

# KATTHA & CATECHU



## **INTRODUCTION:**

Kattha is obtained by crystallization in cold from the water extractives of the heartwood of Acacia Catechu, commonly known as Khair tree. Acacia Catechu is widely distributed in India, from the northwest plains to eastwards in Assam and throughout the country, particularly in drier and deciduous regions. The process of kattha making is a long and arduous process, which takes upto 45 days. Each step in the production process is closely monitored and proper climatic conditions are maintained for optimum colour and quality.

Kattha & cutch are extracted from wood of Khair tree. Acacia is the botanical name of this tree and it has different varieties like Acacia Sundra, Acacia Catechuoides & Acacia Catechu. These species of tree are mainly concentrated in Uttar Pradesh, Bihar, Rajasthan, Gujarat and Himachal Pradesh. The preferred locations are either UP or Bihar. Manufacture of Kattha is an important forest-based traditional industry in India. The Central Forest Research Institute has developed an improved process to manufacture kattha and cutch. Manufacture of these products is simple and does not require sophisticated technology or equipments. There are many applications of these products.

Kattha (Catechu) is one of the principal ingredients used in the preparation of PAAN from betel leaves, for chewing purposes when, in combination with lime, it gives the characteristic red colouration. With the advent of ready made paan (i.e., paan-masala) and gutkha (paan-masala with tobacco) and its ever-growing popularity among masses, the usages of kattha have increased many folds.

## **OBJECTIVE:**

The primary objective of the model report is to facilitate the entrepreneurs in understanding the importance of setting up unit of Kattha & Catechu plant. This model report will serve as guidance to the entrepreneurs on starting up such a new project and basic technical knowledge for setting up such a facility.

## **RAW MATERIAL AVAILABILITY:**

The only Raw Material is Khair Wood and available in some parts of India.

## **SUITABLE LOCATION:**

Kattha & Catechu can be manufactured at that location where Khair Wood is easily available.

## **MARKET OPPORTUNITIES:**

Kattha is being produced in the country since long and it is a mass consumption item as it is used in preparation of paan all over the country. It has got medicinal values as well and is used in ayurvedic preparations as it cures itching, indigestion and bronchitis and is very effective in leprosy, ulcer, boils, piles, throat diseases etc. On the other hand, cutch has various industrial applications. It is one of the important sources of vegetable tanning materials, used extensively as an additive to the drilling mud used for oil drilling and for preservation of sailing rods, fishing nets, mail bags etc. Thus, both products are versatile with varied application.

Kattha is a white substance found in Khair wood. It is obtained by boiling small chips of the heartwood in specially designed earthen pitchers and allowing the concentrate to cool and crystallize. Kattha is not only used as a remedy for body pain but also in medicines for other human ailments. Kattha is also used extensively in pan. It forms an important ingredient of adhesives for plywood and is also extensively used in drying canvas and sizing of fishing nets and ropes.

## **PROJECT DESCRIPTION:**

### **CAPACITY OF THE PROJECT:**

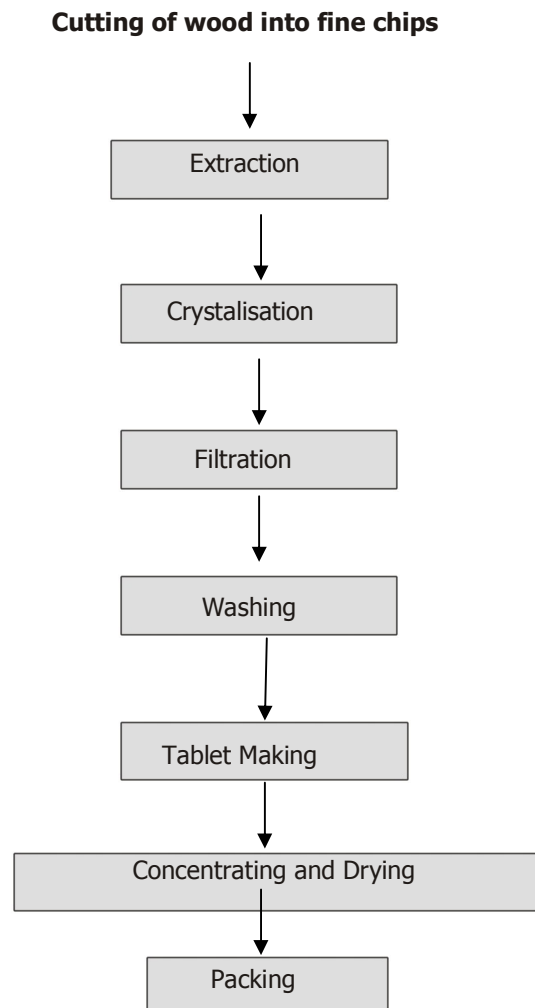
- The capacity of the project is 21,600 Kg. of Kattha & Catechu per year.

**PRODUCTION TARGET:**

- Qty.: 15,120 Kg. per annum or 1,260 Kg. per month.
- The scheme is worked out per shift (8 Hour) basis and 300 working days per annum.

**MANUFACTURING PROCESS:**

Heart wood of khair or acacia is cut into fine chips and around 8-9 kgs. of chips are kept in wire net cage to avoid direct contact with heated surface of extractor. These cages with about 25-27 ltrs. of water (3 times the weight of chips) are placed in extractors. Extraction is done by boiling chips with water for about 3 hours. Extracts from each extractor are mixed after filtering with the help of muslin cloth and concentrated in an open pan on fire and then kept in shade to facilitate crystallisation of Kattha for about 2 days. After complete crystallisation, the curd like mass is passed through frame and plate-type filter press, operated manually and then it is washed with cold water which improves the quality of kattha. It is then placed on wooden frames provided with canvas cloth to separate traces of cutch. Finally, kattha is cut into uniform tablets with the help of wire cutter or knife and dried in sheds. The mother liquor after removal of kattha is further concentrated in an open pan till it becomes viscous and then poured in wooden frames for drying. The dried material is cutch. About 100 kgs of acacia chips give 5 kgs. of kattha and 14 kgs of cutch. Yield largely depends upon the quality of chips. The process flow chart is as under:



**PROJECT COMPONENT AND COST:****FINANCIAL ASPECTS:-****APPLICATION OF FUNDS**

Particular	Amount
Land & Building	200 sq. meter covered area on Rent
Plant & Machinery	429,000.00
Office Equipment & Furniture	50,000.00
Working Capital	666,760.45
Pre-Operative Expenses	25,000.00
<b>Total</b>	<b>1,170,760.45</b>

**SOURCE OF FUND**

Particular	Amount
Own Capital	518,140.11
Loan from Banks	359,250.00
Loan for Working Capital	293,370.34
<b>Total</b>	<b>1,170,760.45</b>

**FIXED ASSETS**

<b>(1)</b>	<b>Land And Building:</b>			<b>Value (Rs.)</b>
	Land & Building 200 sq. meter covered area on rent			Rs. 96,000 per annum
<b>(2)</b>	<b>Machinery And Equipment:</b>			
<b>S. N.</b>	<b>Description (Name of machine with specification)</b>	<b>Qty.</b>	<b>Rate</b>	<b>Value (Rs.)</b>
	<b>Production Unit</b>			
<b>i</b>	Kattha Extractor	1	100,000.00	100,000.00
<b>ii</b>	Wire Mess	2	50,000.00	100,000.00
<b>iii</b>	Tray	2	20,000.00	40,000.00
<b>iv</b>	Vessel	2	40,000.00	80,000.00
<b>v</b>	Wooden Frame	2	10,000.00	20,000.00
<b>vi</b>	Furance	2	10,000.00	20,000.00
<b>vii</b>	Weighing Machine	1	10,000.00	10,000.00
<b>viii</b>	Miscellaneous Equipments / Items (Cloth, Filter, Cutter etc.)	-	-	20,000.00
	<b>Total Cost of Machinery &amp; Equipments</b>			<b>390,000.00</b>
	Electrification & Installation Charges @ 10%			39,000.00
	<b>Total Cost of Production Unit</b>			<b>429,000.00</b>
	Furniture & Fixtures		-	50,000.00
<b>3</b>	<b>Pre-Operative Expenses:</b>			- 25,000.00
	<b>Total Fixed Capital ( 2+3)</b>			<b>- 454,000.00</b>

### SALES TURNOVER PER MONTH

Description	Qty. (Kg.)	Rate (Rs./Kg.)	Value (Rs.)
Kattha	420	500.00	210,000.00
Catechu	840	200.00	168,000.00
<b>Total</b>			<b>378,000.00</b>

### RAW MATERIAL REQUIREMENT & STOCK

<b>Raw Material (per month):</b>			
Description with specification	Qty. (Kg.)	Rate (Rs./Kg.)	Value (Rs.)
Khair Wood Tree	8,400.00	25.00	210,000.00
			<b>210,000.00</b>

### ANNUAL CONSUMPTION

Khair Wood Tree		Rs	2,520,000.00
<b>Total</b>			<b>2,520,000.00</b>
Stock of Raw Material		30 days	207,123.29
Stock of WIP		02 days	13,808.22
Purchase Cost of Raw Material		Rs	2,740,931.51

### WORKING CAPITAL REQUIREMENT

Particulars	Days	Year' 1
Raw Material	30	207,123.29
Work in Process	2	13,808.22
Finished Goods	10	96,239.90
Receivables	30	378,000.00
Advance/Security		200,000.00
Total		895,171.41
Less: Creditors	30	228,410.96
<b>Net Current Assets</b>		<b>666,760.45</b>

Paid Stock	88,760.45
75% of Paid Stock	66,570.34
60% of Book Debts	226,800.00
Bank Limits	293,370.34
Margin for Working Capital	373,390.11

**SELLING & ADMINISTRATION  
EXPENSES**

S. N.	Particular	Year I
i	Postage	18,000.00
ii	Commission on sales	60,000.00
iii	Office Expenses	29,000.00
iv	Tour & Travel	18,000.00
v	Printing & Stationary	20,000.00
vi	Advertisement	60,000.00
vii	Telephone	20,000.00
viii	Repair & Maintenance	22,000.00
ix	Conveyance	27,000.00
x	Sales expenses	36,000.00
xi	Insurance	20,000.00
xii	Misc. Expenses	30,000.00
<b>Total</b>		<b>360000.00</b>

**STAFF AND LABOUR EXPENSES**

S. N.	Description	No.	Salary PM	Total Salaries-Year I
<b>(a) Administrative &amp; Supervisory</b>				
i	Production Incharge cum accountant	1	15,000.00	180,000.00
<b>Total Salaries</b>				<b>180,000.00</b>
<b>(b) Skilled &amp; Unskilled-Wages</b>				
i	Skilled Worker	1	10,000.00	120,000.00
ii	Semi Skilled Worker	1	8,000.00	96,000.00
iii	Helper	2	5,000.00	120,000.00
<b>Total</b>				<b>336,000.00</b>
<b>Grand Total</b>				<b>516,000.00</b>

**MANUFACTURING AND PROFIT  
& LOSS ACCOUNT**

<b>Particulars</b>	<b>Year' 1</b>
Sales Value of Kattha & Catechu	<b>4,536,000</b>
<b>Cost of Production:</b>	
Raw Material Consumed:	
Opening Stock	0
Add: Purchases	2740931.50
	2740931.50
Less: Closing Stock	207123.28
Raw Material Consumption	2533808.21
Add: Op Stock of WIP	0
	2533808.21
Less: Cl Stock of WIP	13808.21
	2520000
Power & Fuel	300000
Manufacturing Wages	336000
Bonus & Incentives	16800
Packaging Materials	100000
Rent	96000
Raw material storage & ins.	4800
Cost	
Carriage inward	19186.52
Depreciation	71850
<b>Total Cost of Production</b>	<b>3464636.52</b>
Add: Op. Stock of Finish. Goods	0
	3464636.52
Less: Cls. Stock of F.Goods	96239.90
<b>Cost of Sales</b>	<b>3368396.61</b>
<b>Gross Profit</b>	<b>1167603.38</b>
	0.25
Selling & Admin Cost:	
Expenses	360000
Salary	180000
Financial Expenses	
Interest on Term Loan	48947.81
Interest on W.Capital	36671.29
Pre. Expenses	90800
Profit Before Taxation	<b>451,184.27</b>
Taxation	135355.28
Net Profit After Taxation	<b>315,828.99</b>
Cash withdrawal	126331.59
Transfer to Reserves	189497.39
Cumulative Reserves	189497.39
% of PBT on Sales	9.94

**BALANCE SHEET**

<b>Particulars</b>	<b>Year' 1</b>
<b>Liabilities:</b>	
Capital	947,140.11
Reserve & Surplus	189,497.40
Secured Loan:	
Term Loan	287,400.00
Unsecured loan:	
Current Liabilities:	
Bank Borrowings	293,370.34
Sundry Creditors	228,410.96
	<b>1,945,818.81</b>
<b>Assets:</b>	
Fixed Assets:	
Gross Block:	479,000.00
Less: Depreciation	71,850.00
	407,150.00
Current Assets:	
Inventories	317,171.41
Recievables	378,000.00
Advance/Security	200,000.00
Cash & Bank Balance	280,297.40
Preliminary Expenses	363,200.00
	<b>1,945,818.81</b>
Difference	<b>0.00</b>

## RATIO ANALYSIS

Particulars	Year' 1
<b>NET PROFIT RATIO</b>	
NP*100/Total sales	<b>6.96</b>
<b>RATE OF RETURN</b>	
NP*100/Total Investment	<b>19.74</b>

## BREAK EVEN ANALYSIS

<b>Fixed Cost</b>	
Rent	96,000.00
Interest on Borrowing	48,947.81
40% of Salaries	72,000.00
40% of Utilities	120,000.00
25% of Admin Exp	90,000.00
Depreciation	71,850.00
<b>Total</b>	<b>498,797.81</b>
<b>BREAK EVEN POINT</b>	$\frac{\text{Fixed Cost} * 100}{\text{Fixed Cost} + \text{Profit}}$
	<b>61.23</b>

### **ADDRESS OF MACHINERY & EQUIPMENT SUPPLIERS:**

- M/s Bajaj Processpack Maschinen Pvt. Ltd., 7/27, Jai Lakshmi Industrial Estate, Sahibabad Industrial Area, Sahibabad, Dist. Ghaziabad (U.P.) - 201301.
- M/s Jayems Engineering Works, Strand Road, Kolkata – 700 001
- Sarkar machinery, 49, P. K. Guha Road, Near Kumarpara Party Office, Kolkata, West Bengal, 700028
- M/s Krishna Food Products, No. 426 To 429, New G. I. D. C., Kabilpore, Bardoli Road, Navsari - 396424, Gujarat, India
- M/s Unique Wood Products, 52/1B, Katra Pedan, Tilak Bazar, Khari Baoli, Delhi - 110006, India
- M/s FMC Asia-Pacific Inc., Complete Fruits and Vegetable Plant, Compre- Krision House, Saki Vihar Road, Saki- hensive Line of Equipments for Tomato Process-Naka, Mumbai-400 072.