

**143. PROFILE ON PRODUCTION OF
LEATHER GLOVES**

TABLE OF CONTENTS

	<u>PAGE</u>
I. SUMMARY	143-3
II. PRODUCT DESCRIPTION & APPLICATION	143-3
III. MARKET STUDY AND PLANT CAPACITY	143-4
A. MARKET STUDY	143-4
B. PLANT CAPACITY & PRODUCTION PROGRAMME	143-6
IV. RAW MATERIALS AND INPUTS	143-7
A. RAW & AUXILIARY MATERIALS	143-7
B. UTILITIES	143-8
V. TECHNOLOGY & ENGINEERING	143-9
A. TECHNOLOGY	143-9
B. ENGINEERING	143-9
VI. MANPOWER & TRAINING REQUIREMENT	143-11
A. MANPOWER REQUIREMENT	143-11
B. TRAINING REQUIREMENT	143-12
VII. FINANCIAL ANALYSIS	143-12
A. TOTAL INITIAL INVESTMENT COST	143-12
B. PRODUCTION COST	143-13
C. FINANCIAL EVALUATION	143-14
D. ECONOMIC BENEFITS	143-15

I. SUMMARY

This profile envisages the establishment of a plant for the production of leather gloves with a capacity of 36,000 pairs per annum.

The present demand for the proposed product is estimated at 58,211 pairs per annum. The demand is expected to reach at 96,926 pairs by the year 2020.

The plant will create employment opportunities for 30 persons.

The total investment requirement is estimated at about Birr 6.63 million, out of which Birr 4 million is required for plant and machinery.

The project is financially viable with an internal rate of return (IRR) of 19 % and a net present value (NPV) of Birr 3.23 million discounted at 8.5%.

II. PRODUCT DESCRIPTION AND APPLICATION

Leather gloves are products for which leather is used as a principal input in the manufacturing process. Leather hand gloves are leather products.

Most of the leather gloves investigated under this study are used to indoor application (Kitchen and garage) and out door application (During cold season and agro industrial works).

III. MARKET STUDY AND PLANT CAPACITY

A. MARKET STUDY

1. Past Supply & Present Demand

Gloves are used for covering of the hand. A glove has a separate sheath for each finger and it's used for protection of hand and as a fashion trend. The country's demand for leather gloves is entirely met through import. Table 3.1 shows the yearly supply of of the product during the period 2000 - 2006.

Table 3.1
IMPORT OF LEATHER GLOVE (PAIRS)

Year	Import
2000	3,506
2001	11,848
2002	34,909
2003	11,975
2004	45,353
2005	29,816
2006	99,464
Total	236,871
Average	33,839

Source: Customs Authority, Annual External Trade Statistics.

As shown in Table 3.1 the supply from import fluctuates from year to year without any trend ranging from 3,506 pairs to 99,464 pairs. Although the import data is very erratic during 2000 - 2006, the country has been importing on the average about 33,839 pairs of leather gloves per year.

Due to lack of trend in the import data for the product, the average import during the last three years (2004 – 2006) is assumed to approximate present demand for the product. Accordingly, the present effective demand for the product is estimated at 58,211 pairs.

2. Projected Demand

The demand for leather gloves is related with population size and income. Accordingly, the in projecting the demand for the product an annual average growth rate of 4% which is equivalent to the growth rate of population is used. The demand projection executed using this growth rate is shown in Table 3.2.

Table 3.2
PROJECTED DEMAND FOR GLOVES (PAIRS)

Year	Project Demand
2008	60,539
2009	62,961
2010	65,479
2011	68,099
2012	70,823
2013	73,655
2014	76,602
2015	79,666
2016	82,852
2017	86,167
2018	89,613
2019	93,198
2020	96,926

3. Pricing and Distribution

Based on current retail price of the product and assuming margin for wholesalers and retailers a factory gate price of Birr 75/ pairs is adopted. The product can be distributed by establishing distribution centers in strategic locations.

B. PLANT CAPACITY AND PRODUCTION PROGRAMME

1. Plant Capacity

According to the market study, the demand of leather gloves in the year 2008 will be 60,539 Pairs, whereas this demand will grow to 96,926 Pairs by the year 2020.

Because of the variety of leather gloves and different manufacturing methods and levels of sophistication, it is practically challenging to define exactly the capacity of a leather gloves plant. For the purpose of this study three groups of leather gloves are selected and indicated in Table 3.3. It is assumed that the plant will be operate for 300 days per annum and a single shift of 8 hours per day. Its demand is ever on the increase. However, additional market requirement can be met by running the production unit on a second or third shift.

Table 3.3

LEATHER GLOVES PRODUCTION CAPACITY

Sr. No.	Leather Gloves	Annual Production Capacity (Pairs)
1	Hand gloves (kitchen)	4,000
2	Hand gloves (Cold season)	2,000
3	Hand gloves (Agro-industrial)	30,000

2. Production Programme

In the first and second year of production, the plant shall operate with capacity utilization rate of 70% and 85%, respectively. This is because the plant requires enough time to penetrate into the market and to develop skill in the design and manufacturing of appropriate leather products. In the third year and onwards, full capacity production shall be attained. Table 3.4 below indicates the production programme of the proposed project.

Table 3.4
PRODUCTION PROGRAMME (IN PCS)

Sr. No.	Leather Goods	Production Year		
		Year-1	Year-2	Year-3
1.	Hand gloves (kitchen)	2,800	3,400	4,000
2.	Hand gloves (Cold season)	1,400	1,700	2,000
3.	Hand gloves (Agro-industrial)	21,000	25,500	30,000

IV. MATERIALS AND INPUTS

A. RAW AND AUXILIARY MATERIALS

The raw material required for leather gloves production mentioned herein consists of upper leather, lining fabric. In addition, auxiliary materials consumed by the plant include locks, zippers, buckles, thread and others. The list and cost of these materials is indicated in Table 4.1. The total annual cost of materials (at full plant capacity) is estimated at Birr 734,600.

Table 4.1

RAW AND AUXILIARY MATERIALS REQUIREMENT AND COST
(AT FULL CAPACITY)

Sr. No.	Raw And Auxiliary Materials	Unit of Measure	Qty	Cost ('000 Birr)		
				FC	LC	Total
1.	Upper Leather	m ²	10,000	-	454.8	454.8
2.	Lining Fabrics	m ²	6,000	-	240	240
3.	Locks	No	2,000	2	-	2
4.	Zippers	No	3000	9	-	9
5.	Buckles	No	1,500	3	0.8	3.8
6.	Thread (assorted)	Km	1500	3	2	5
7	Miscellaneous				20	20
	Total			17	717.6	734.6

B. UTILITIES

Electricity and water are utilities required by the envisaged project. Table 4.2 shows the annual utilities requirement and its cost.

Table 4.2

ANNUAL UTILITIES REQUIREMENT AND COST

Sr. No.	Utility	Unit of Measure	Qty	Cost ('000 Birr)
1	Electricity	kwh	20,000	9.472
2	Water	m ³	1000	10
	Total			19.472

V. TECHNOLOGY AND ENGINEERING

A. TECHNOLOGY

1. Production Process

The principal operations involved in leather gloves production are cutting, skiving, folding, stitching, splitting, inspecting and packing.

Cutting is performed either by hand, with the aid of knife and templates or in the clicking machine. It is an important operation in order to obtain consistent production and a satisfactory final appearance of the product. The same applies to the cutting of straps and belts with the strap cutter and cardboard reinforcements with the guillotine cutter.

Skiving and folding is done to secure straight and even edges. Stitching, done on sewing machine of different types, must take into consideration the materials to be sewn together (thread, needle, stitch length, etc). Splitting is sometimes required to reduce the thickness of leather or other sheet material to be used.

.

2. Source Of Technology

The technical data and information are extracted from the study conducted by the GOPA Consultants and compiled and published by UNIDO (“HOW TO START MANUFACTURING INDUSTRY”).

B. ENGINEERING

1. Machinery and Equipment

The leather gloves identified and intended to be produced in the envisaged plant will employ similar machinery for most of the operations. There are only few equipment required for individual operations attached to specific product.

The total cost of machinery and equipment is estimated at Birr 4 million, out of which Birr 3 million is required in foreign currency. The list of required machinery and equipment is indicated in Table 5.1.

Table 5.1
LIST OF MACHINERY AND EQUIPMENT

Sr. No.	Machinery & Equipment	Qty.
1.	Hydraulic Clicking Machine	1
2.	Guillotine Cutter	1
3.	Strap Cutter	1
4.	Splitting Machine	1
5.	Skiving Machine	2
6.	Folding Machine	1
7.	Sewing Machines	10
8.	Hand tools	Set

2. Land, Building and Civil Works

The plant requires a total of 1500 m² area of land out of which 1,000 m² is built-up area which includes Processing area, raw material stock area, offices etc. Assuming construction rate of Birr 1500 per m², the total cost of construction is estimated to be Birr 1.5 million. The total cost, for a period of 80 years with cost of Birr 1 per m², is estimated at Birr 1,500. The total investment cost for land, building and civil works is estimated at Birr 1,501,500.

3. Proposed Location

According to the resource potential study of the region, the raw material is identified in Awassa zuria , Wonago , Arba Minch Zuria woredas. Based on the availability of raw

material infrastructure, utility and market out let Awassa town of Awassa zuria Woreda is selected and recommended to be the location of the envisaged plant.

VI. MANPOWER AND TRAINING REQUIREMENT

A. MANPOWER REQUIREMENT

The manpower requirement of the envisaged project is 30 persons. The total annual labour cost including fringe benefits is estimated at Birr 259.5 thousand. Table 6.1 shows the manpower requirement and labour cost of the project.

Table 6.1
MANPOWER REQUIREMENT AND ANNUAL LABOUR COST

Sr. No.	Description	Req. No.	Monthly Salary (Birr)	Annual Salary (Birr)
1.	General manager	1	1500	18000
2.	Secretary	1	500	6000
3.	Accountant	1	1200	14400
4.	Sales Officer	1	900	10800
5.	Purchaser	1	800	9600
6.	Storekeeper	1	500	6000
7.	Driver	1	600	7200
8.	Production Supervisor	1	1000	12000
9.	Skilled Workers	15	7500	90000
10.	Design Experts	1	1200	14400
11.	Semi-skilled workers	4	1200	14400
12.	Guards	2	400	4800
	Sub – Total	30	17300	207600
	Benefits (25% of Basic Salary)		4325	51900
	Total	30	21625	259500

B. TRAINING REQUIREMENT

On-the-job training will be carried out during plant erection and commissioning. Its cost is estimated at Birr 20,000.

VII. FINANCIAL ANALYSIS

The financial analysis of the leather gloves project is based on the data presented in the previous chapters and the following assumptions:-

Construction period	1 year
Source of finance	30 % equity
	70 % loan
Tax holidays	5 years
Bank interest	8%
Discount cash flow	8.5%
Accounts receivable	30 days
Raw material local	30 days
Raw material, import	90 days
Work in progress	2 days
Finished products	30 days
Cash in hand	5 days
Accounts payable	30 days

A. TOTAL INITIAL INVESTMENT COST

The total investment cost of the project including working capital is estimated at Birr 6.63 million, of which 56 per cent will be required in foreign currency.

The major breakdown of the total initial investment cost is shown in Table 7.1.

Table 7.1
INITIAL INVESTMENT COST

Cost Items	Total Cost (‘000 Birr)
Land lease value	120.0
Building and Civil Work	1,500.0
Plant Machinery and Equipment	4,000.0
Office Furniture and Equipment	100.0
Vehicle	250.0
Pre-production Expenditure*	496.2
Working Capital	163.9
Total Investment cost	6,630.1
Foreign Share	56

* *N.B Pre-production expenditure includes interest during construction (Birr 346.48 thousand) training (Birr 20 thousand) and Birr 130 thousand costs of registration, licensing and formation of the company including legal fees, commissioning expenses, etc.*

B. PRODUCTION COST

The annual production cost at full operation capacity is estimated at Birr 1.99 million (see Table 7.2). The material and utility cost accounts for 37.86 per cent, while repair and maintenance take 5.77 per cent of the production cost.

Table 7.2**ANNUAL PRODUCTION COST AT FULL CAPACITY ('000 BIRR)**

Items	Cost	%
Raw Material and Inputs	734.60	36.89
Utilities	19.47	0.98
Maintenance and repair	115	5.77
Labour direct	124.56	6.25
Factory overheads	41.52	2.08
Administration Costs	83.04	4.17
Total Operating Costs	1,118.19	56.15
Depreciation	571	28.67
Cost of Finance	302.37	15.18
Total Production Cost	1,991.56	100

C. FINANCIAL EVALUATION**1. Profitability**

According to the projected income statement, the project will start generating profit in the first year of operation. Important ratios such as profit to total sales, net profit to equity (Return on equity) and net profit plus interest on total investment (return on total investment) show an increasing trend during the life-time of the project.

The income statement and the other indicators of profitability show that the project is viable.

2. Break-even Analysis

The break-even point of the project including cost of finance when it starts to operate at full capacity (year 3) is estimated by using income statement projection.

$$\text{BE} = \frac{\text{Fixed Cost}}{\text{Sales} - \text{Variable Cost}} = 63 \%$$

3. Pay Back Period

The investment cost and income statement projection are used to project the pay-back period. The project's initial investment will be fully recovered within 5 years.

4. Internal Rate of Return and Net Present Value

Based on the cash flow statement, the calculated IRR of the project is 19% and the net present value at 8.5% discount rate is Birr 3.23 million.

D. ECONOMIC BENEFITS

The project can create employment for 30 persons. In addition to supply of the domestic needs, the project will generate Birr 1.75 million in terms of tax revenue. The establishment of such factory will have a foreign exchange saving effect to the country by substituting the current imports.