

Plan: refrigerator and sorting center establishment

Introduction to the product:

The main goal of this plan is to establish sorting and refrigeration center in Lorestan Province. The produced products are stored in refrigeration centers in order to be preserved after the plan implementation. The ISIC code of services in ministry of industries and mines and commerce is classified in subgroups of the support and transportation aiding activities, travel agencies (63) and its measurement scale is tone.

Plan products ISIC code

No	Product	
1	+0 refrigeration center	6302612306
2	-0 refrigeration center	6302612307
3	Dual circuit refrigeration center	6302612311
4	Food storage and preservation in refrigerators	6302412304

The products investigated in this plan include different fruits such as pear, apple etc. for sorting and preserving in refrigerator. The nature of the manufactured products in sorting unit is characterized by the situation created in the product and the quality and uniform size and packaging coverage and there would be also a set of the quality control processes applied to the products. But, there is a large spectrum of the contents packaging which would be of high diversity based on the raw material chosen including vegetables and fruits and it will have the conditions and characteristics of the fruits and vegetables generally.

Introducing the product's application:

Products in this plan is one of the nutritious and energetic foods suppliers containing vitamins necessary for body which, irrespective of the supply manner which is directly provided by food services providing systems, tourism and welfare systems and would be directed toward the human and is not considered a mediatory product. It can be considered the mediatory products; if it was used for extracts, canned products, juices or organic acids and alcohol etc. in fact, it can be used as consumable and as mediatory products. The physical, chemical natures and the main raw materials variety are important which are indeed supplied after the sorting and segregation processes and packaging and preserved as the sorted products, while its nutritional, energy nature and supply of necessary vitamins for body is of the particular sanitary and microbiological significance. They have desirable microbiological and ergonomic conditions and qualities considering the microbial and chemical standards of the products and the market attractions are highly desirable for this product due to the packing process.

Plan suggested sites

Based on the advantages of the establishment in industrial parks and zones, the Lorestan province industrial parks are suggested for implementing the plan.

Raw, auxiliary materials and consumables

The amount and the costs of the consumables in this unit are as follow.

Raw materials and packing costs per 100% practical capacity

Annual costs (m Rials)	Price (Rial)	Raw materials and consumables Sum	Wastes	Consumption per year	Unit	Raw, auxiliary materials and consumables	No	Description
2448	12000	204000	4000	200000	Kg	Fruit types	1	Preserving in refrigerator for fruit lacking season
183.60	18000	10200	200	10000	Number	10kg box	5	
244.80	12000	20400	400	20000	Number	5kg box	6	
195.84	3200	61200	1200	60000	Number	Pasty batch	7	
2.65	26000	102	2	100	Kg	Detergents	8	
16.96	30000	565.43	11	554	Roll	Cardboard tape	9	
3091.86								Sum
39168	12000	3264000	64000	3200000	Kg	Fruit types	10	For sorting in crop harvesting
2203.20	18000	122400	2400	120000	Number	10kg box	12	
1958.40	12000	163200	3200	160000	Number	5kg box	13	
3916.80	3200	1224000	24000	1200000	Number	Pasty batch	14	
42.43	26000	1632	32	1600	Kg	Detergents	15	
158.32	30000	5277.39	103	5174	Roll	Cardboard tape	16	
47447.15								Sum
50539.01		5076976.826	99549				Sum	

Sales plan and target market

The sorting and refrigeration centers sales plans are as follow.

Annual sales (m Rial)	Unit price (Rial)	Practical capacity	Nominal capacity	Description		No
8100	45000	180000	200000	Fruit types	+0 refrigeration unit and sorting before/after harvesting	1
1350	15000	900000	100000	Meat preservation rent	-0 refrigeration units	2
74880	26000	2880000	3200000	Fruit types	Sorting during harvesting	3
84330			3500000	Sum		

Annual nominal and practical capacity

The nominal capacity of this plan is to store, sort and pack 200 t food per year (fruits, vegetables and beans) in +0 temperature. On the other hand, based on the fact that sorting fruit is a fruit production dependent, so in a 60-100 days period, this unit works in 2 and 3 shifts. In some seasons, the sorting unit may be off. But, in order to provide a suitable mathematical model for technical and engineering calculation of unit's nominal capacity which is 3200 t annually, 300 days and 1 working shift is considered. The nominal capacity for the unit is determined based on machineries and equipment's capacity, volumetric capacity of buildings, production line bottlenecks, raw material supply and prediction of the market capacity. Considering unpredicted and unexpected factors of process stop as well as maintaining and repairing processes, the plan practical capacity for this unit is 90%. Therefore, the practical capacity is 90 t meat storage in -0 temperature and storing 180 types of fruits in +0 temperature annually and sorting 2880 t fruits.

Manufacturing procedure and technology

The refrigeration units don't require particular technical knowledge. It is necessary in units to regulate the ideal temperature. In sorting unit, based on the investigated process in technology section and necessity to implement sorting and packing system and machineries supply sources necessary for this plan in sorting unit and manufacturing and running the sorting line locally, considering the suitable costs and desirable automation and suitable with different target products and respecting the sorting technology, the technology in this section includes:

1. Discharge pool
2. Uplifting and waste segregation conveyor
3. Washing brush
4. Fungicides and paraffin brush

5. Drying tunnel
6. Sorting conveyor
7. Sorting unit
8. Packing unit

Investment costs

The fixed investment costs for this plan is 35.49 billion Rials and the working capital is equivalent to 8.85 billion Rials estimated.

Description	Total Cost(m.Rial)	%
Land purchase	2,450	6%
Site preparation and development	1,144	3%
Civil works, structures and buildings	10,524	24%
Machinery and equipment	14,967	34%
Branches And Installation	2,888	7%
laboratory equipment	200	0%
Vehicles	400	1%
Service equipment	87.00	0%
official equipment	405	1%
Other and unpredicted costs	1,653	4%
Total FIXED ASSETS	34,717.40	78%
pre-production expenditures	779.40	2%
TOTAL FIXED INVESTMENT COSTS	35,496.81	80%
Working capital in 100% of capacity	8,858.07	20%
Other assets	0	0%
TOTAL INVESTMENT COSTS	44,354.88	100%

Plan production costs

The annual cost of this plan is 60.62 billion Rials estimated.

#	Description	Total Cost(m.Rial)
1	Raw and packing material	50,539
2	Personnel's salary	5,904
3	Energy	1,258
4	Building and livestock insurance	63
5	Repair, maintenance and spare parts	1,270
6	Marketing and Advertising	1,687
7	Unpredicted	3,036

8	Depreciation	2,679
Total operational and non-operational production costs		66,436

Economic indices

<i>Description</i>	<i>Amount-measurement scale</i>
<i>NPV</i>	<i>19371 m Rial</i>
<i>IRR</i>	<i>29.81%</i>
<i>PBP</i>	<i>2.99 years</i>

Plan and Budget Organization of Lorestan province

PROJECT PROFILE – SUMMARY SHEET

Project Introduction

1. Project title: **refrigerator and sorting center establishment**

2. Sector: helping and supportive activities

Sub sector: stocking

3. Products/Services: refrigeration centre and sorting services

4. Location: ... Free zone Economic special zone Industrial Estate Main Land

5. Project description:

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6. Annual capacity: 3200 t /year

Project Status

7. Local / internal raw material access 100 %

8. Sale: 100% locally

- Anticipated export market 0 %

9. Construction Period 24 month

Beginning of activity

In-site beginning of activity:

End of project:

Commercial activity beginning:

Project Status

10. Project Status:

- Feasibility study available? Yes No
- Required land provided? Yes No
- Legal permissions (establishment license, foreign currency quota, environment, etc) taken? Yes No
- Partnership agreement concluded with local/foreign investor? Yes No
- Financing agreement concluded? Yes No
- Agreement with local / foreign contractor(s) concluded? Yes No
- Infrastructural utilities (electricity, water supply, telecommunication, fuel, road, etc) procured? Yes No
- List of know-how, machinery, equipment, as well as seller / builder companies defined? Yes No
- Purchase agreement for machinery, equipments and know- how concluded? Yes No

Financial Structure

11. Financial Table

Description	Local Currency Required			Foreign Currency Required Million Dollar	Total Million Dollar
	Million Rials	Rate	Equivalent in Million Dollar		
Fix Capital	35496.81	31000	0.15	0	0.15
Working Capital	8858.07	R for	0.29	0	0.29
Total Investment	44354.88	each Dollar	0.43	0	0.43

- Value of foreign equipment/machinery million dollar
- Value of local equipment/machinery 0.48 million dollar
- Value of foreign technical know- how million dollar
- Value of local technical knows- how million dollar
- Net Present Value (NPV): 19371 Million Rial for 10 Year, discount rate: 20%
- Internal Rate of Return (IRR) 29.81%
- Payback Period (PP) 33.44%

General Information

12. Project Type : Establishment Expansion and completion

13. Company Profile:

-Name (legal /natural persons):

-Company Name:

-Address:

-Tel: Fax:

-E-mail: Web site:

-Local entrepreneur : private sector public sector other

Please attach follow documents if available

- Pre-feasibility study ■
- Feasibility study □
- Legal permissions (establishment license, foreign currency quota, environment, etc) □

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