

LEAF CUP MACHINE

INTRODUCTION

Forest and agricultural raw materials like leaves, leafy sheaths and Pseudo-stems were traditionally used for storing or serving foods. Physicochemical studies on wet/dry leaves of banana, beautia, bauhinia and arecanut sheath have revealed that their functional properties are better than those of paper. It was found possible to convert them into small package forms like cups and trays for substituting the modern paper and plastic materials. Market samples of dry leaves of banana and beautia showed initial microbial loads and it was found that by brief treatment of dry leaves of banana and beautia for a few minutes in hypo-chlorite solution, the microbial load could be reduced.

- i) The leaf cup-making machine is a simple pedal operated machine, which is manually operated with minimum power consumption.
- ii) It requires only 300 watts of electric power for the heating units and can be worked on the domestic line (220 volts).
- iii) The machine can be located in any village/towns where electricity and leaves of banana, beautia, bauhinia and arecanut palm sheaths are available in plenty.
- iv) The leaf cups/plates manufactured in the unit is hygienically superior

RAW MATERIAL

Abundantly available agricultural and forest products such as leaves of banana, beautia, bauhinia and sheath of arecanut palms in only arecanut growing areas are available. There is no dearth for the availability of raw material

PLANT AND MACHINERY

List of suppliers:

The leaf cup-making machine has been designed by CFTRI and the drawings for the machine can be obtained from CFTRI. However, the addresses of few firms who have obtained design drawings from CFTRI for fabrication and supply of leaf cup/plate making machines are given below:

ANIL AND CO.

68, NGO's Colony, N R Mohalla Post, Mysore – 570 007
Tel: 08212-491 849, Mobile: 94480 41849

SREE MURAGAN INDUSTRIES

Plot No.68/W, Hootagalli Industrial Area, Belawadi Post, Mysore-570 018
Ph: Off: 0821-6450511, **Res:** 6450510,

KALI AERATED WATER WORKS

68, 11/77, Vivekanandar Street, P.B.No.2, Virudhunagar – 626 001 (TN)
Ph: 04562-43636, **Fax:** 04562-43872

A.M.I.ENGINEERING

Station Road, Opp. Veena Cinema, Patna-800 001,
Fax: 0612-2224274; Mobile: 9973437800; 9431016895;
E-mail: ashwani@amienggfarmer.com

NALANDA AGRO WORKS

Nalanda Nagar, Kurji, Patna - 800 010
Ph: **Off:** 0612-263886 **Res:** 0612-267706

PROJECT COST – FIXED COST – WORKING CAPITAL (in Rs. '000) (estimate for a model project)

a) Building (shop) (20 M ²)	55.00
b) Cost of machine with 3 different dies	45.00
c) Misc. fixed assets	5.00
d) Pre-operative expenses	5.00
Total fixed capital	110.00
Working capital margin	8.00
Total Project cost	118.00
Total working capital required at 20% of turnover	32.00
Means of finance	
Promoters contribution	35.50
Term loan	82.50

PRODUCTION - (estimate)

- The leg operated leaf cup-making machine can produce 250-300 leaf cups or 100 areca sheath cups per hour by a single skilled operator and a helper.
- Capacity Production of 2000-2500 cups/plates per shift/day.
- Optimum utilization capacity: 70%

TECHNOLOGY/MANUFACTURING PROCESS-AVAILABILITY

CFTRI has developed design drawing on leaf cup making machine. There are more than 2000 leaf cup making machines fabricated as per CFTRI design is estimated to be in operation in the country, distributed in UP, Bihar, Maharashtra, Gujarat, AP, and Karnataka. However, most of the units are reported to be concentrated in UP and Bihar.

