

WEAVING OF MUGA SILK FABRIC



1. INTRODUCTION

The art of Weaving is an age old tradition that has been practiced over centuries. Handloom weaving constitutes one of the richest and most vibrant aspects of cultural heritage. Handloom is known for flexibility, versatility and innovativeness. The level of artistry and intricacy achieved in the handloom fabric is unparalleled and certain weaves/ designs are well beyond the scope of modern machines. Weaving is an integral part of the rural culture and economy of north East India. It is the second most important livelihood after farming. The North-Eastern States accounts, for the highest concentration of handlooms in the country. Over 69 per cent of the looms in the country and more than 58.4 per cent of the weaver household belong to the North-Eastern States (according to the Fourth All-India Handloom Census).

Weaving of Muga silk yarn producing lustrous golden fabric is a traditional activity of the Assamese. Being a profitable venture many big and small Muga weaving units are producing Muga Silk fabrics like Mekhela, Chador, Riha, Sari and Thans/yardages (running length of fabric) of various widths on commercial basis.

2. MARKET POTENTIAL

Muga silk fabric is highly priced and valuable commodity of the Indian textile industry, produced in Assam. It is the ultimate product of the Muga silk industry catering to the clothing needs of the consumers. Muga woven fabrics with its indigenous color, texture, luster and traditional look have a distinct niche in the domestic market, which is slowly featuring in the export market.

Traditional costumes adorned with motifs and designs are indispensable part of social, cultural and religious life of the Assamese communities. Among various fashion categories, traditional ethnic-wear category has emerged as one of the most exciting categories owing to the revival of demand for ethnic-wear across age groups, especially, among the young girls. Ethnic wear has managed to reposition itself as preferred attire for specific occasions. Combination of a numerous factors like customs, traditions, product innovation, innovative marketing etc. have contributed to the exciting growth trajectory of ethnic-wear.

3. THE PROCESS OF WEAVING

Selection of Muga Silk Yarn

- Single ply Twisted (5-8 TPI) filament yarn
- Single ply reeled filament yarn
- Colored art silk yarn and jari yarn for decorative weaves

Processes involved

Pre loom processes

- Sizing
- Winding of weft
- Winding of warp
- Warping
- Beaming
- Looming –Drafting, Denting, Tying up of healds.

On loom processes

- Weaving
- Sizing while weaving

Post loom processes

- Finishing, Cutting of loose ends.
- Packaging.

The Weave/design used

Muga fabrics will be woven in plain weave and designs created with extra set of weft yarns for the traditional Mekhela Chador, Riha, Sari etc.

4. This project profile is for setting up of a traditional weaving unit, based on 300 working days per annum and 8 working hours per day. The installed production capacity of the unit with two looms per annum is as follows;

Muga Silk fabric weaving with designs - 54 sets (351M)

4.1 COST OF THE PROJECT

The estimated project cost is given below:

Particulars	Amount (Rs lacs)
Land & Site development	Own Land/On Lease
Building & Civil Works	2.63
Plant & Machinery	1.78
Misc. Fixed Assets	0.81
Preliminary & Pre-operative Expenses	0.86
Contingencies & Escalation @ 5%	0.16
Working Capital	1.35
TOTAL	7.59

Land & Site Development: Nil.

Covered Area: 700 Square Feet.

Building & Civil Works: Details of building & civil works are given below.

Particulars	Area (Sqft)	Rate (Rs) Per Unit	Amount (Rs)
Work Shed, Store House cum Office	700	300.00	210000
		Sub total	210000
Add: Electrification, Water supply, Sanitation and Drainage @ 25%			52500
		TOTAL	263000
		Say (Rs. in lacs)	2.63

Plant & Machinery: Details of plant & machinery are given below.

Particulars	Qty	Rate (Rs) Per Unit	Amount (Rs)
Plain Country Looms with accessories like Slay, Beam, Reed, Bobbin and Shuttle etc	2	20000	40000
Jacquard Machine with complete accessories	2	15000	30000
Pirn Winding Machine	2	1000	2000
Warping unit	1	30000	30000
Wet Processing unit	1	10000	10000
Miscellaneous Tools and Equipments	LS	--	50000
		Sub total	162000
Add: Taxes, transportation and installation etc @ 10%			16200
		TOTAL	178000
		Say (Rs. in lacs)	1.78

Misc. Fixed assets: Details of miscellaneous fixed assets are given below.

Particulars	Qty	Rate (Rs) Per Unit	Amount (Rs)
Furnitures and Fixtures including Working Tables, Steel Almirah and Fire Fighting Equipments	LS	--	50000
Inverter	1	20000	20000
Fan	3	2000	6000
Miscellaneous items	LS	--	2000
		Sub total	
Add: Taxes, transportation and installation etc @ 10%			3000
		TOTAL	81000
		Say (Rs. in lacs)	0.81

Contingencies & escalation: Contingencies & escalation has been assumed at 5% of the cost of land & site development, building & civil works, plant & machinery and miscellaneous fixed assets.

Preliminary & pre-operative expenses: Details of preliminary & pre-operative expenses are given below.

Particulars	Amount (Rs)
Documentation	5000
Travelling Expenses	5000
Legal Expenses	10000
Security Deposit.	20000
Interest during implementation	16000
Upfront fees	30000
Miscellaneous expenses	5000
	TOTAL
	86000
	Say (Rs. in lacs)
	0.86

Working capital: Details of working capital are given below.

(Rs. in lacs)

	Period (Days)	Total Current Assets		
		Year 1	Year 2	Year 3
Raw Materials	120	1.624	1.9	2.2
Power & Utility	30	0.0132	0.016	0.019
Salary	30	0.444	0.543	0.55
Finished Goods	15	2.11	2.2	2.3
Receivables	15	1.2	1	1.2
Total		5.3912	5.659	6.269
Working Capital Margin in Year 1 (25%)	1.35			

4.2 MEANS OF FINANCE

The means of finance for the project is estimated as below.

(Rs. in lacs)

Particulars	Percent	Amount
EQUITY		
A. Equity from Promoters	40%	3.04
B. Subsidy from Central/ State Govt.	-	
DEBT		
Term Loan from Banks/ FIs	60%	4.55
TOTAL	100%	7.59

4.3 PROFITABILITY STATEMENT

(Rs. in lacs)

Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
A. INCOME						
Production Capacity (Sets/ annum)	58	58	58	58	58	58
Capacity utilisation	60%	70%	80%	80%	80%	80%
Production/ annum at capacity utilisation	34.8	40.6	46.4	46.4	46.4	46.4
Total income/ annum	10.44	12.18	13.92	13.92	13.92	13.92
B. OPERATING EXPENSES						
Raw Materials	4.06	4.74	5.42	5.42	5.42	5.42
Power & Utility	0.132	0.158	0.185	0.185	0.185	0.185
Salary (0.5% increase every subsequent year)	4.44	5.43	5.46	5.46	5.46	5.46
Repair & Maintenance (2% increase every subsequent year)	0.08	0.082	0.084	0.09	0.092	0.094
Other Expenses (1% of sales)	0.10	0.12	0.14	0.14	0.14	0.14
Total Operating Expenses	8.81	10.53	11.29	11.30	11.30	11.30
Operating profit	1.63	1.65	2.63	2.63	2.62	1.63
C. FINANCIAL EXPENSES						
Depreciation	0.22	0.22	0.22	0.22	0.22	0.22
Interest on Term Loan	0.33	0.26	0.19	0.11	0.04	0.33
Net Profit Before Tax	1.07	1.17	2.22	2.29	2.36	1.07
Less: Income Tax	0.32	0.35	0.67	0.69	0.71	0.32
PROFIT AFTER TAX	0.75	0.82	1.55	1.60	1.65	0.75
Net Profit Margin	7.20%	6.70%	11.15%	11.52%	11.87%	7.20%
Retained earnings	0.75	0.82	1.55	1.60	1.65	0.75
Add: Non Cash Accruals	0.22	0.22	0.22	0.22	0.22	0.22
Cumulative retained earnings	0.75	1.57	3.12	4.73	6.38	0.75

4.4 Production capacity and Sales Realisation: Total production at 100% capacity utilization is estimated as below.

Muga Silk fabric Mekhela Chadaar Set	58 Sets
Total Production per annum at 100% capacity (in Nos.)	58Sets

Particulars	Qty	Average Price Per Unit (Rs.)	Amount (Rs.)
Muga Silk fabric Mekhela Chadaar Set	58 Sets.	30000	1740000
Expenses on Raw Material at 100% capacity (Rs)			1740000

4.5 Raw materials: Total expenses on raw materials at 100% capacity utilization are estimated as below.

Particulars	Qty Reqd	Price Per Unit (Rs.)	Amount (Rs.)
Muga warp Silk Yarn	13.50 Kg	20000	270000
Muga weft Silk Yarn	20.40 Kg	18000	367200
Designing Yarn	5 Kg	800	40000
Expenses on Raw Material at 100% capacity (Rs)			677200

4.6 Power & Utility: Total expenses on power & utility at 100% capacity utilization is estimated as below.

A. Expenses on Power

Particulars	Quantity	Power (Kw)	Total (Kw)
Plant & Machinery	1	0.00	0.00
General Lighting	10	0.10	1.00
Total power requirement/ day (Kw)			1.00
No. of hrs/ day		8	
Nos. of days/annum		300	
Annual power requirement (kwh)		2400	
Rate per unit (Rs)		6	
Expenses on power (Rs)		14400	

B: Estimate of Utility

Expenses on Water/Other Utilities (Rs)	12000
Expenses on Power & Utility at 100% capacity (Rs)	26400

4.7 Salary: Total expenses on salary in the 1st year are estimated as given below. It is assumed that salary expenses will increase @ 0.5% every subsequent year.

Particulars of Employee	Numbers	Salary/ Month (Rs)	Cost/ annum (Rs)
Skilled Weavers	2	0.16	3.84
Helper	1	0.05	0.60
Expenses on salary in the 1st year (Rs)			4.40

4.8 Repair & Maintenance: Total expenses on repair & maintenance in the 1st year is estimated as given below. It is assumed that expenses on repair & maintenance will increase @ 2% every subsequent year.

(Rs. in lacs)

Particulars	Cost (Rs)	Contingencies 5%	Total	Rate	Amount (Rs)
Building & Civil Works	2.63	0.13	2.76	1.00%	0.03
Plant & Machinery	1.78	0.09	1.87	2.00%	0.04
Misc. Fixed Assets	0.81	0.04	0.85	1.50%	0.01
Expenses on repair & maintenance in year 1					0.08

Other Expenses: Other expenses has been assumed at 1% of sales realisation.

4.9 Depreciation: Depreciation has been calculated by straight line method. The details of calculation are given below.

(Rs in lacs)

Description	Cost (Rs)	Rate	Amount/ annum (Rs)
Building & Civil Works	2.63	3.34%	0.09
Plant & Machinery	1.78	4.75%	0.08
Misc. Fixed Assets	0.81	6.33%	0.05
TOTAL	5.22		0.22

4.10 Interest on term loan & principal repayment: Interest rate has been assumed at 8.5%. Duration of Loan repayment has been considered for a period of 6 years including moratorium period of 1 year with equal monthly installments. The details of calculation are given below. (Rs in lacs)

Month	Year	1	2	3	4	5	6
Month 1	Opening balance	4.55	3.64	2.73	1.82	0.91	0.00
	Repayment	0.08	0.08	0.08	0.08	0.08	0.00
	Interest (8%)	0.03	0.03	0.02	0.01	0.01	0.00
	Closing balance	4.47	3.56	2.65	1.74	0.83	0.00
Month 2	Opening balance	4.47	3.56	2.65	1.74	0.83	0.00
	Repayment	0.08	0.08	0.08	0.08	0.08	0.00
	Interest	0.03	0.03	0.02	0.01	0.01	0.00
	Closing balance	4.40	3.49	2.58	1.67	0.76	0.00
Month 3	Opening balance	4.40	3.49	2.58	1.67	0.76	0.00
	Repayment	0.08	0.08	0.08	0.08	0.08	0.00
	Interest	0.03	0.02	0.02	0.01	0.01	0.00
	Closing balance	4.32	3.41	2.50	1.59	0.68	0.00
Month 4	Opening balance	4.32	3.41	2.50	1.59	0.68	0.00
	Repayment	0.08	0.08	0.08	0.08	0.08	0.00
	Interest	0.03	0.02	0.02	0.01	0.00	0.00
	Closing balance	4.25	3.34	2.43	1.52	0.61	0.00
Month 5	Opening balance	4.25	3.34	2.43	1.52	0.61	0.00
	Repayment	0.08	0.08	0.08	0.08	0.08	0.00
	Interest	0.03	0.02	0.02	0.01	0.00	0.00
	Closing balance	4.17	3.26	2.35	1.44	0.53	0.00
Month 6	Opening balance	4.17	3.26	2.35	1.44	0.53	0.00
	Repayment	0.08	0.08	0.08	0.08	0.08	0.00
	Interest	0.03	0.02	0.02	0.01	0.00	0.00
	Closing balance	4.10	3.19	2.28	1.37	0.46	0.00
Month 7	Opening balance	4.10	3.19	2.28	1.37	0.46	0.00
	Repayment	0.08	0.08	0.08	0.08	0.08	0.00
	Interest	0.03	0.02	0.02	0.01	0.00	0.00
	Closing balance	4.02	3.11	2.20	1.29	0.38	0.00
Month 8	Opening balance	4.02	3.11	2.20	1.29	0.38	0.00
	Repayment	0.08	0.08	0.08	0.08	0.08	0.00
	Interest	0.03	0.02	0.02	0.01	0.00	0.00
	Closing balance	3.94	3.03	2.12	1.21	0.30	0.00
Month 9	Opening balance	3.94	3.03	2.12	1.21	0.30	0.00
	Repayment	0.08	0.08	0.08	0.08	0.08	0.00
	Interest	0.03	0.02	0.02	0.01	0.00	0.00
	Closing balance	3.87	2.96	2.05	1.14	0.23	0.00
Month 10	Opening balance	3.87	2.96	2.05	1.14	0.23	0.00
	Repayment	0.08	0.08	0.08	0.08	0.08	0.00
	Interest	0.03	0.02	0.01	0.01	0.00	0.00
	Closing balance	3.79	2.88	1.97	1.06	0.15	0.00
Month 11	Opening balance	3.79	2.88	1.97	1.06	0.15	0.00
	Repayment	0.08	0.08	0.08	0.08	0.08	0.00
	Interest	0.03	0.02	0.01	0.01	0.00	0.00
	Closing balance	3.72	2.81	1.90	0.99	0.08	0.00
Month 12	Opening balance	3.72	2.81	1.90	0.99	0.08	0.00
	Repayment	0.08	0.08	0.08	0.08	0.08	0.00
	Interest	0.03	0.02	0.01	0.01	0.00	0.00
	Closing balance	3.64	2.73	1.82	0.91	0.00	0.00
TOTAL INTEREST (for the yr.)		0.35	0.27	0.20	0.12	0.04	0.00
LOAN REPAID (during the yr.)		0.91	0.91	0.91	0.91	0.91	0.00
TOTAL LOAN REPAID (Cumulative)		0.91	1.82	2.73	3.64	4.55	0.00

4.11 DEBT SERVICE COVERAGE RATIO (DSCR)

(Rs. in lacs)

PROFIT AFTERTAX	DEPRE - CIATION	INT. ON T.L.	TOTAL	INT. ON T.L.	LOAN REPAYMENT(TL)	TOTAL	DSCR
0.74	0.22	0.35	1.31	0.35	0.91	1.26	1.04
0.81	0.22	0.27	1.30	0.27	0.91	1.18	1.10
1.55	0.22	0.20	1.97	0.20	0.91	1.11	1.77
1.60	0.22	0.12	1.94	0.12	0.91	1.03	1.88
1.65	0.22	0.04	1.92	0.04	0.91	0.95	2.02
6.34	1.12	0.98	8.44	0.98	4.55	5.53	7.82

Average DSCR = 1.53

4.12 BREAK EVEN POINT (BEP)

(Rs. in lacs)

Year	1	2	3
A. Net Sales	10.44	12.18	13.92
B. Variable cost			
Raw materials	4.06	4.74	5.42
Power	0.13	0.16	0.19
Total variable cost	4.19	4.90	5.61
C. CONTRIBUTION (A-B)	6.25	7.28	8.32
D.Fixed & Semi-fixed Costs			
Salaries & Allowances	4.44	5.43	5.46
Repair & Maintenance (2% increase every subsequent year)	0.08	0.08	0.08
Interest on Loan	0.35	0.27	0.20
Other Expenses (1% of sales)	0.10	0.12	0.14
Depreciation	0.22	0.22	0.22
E. BREAKEVEN POINT	83.12%	84.12%	73.45%
CASH BEP	79.55%	81.05%	70.76%

4.13 INTERNAL RATE OF RETURN (IRR)

(Rs. in lacs)

Particulars	Implement ation Period	YEAR								
		1	2	3	4	5	6	7	8	9
CASH INFLOW										
Profit After Tax		0.74	0.81	1.55	1.60	1.65	1.68	2.15	2.15	2.15
Add: Depreciation		0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Add: Interest		0.35	0.27	0.20	0.12	0.04	0.00	0.00	0.00	0.00
Total (A)	0.00	1.31	1.30	1.97	1.94	1.92	1.90	2.38	2.38	2.38
CASH OUTFLOW										
Capital Expenditure	3.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Working Capital	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (B)	4.53	0.00								
NET FLOW (A-B)	-4.53	1.31	1.30	1.97	1.94	1.92	1.90	2.38	2.38	2.38
IRR = 33.12%										

4.14 Name and contact of Machinery suppliers

Sl. No.	Name of the Machinery Suppliers	Communication Address
1.	M/s Pragjyotika Enterprise	Chhabra Bhawan,MS Road, Rly.Gate No 4, Fancy Bazaar, Guwahati- Assam, 781001,Phone: 09435145467 E-mail: pragjyotika.mj@gmail.com
2	M/s Gajalakshmi Industries	No.61, 2 nd Main Road, Sheshadripuram Behind Govt. Primary High School Bangalore - 560 020. Karnataka, India E-mail: info@gajalakshmi.in Telefax: +91-80-28361419 Mobile : 9880023277, 9844032913, 98861 11555