

JUTE SUTLI (JUTE TWINE / ROPE)

INTRODUCTION

Jute is a natural cellulosic bast fiber. Due to its good spinable characteristics, it is well known as a golden fiber. Jute has various inherent characteristics like, high tensile strength, low extensibility, long durability, fire and heat resistance, silkiness, luster and long staple lengths.

India is the single largest jute producer in the world producing around 35% of the world production and earn highest foreign currency from jute. In India around 1 million hectare of land is under jute cultivation, production is 10 million tones and yield is 1960 kg per hectare. In North Eastern States Jute is cultivated in Assam, Arunachal Pradesh, Meghalaya, Nagaland & Tripura. Assam ranks second as the most jute producing state in India after West Bengal. Unfortunately 75% of the jute produced in Assam goes out of the state in raw form and a large position of it comes back to Assam after value addition outside the state.

The Jute sector continues to play an important role in the economy of the country in general. In state wise jute production, West Bengal, Assam and Bihar are the three major jute producing states accounting for around 98% of India's total production.

ABOUT THE PRODUCT

Jute can be defined as an eco-friendly natural fiber with versatile application. Jute with its unique versatility, rightfully deserves to be branded as the "fiber for the future". Prospects ranging from low value geo-textiles to high value carpet, apparel, composites, decorative, upholstery furnishings, fancy non-woven for new products, decorative colour boards etc. The traditional excellence of Indian craftsmen and artisans is reflected in a wide range of jute handicrafts of utility, decoration and novelty.

Jute is classified in traditional products and diversified products. Traditional products essentially comprise of Hessian, Carpet-backing cloth and sacking while diversified products include blankets, decorative fabrics, gift articles, shopping hand bags and wall hangings.

Jute twine of different qualities and thickness are used extensively in India. Three classes of twine are made viz. general twine, export twine and sacking twine, General twine is utilized in India for a large variety of purpose, particularly for packing purpose and various type of rope making., and other twines are used in finishing nets On the other hand the softened twines can be used for packing cloth, carpets etc.

MARKET POTENTIAL

Traditional jute products occupy a dominant share in both production and market. The global jute production was estimated at approximately 3.13 million tones in 2002-03. India topped the list of the largest producers accounting for an impressive 64% of the world production in 2002-03. Indian prices were found to be competitive in export market of jute yarn and jute fabrics, while India faced a stiff price competition in export of twine, ropes. The demand of Jute products is good and there is bright scope of jute yarn, jute sutli making unit.

SUGGESTED CAPACITY

To assessing the proposed plant capacity due consideration is given on availability of raw materials, availability of electricity and market. The annual production of 100 tonnes is suggested, the production at different capacity utilization per annum will be as follows:

| Installed Capacity | 1st yr. production @80% | 2nd yr. onwards production @90% |
|---------------------------------------|-------------------------|---------------------------------|
| Production Capacity 330 Kg per day | 264 kg per day | 297 kg per day |
| Production Capacity 10,000 Kg per yr. | 80,000 kg per year | 90,000 kg per year |

Basis:-

| | | |
|-----------------------------|---|-------------------|
| No. of working days | = | 25 days per month |
| | = | 300 days per year |
| No. of shifts | = | 1 per day. |
| One shift | = | 8 hours |
| Effective working hours/day | = | 6 hours |

INFRASTRUCTURE REQUIREMENT

The main Infrastructural facilities required are:

| | |
|---|-------------|
| Covered shed area (processing hall/storages/office) | 800 sq. ft. |
| Power requirement | 10 kw. |

RAW MATERIALS

Raw material is available in many jute cultivation areas. Few jute extraction units can also be set up in jute growing areas to meet jute fiber requirement. Barpeta Road in Assam is the main market centre of jute. Jute can be procured from this market in bulk throughout the year and produce required jute yarns even manually. Processed, ready to use jute yarns also available in the local market.

SUGGESTED LOCATION

Jute based project should be located mainly in jute growing area and also should be nearby available market round the year.

Keeping in view the availability of jute, the suggested locations in the state of Assam are Borpeta, Kamrup, Nalbari, Bongaigaon, Dhubri, Goalpara, Nagoan, Cachar, Hilakandi and Karimganj . In Arunachal Pradesh-Itanagar and Daimukh In Manipur-Imphal, and Tamenglong etc. In the State of Tripura-Agartala, Dharmanagar, Sikkim-Gangtok, Penlang, North Sikkim area.

PRODUCTION PROCESS (STEP WISE)

The main process steps are:

1. Extraction of fibre.
2. Carding of extra fibre.
3. Spinning.
4. Conversion of spun jute yarn into sutli/rope.
5. Coiling of sutli/rope.
6. Finishing
7. Weighing & packing.

PROJECT ECONOMICS**Total Capital Requirement**

The total capital requirement including fixed capital and working capital is estimated at Rs 14.50 lakhs as follows. Of this, the project cost comprising fixed capital and margin money on working capital is Rs.11.42 lakhs.

| A. Fixed Capital | (Rs. in lakhs) |
|-------------------------|----------------|
| Land | on rent |
| Land Development Cost | 1.00 |
| Building /Civil works: | |
| i) Work shed 500 sq.ft | 2.50 |

| | | |
|-----------|--|--------------|
| ii) | Office/Store 300 sq.ft. | 1.80 |
| iii) | Toilet/Bathroom/Cemented open space, Drainage facilities etc. | 1.20 |
| | Plant & Machinery | 2.05 |
| | Misc. Fixed Assets (Water arrangement/Overhead reservoir/pump set/power line connection/water & electrical fittings/office equipment) | 1.20 |
| | Preliminary & Pre-operative Expenses | 0.60 |
| | Contingency provision | 0.50 |
| | | 10.85 |
| B. | Working Capital: | |
| | Raw materials/ Packing materials | 15 days 0.62 |
| | Working expenses | 1 month 0.52 |
| | Finished goods | 10 days 0.66 |
| | Receivable | 7 days 0.65 |
| | | 2.45 |
| | Note: Working capital to be financed as – | |
| | Margin Money | : 1.00 |
| | Bank Finance | : 1.45 |
| | | 2.45 |
| | Means of Finance: | |
| | Promoter's Equity(24.8%) | 2.95 |
| | Term Loan(75.2%) | 8.90 |
| | | 11.85 |

| | |
|-------------------------------------|--------------|
| Cost of Production & Profitability: | (Rs in lakh) |
| Raw material & packing materials | : 12.40 |
| Wages & Salaries | : 5.80 |
| Utilities | : 0.40 |
| Repair & Maintenance | : 0.24 |
| Administrative overhead | : 0.30 |
| Selling expenses 10% on sales | : 2.80 |
| Depreciation | : 0.66 |
| Interest | : 1.30 |
| | 23.90 |

Sales Turnover:

The market price of sutli varies between Rs. 40 to Rs. 50 per kg. Keeping in view the margin for retailers/wholesalers, the ex-factory price had been taken at Rs. 35.00 per kg. and accordingly the sales realization is estimated at Rs. 28.00 lakhs per year.

Break Even Analysis:

| | | |
|----|----------------------------------|--------------|
| A. | Variable Cost: | (Rs in lakh) |
| | Raw materials/ packing materials | 12.40 |
| | Utilities | 0.40 |
| | Selling expenses | 2.80 |
| | | 15.60 |
| B. | Semi-Variable Cost: | |
| | Wages & Salaries | 5.80 |
| | Repair & Maintenance | 0.24 |
| | Administrative overhead | 0.30 |

| | |
|-------------------------------|-------|
| Depreciation | 0.66 |
| Interest | 1.30 |
| | 8.30 |
| C. Sales Realization | 28.00 |
| D. Contribution | 12.40 |
| E. Break-Even Point B/D x 80% | 54% |

Profitability:

Based on the sales realization and the operating expenses, the profit would be Rs. 4.10 lakhs per year. This works out to a return on capital investment of 31%. The unit would break-even at about 54% of the rated capacity.

Machinery & Equipment:

The main equipment required are –

| | No. of Machinery | Power |
|---------------------------------------|------------------|-------------|
| i) Fibre Extraction machine | : 2 Nos. | 2 H.P. each |
| ii) Fibre Carding machine | : 2 Nos. | 1 H.P. each |
| iii) Semi-auto twisting machine | : 1 No. | 1 H.P. |
| iv) Automatic feed rope making(4 ply) | : 1 No. | ½ H.P. |
| v) Hand making coil winding M/C | : 1 No. | ½ H.P. |
| vi) Rope finishing M/C | : 1 No. | - |
| vii) weighing scales etc. | : 1 set. | - |

Raw Materials/Packaging materials (Annually):

| Item | Quantity (per day) | Rates(Rs.) | Amount required per day(Rs.) | Annual Requirement (Rs in lakh) |
|-----------------|--------------------|------------|------------------------------|---------------------------------|
| 1. Raw Jute | 281 kg | 14/-per kg | 3934.00 | 11.80 |
| 2. Packing roll | L.S. | - | 200.00 | 0.60 |
| TOTAL | | | | 12.40 |

Manpower:

| Category | No.of person | Salary per person per month(Rs) | Monthly Requirement (Rs) |
|-----------------------|--------------|---------------------------------|---------------------------|
| Supervisor | 1 | 6000 | 6000 |
| Skilled worker | 1 | 6000 | 6000 |
| Semi-Skilled workers | 3 | 5000 | 15000 |
| Unskilled workers | 4 | 3000 | 12000 |
| Accounts/store keeper | 1 | 5000 | 5000 |
| Total Manpower Cost | | | 44,000 |

Salary Bill Rs 5.28 Lakhs + Benefits @ 10% annually i.e. Rs 0.52
Total Annual Salary Bill : Rs 5,80 Lakh.

Highlights:

The major highlights of the project are as follows:

| | | |
|---------------------------|-----|-------------|
| Total Capital requirement | Rs. | 13.30 lakhs |
| Promoter's contribution | Rs. | 2.95 lakhs |
| Annual Sales realization | Rs. | 28.00 lakhs |
| Annual Operating Expenses | Rs. | 23.90 lakhs |
| Annual Profit | Rs. | 4.10 lakhs |
| Return on sales | | 15% |
| Break-even point | | 54% |
| No. of person employed | | 10 |

ADDRESS OF MACHINERY MANUFACTURER/SUPLIERS

1. Ambia Texmech Manufactures (P) Ltd,
B-13, Noble Chamber (VATSA HOUSE),
Gogha Street, Fort,
Mumbai-400 021
2. Textool Company Ltd.
Ganapatji
Coimbatore-641 006
3. Texcomast Export,
2, Arcadia
Nariman Point,
Mumbai-400 001
4. Bimag Machine Pvt. Ltd.
309, Dolmal Tower
Nariman Point,
Mumbai-400 021
5. Perna Textiel Industries Pvt.Ltd.
212/213, T.V.Industrial Estate
(2nd Floor) Plot No.248A,
52, Ahire Marg, Worli,
Mumbai-400 025