI Subsidy	-72.50
4	Unsecured Deposits	0.00
	Total Means of Finance	0.00

12. WORKING CAPITAL CALCULATION:

Particulars	Total Amount	Stock Period Days	Value of Stock Period	Promoter Margin	Promoter Share	Bank Borrowings
Raw Material	130.00	15.00	6.50	0.50	3.25	3.25
Packing Material	145.25	30.00	14.52	0.40	5.81	8.71
Work in Process	447.25	3.00	4.47	0.40	1.79	2.68
FP Stock	550.00	15.00	27.50	0.40	11.00	16.50
Bills Receivable	550.00	15.00	27.50	0.40	11.00	16.50
Working Expense	12.00	30.00	1.20	1.00	1.20	0.00
Total:	1,834.49		81.70	0.00	34.05	47.65

13. LIST OF MACHINERY REQUIRED:

Sr. No.	Equipment	Qty
1	Mechanical washing system with conveyor	1
2	Automatic boring and sucking system	2
3	SS filter / clarifier	2
4	Collection tank	1
5	Treatment tank	1
6	Pasteurization tank	1
7	Boiler and other accessories	2
8	Shrink wrapping machine	2
9	Air compressor	1
10	Coding machine	4

- Essar Engineers
519/1 A, Athipalayam Road,
Chinnavedampatti Post,
Coimbatore - 641006
Tamil Nadu
- Ace Pack Machines
No. 23, V. N. Industrial Estate,
Bharathi Colony,
Pellamedu
Bharathi Colony
Coimbatore - 641004
Tamil Nadu.

14. PROFITABILITY CALCULATIONS:

Sr. No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
	Gross Sales	385	440	495	495	495
A	Less:					
	Raw Materials	91	104	117	117	117
1	Packing Material	101.675	116.2	130.725	130.725	130.725
2	Fuel	25.2	28.8	32.4	32.4	32.4
3	Power	11.76	13.44	15.12	15.12	15.12
Sr. No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
4	Manpower	25.74	29.04	32.34	32.34	32.34
5	Depreciation	15.05	17.2	19.35	19.35	19.35
	Sundry Expenses	8.4	9.6	10.8	10.8	10.8
6	Interest on Term Loan	6.09	6.96	6.264	5.6376	5.07384
7	Interest on WC Loan	4.9	5.6	6.3	6.3	6.3
8	Repairs & Maintenance	8.4	9.6	10.8	10.8	10.8
9	Marketing Expenses	17.5	20	22.5	22.5	22.5
B	Production cost	315.715	360.44	403.599	402.9726	402.4088
C	Gross Profit	69.285	79.56	91.401	92.0274	92.59116
	Taxes @ 30%	20.7855	23.868	27.4203	27.60822	27.77735
	Net Profit	48.4995	55.692	63.9807	64.41918	64.81381

15. BREAKEVEN ANALYSIS:

Break- Even Point	
Annual Fixed Cost x100/ Annual Fixed Cost + Profit	49.49

16. CRITICAL FACTORS FOR THE PROJECT:

- Availability of right variety of fresh coconut fruits having adequate coconut water inside at the right price.
- The plant must be in vicinity of coconut growing area where abundant coconuts are available throughout the year.
- Appropriate technology adoption and proper selection of plant and machinery.
- Assurance of market and adequate fund for product promotion.

17. STATUTORY/ GOVERNMENT APPROVALS

There is statutory requirement of FSSAI license for setting up of food processing industry. Moreover, MSME& GST registration, IEC Code for Export of end products and local authority clearance may be required for Shops and Establishment, for Fire and Safety requirement and registration for ESI, PF and Labour laws may be required if applicable. Entrepreneur may contact State Pollution Control Board where ever it is applicable.

18. BACKWARD AND FORWARD INTEGRATION

As part of backward linkage promoter may think in future to have own coconut plantation when market is well developed and production is substantially increased. For forward linkages coconut by products such as coconut fiber, activated carbon from coconut shell and organic manure from waste.

19. TRAINING CENTERS/COURSES

For food processing industry training and short term courses are available at Indian Institute of Food Processing Technology, Thanjavur, Tamil Nadu and Central Food Technological Institute, Mysore and Coconut Research Institute, Kerala. Udyamimitra portal (link : www.udyamimitra.in) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Disclaimer:

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation.