



Honey Packaging Esfarayen Industrial park

Center of Investment Services of North Khorasan

2021 April

Summary of Technical-Economical Pre-Feasibility Study

The name: Honey Packaging

Sector: Agricultural

Subsector: Alterant Industries

ISIC Code: 7495412370

The owner of:

Organization of Economic Affairs and Finance (North Khorasan)



The ADDRESS:

Iran, North Khorasan, Esfarayen

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1 Abstract

1.1 Project Profile - Summary Sheet

Table 1: Summary Sheet

Project Introduction			
Project Title	Honey Packaging		
Sector	Agricultural		
Sub Sector	Alterant Industries		
Location	Iran, North khorasan, Esfarayen		
The County	Esfarayen		
Products / Services	Honey		
Annual Nominal Capacity	500		Ton's
The Raw Material	Honey and Packaging Equipment		
Employment	24		Person
Land Area	4,000		m ²
Floor Area	980		m ²
Energy and Water Consumption	Water Consumption	10,000	m ³ in year
	Electricity Consumption	120	KW
	Gas Consumption	200,000	m ³ in year
Fixed Capital	70,215		Million Rial
Working Capital (The First Year)	40,693		Million Rial
Payback Period	2.95		Year
Net Present Value (NPV)	164,876		Million Rial
Internal Rate Of Return (IRR)	61		%
Modified Internal Rate of Return (MIRR)	30		%
Break Even Point	32		%
The Exchange Rate (Dolar)	240,000		Rial
Description	In this project, all the materials related to the study of the packaging of honey market especially domestic and foreign supply and demand, are examined.		

Table 2: Legal Authorizations

Licensure Status	
Descriptions	Issuance Status
Principal Agreement (Establishment Licensure)	☒
Land Allocation	☒
Environmental Inquiry	☒
Possibility of Water Supply	☒
Possibility of Electricity Supply	☒
Possibility of Electricity Supply	☒
Possibility of Gas Supply	☒

Table 3: Total Investment

Descriptions	Local Currency Required			Foreign Currency Required (Million Euro)	Total (Million Euro)
	(Million Rial)	Rate	Equivalent in (Million Euro)		
Fixed Capital	70,215	240,000	0.2926	0	0.2926
Working Capital	40,693		0.1696	0	0.1696
Total Investment	110,908	240,000	0.4621	0	0.4621

- Value of Foreign Equipment / Machinery: 0 Million Euro
- Value of Local Equipment / Machinery: 0.036 Million Euro
- Net Present Value (NPV): 0.6869 Million Euro in 15 Years
- Internal Rate of Return (IRR): 61%
- Payback Period: 2.95 Years

Table 4: General Information

Company Profile	
Project Type	Establishment <input checked="" type="checkbox"/>
Company Name	North Khorasan Organization of Agriculture Jihad
Contact Person (Name and Position)	Mr Rezvan Nikbakht
Email	et.1383@yahoo.com
Mobile	+989379094738
Tel	+9858-32257990
Website	http://portal.nkj.ir
Address	North Khorasan Province, Bojnurd, Chehelodometri Kamarbandi Blvd, North Khorasan Organization of Agriculture Jihad
Company's Legal Structure	Government <input checked="" type="checkbox"/>

2 Project Location

2.1 Province: North Khorasan

2.2 The County: Esfarayen

Esfarayen is a city and capital of Esfarayen County, North Khorasan Province in Iran. At the 2011 census its population was 60,372 persons in 17,334 families. This project will be construct in part 107 with coordinates (4083418,571434) in Esfarayen Industrial Park. Proposed location of project is shown in Figure 1.



Figure 1: Location of Proposed Land in Esfarayen Industrial Park

2.3 The Project: Honey Packaging

2.4 Access to the Infrastructures

Table 5: Access to Infrastructures

No.	Needed Infrastructures	Distance to the Project	The Supply Infrastructures
1	Water	0	is provided
2	Electricity	0	is provided
3	Gas	0	is provided
4	Telecommunications	0	is provided
5	High way	<1 km	is provided
6	Sub way	0	is provided
7	Airport	115	is provided
8	Amirabad Port (Behshahr)	540	is provided
9	Bandar Abbas Port	1,433	is provided
10	Rail way station of Joveyn	109	is provided
11	Rail way station of Jajarm	160	is provided

3 Technical Specifications of Plan

3.1 Product

Table 6: Project Specifications Based on ISIC Code

The Project	ISIC Code	Customs Tariff	Environmental Category
Honey Packaging	7495412370	Service	1

In this project, all the materials related to the study of the packaging of honey market especially domestic and foreign supply and demand, are examined. The product of this project is packaged honey. Honey is a useful and valuable substance that is produced by bees from the nectar of flowers. The composition of honey includes several sugars, fructose, glucose, and sucrose. Honey also contains some other substances such as amylase, invertase, catalase, and peroxidase, which have a significant effect on digestion. Honey contains a variety of minerals, proteins and amino acids, organic acids, and enzymes, depending on the type of bees that produce them and their diet. Honey has beneficial effects on our body and is a biologically active product that has rich and complex compounds. The exact composition depends on the flowers that the bees feed on. Everything in this product is essential and useful for human health. There are more than 300 substances in honey that positively affect the body's metabolic process. The necessity of implementing this project can be examined from several aspects. The first aspect is the abundance of honey in North Khorasan. Some of the honey that produced in North Khorasan is used in bulk by the natives of this province, but a large part of the honey produced in this province is sent in bulk and with very low profits to processing units in Mashhad, Tehran, and other provinces, which weakens the economic situation. The second aspect is related to manpower. Although unemployment rates in North Khorasan Province are relatively favorable, the presence of a large number of skilled workers can be a very valuable opportunity to set up a honey packaging plant. Taking advantage of this opportunity to prevent the migration of the province's labor force at this time is very necessary. The third aspect is related to exports. This aspect is due to the advantage of North Khorasan province in terms of geographical location and proximity to Afghanistan and Pakistan, Turkmenistan. This short distance has a great impact on reducing

transportation costs, which increases profitability for Khorasan entrepreneurs who intend to do business

3.2 Project's Requirements

Impact of informal imports and exports: The volume of similar products imported to the country is very low and insignificant, and according to studies, informal imports are almost zero and insignificant. But in discussing the export of this product, it should be noted that the volume of exports of this product to neighboring countries by large companies is appropriate. Compatibility of the project with the total macroeconomic strategies: This plan is in line with the total macroeconomic policies. Implementation of this plan will create jobs, honey packaging will be done through this project and will create added value for honey. On the other hand, with the consumption of honey and the improvement of people's health, the costs of treatment for the general public will be reduced.

3.3 Space and Infrastructure Required

Table 7: Land Purchase Costs (Million Rial)

Specifications	Area (m ²)	Price per m ²	Cost		
			Paid Cost	Needed Fund	Total
A piece of land in Esfarayen	4,000	0.3	0	0	1,200

Table 8: Site Preparation and Development Costs (Million Rial)

Description	Working Capacity	Unit	Unit Price	Paid Cost	Needed Fund	Total
Excavation	4,000	cm	0.3	0	0	1,200
Wall Construction and door	300	Sm	9	0	0	2,700
street construction (5% of the amount of land)	200	Sm	7	0	0	1,400
Green space and Lighting (1% of the amount of land)	40	No	8	0	0	320
Total				0	0	5,620

Table 9: Civil Works, Structures and Buildings Costs (Million Rial)

Description	Area (m ²)	Unit Price	Paid Cost	Needed Fund	Total
Production Hall	500	25	0	12,500	12,500
Raw Material Warehouse	200	30	0	6,000	6,000
Product Warehouse	200	25	0	5,000	5,000
Office Building	50	45	0	2,250	2,250
Welfare and Guardroom	30	45	0	1,350	1,350
Total			0	27,100	27,100

Table 10: Infrastructures

No	Description	Unit	Annual Consumption	Unit Cost (Rial)	Total (Million Rial)
1	Water consumption	m ³	10,000	7,000	70
2	Electricity consumption	Kw	500,000	1,100	550
3	Gas consumption	m ³	200,000	1,200	240
4	Gasoline	Litr	2,000	30,000	60
5	others				210
Total					1,130

3.3.1 Equipment and Machinery

Table 11: Plant Machinery and Equipment Costs (Million Rial)

Description	Unit Cost	Costs Required				Total
		Local Costs	Costs of Currency		Cost to Complete	
			Rate	(Million Euro)		
Purification machine	5	5	240,000	0.000021	0	5
Extractor with filter	180	180		0.00075	0	180
Mono condensate pump	80	160		0.00067	0	160
Honey storage tank	180	180		0.00075	0	180
Traffic tray	35	35		0.00015	0	35
Washing machine (for glass)	700	700		0.0029	0	700
Filling machine	3,500	3,500		0.01458	0	3,500
Door locking device	1,200	1,200		0.005	0	1,200
Sheathing machine	300	300		0.00125	0	300
labeler machine	1,800	1,800		0.0075	0	1,800
Printer	85	85		0.000354	0	85
Sharing Pack	480	480		0.002	0	480
Total cost of machinery		8,625		0.03594	0	8,625

The exchange rate is: 1 € = 240,000 Rial

3.3.2 Raw material and Intermediate Components

Table 12: Raw Material and Intermediate Components (Million Rial)

Description	Unit	Total Consumption of the Raw Material	Price per Unit of Raw Material	Annual Cost of Providing Material
Raw material & Packaging	ton	-	-	37.592
Salary	Rial	-	-	17.910
Energy costs (fuel, electricity and water)	L/KW/CM	-	-	1,130
Repair and maintenance	Rial	-	-	2,086
Total				58,718

3.3.3 Management and Human Resources

Table 13: Salary of Administrative Staff (Million Rial)

No.	Position	Number of Shifts	Personnel per Shift (No.)	Total Staff (People)	Monthly Salary (per Person)	Annual Salary
1	manpower (in Administrative sector)	-	-	8	71.25	6,840
2	manpower (in Production sector)	-	-	16	57.66	11,070
Total				24		17,910

- Number of skilled personnel required: 16
- Number of non- skilled personnel required: 8
- Total number of personnel required: 24

4 Market Study and Competition

4.1 Examining Supply And Demand Trends

The amount of domestic supply or production honey packaging based on license (according to the information of the Ministry of industry, Mine and Trade) from 2015 up to 2020 is presented in Table 14.

Table 14: The Amount of Domestic Supply

Year	Nominal Capacity (Tons)
2015	36,990
2016	48,188
2017	57,348
2018	68,554
2019	92,953
2020	103,629

The real production capacity of active units in 2015 up to 2020 is shown in Table 15.

Table 15: The Real Production Capacity of Active Units in 2015 up to 2019

Year	Nominal Capacity (Tons)
2015	23,406
2016	30,448
2017	36,289
2018	43,379
2019	58,819
2020	65,574

The following chart shows the prediction of production according to the Table 15 based on linear regression.

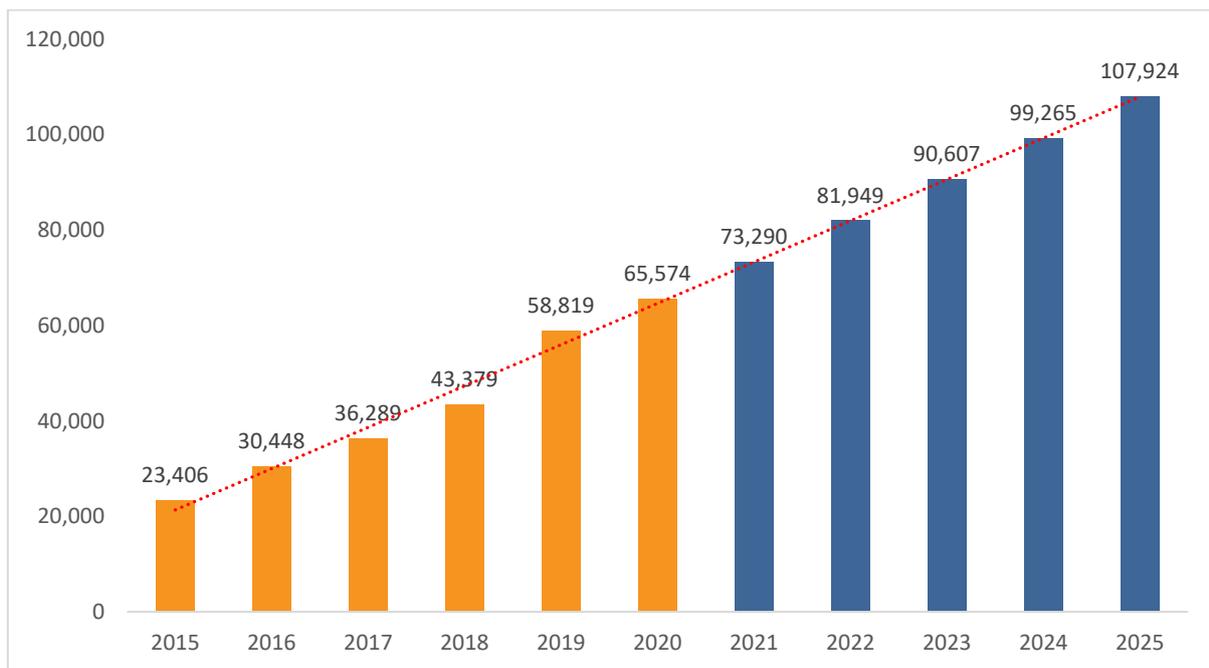


Figure 2: The Prediction of Production

As **Figure 2** shows, the amount of honey packaging production is increasing.

Considering that honey packaging is a service, it has no customs tariff, so import and export analysis is removed. In the Table 16, the information of the units that have obtained license is presented based on the amount of progress

Table 16: The Information of The Units that have Obtained License

Progress Percent	Capacity (Tons)
0% - 25%	80,768
25% - 50%	4,900
50% - 75%	8,780
75% - 100%	2,085

5 Financial Projection

5.1 The Cost Estimate

Table 17: Total Investment (Million Rial)

No.	Subject	Cost
1	Fixed Capital	70,215
2	Working Capital	40,693
Total investment		110,908

Table 18: Fixed Capital (Million Rial)

Subject	Paid Cost	Cost Required			Total Cost	
		local Cost	Foreign Exchange Cost			Needed Fund
			Rate	(€)		
land purchase	0	1,200	240,000	0.005	1,200	1,200
Landscaping	0	5,620		0.02342	5,620	5,620
Building	0	27,100		0.1129	27,100	27,100
Equipment and machinery	0	8,625		0.0359	8,625	8,625
Laboratory and workshop supplies & equipment	0	497		0.0021	497	497
Facilities	0	4,510		0.01879	4,510	4,510
Transportation	0	2,650		0.01104	2,650	2,650
Office and services equipment	0	560		0.0023	560	560
Pre-operation costs	0	13,070		0.05446	13,070	13,070
Unforeseen (10% of the above items)	0	6,383		0.02659	6,383	6,383
Total Fixed investment	0	70,215			0.2926	70,215

Table 19: Working Capital (Million Rial)

Subject	Day	Total
Packaging material (2 months raw materials and packaging)	60	37,592
Salary (2months salary)	60	2,985
Imprest fund (15 days of water, electricity, fuel and repair costs)	15	116
Total		40,693

Table 20: Fixed and Variable Costs

.No	Production Cost	Fixed Cost		Variable Cost	
		%	Cost	%	Cost
1	Raw material	0	0	100	225,550
2	Energy & utility	20	226	80	904
3	Repair & maintenance	20	417	80	1,669
4	Production salary	70	12,537	30	5,373
5	Depreciation	100	5,773	0	0
Total production costs			18,953		233,496

5.2 Break-Even Analysis

Table 21: Break-even Analysis

Period	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Break-even ratio (%)	32.12	31.23	30.42	29.69	28.87	27.78	27.28	26.83	26.43	26.05

5.3 Sensitivity Analysis of IRR

Table 22: Sensitivity Analysis of IRR

Variation (%)	Sales revenue	Increase in fixed assets	Operating costs
-20.00%	-59.47%	73.45%	127.61%
-16.00%	-8.19%	70.60%	114.21%
-12.00%	14.34%	68.00%	100.87%
-8.00%	30.54%	65.60%	87.60%
-4.00%	45.93%	63.38%	74.42%
0.00%	61.33%	61.33%	61.33%
4.00%	76.86%	59.42%	48.34%
8.00%	92.52%	57.64%	35.39%
12.00%	108.29%	55.98%	22.17%
16.00%	124.16%	54.42%	7.53%
20.00%	140.10%	52.96%	-17.25%

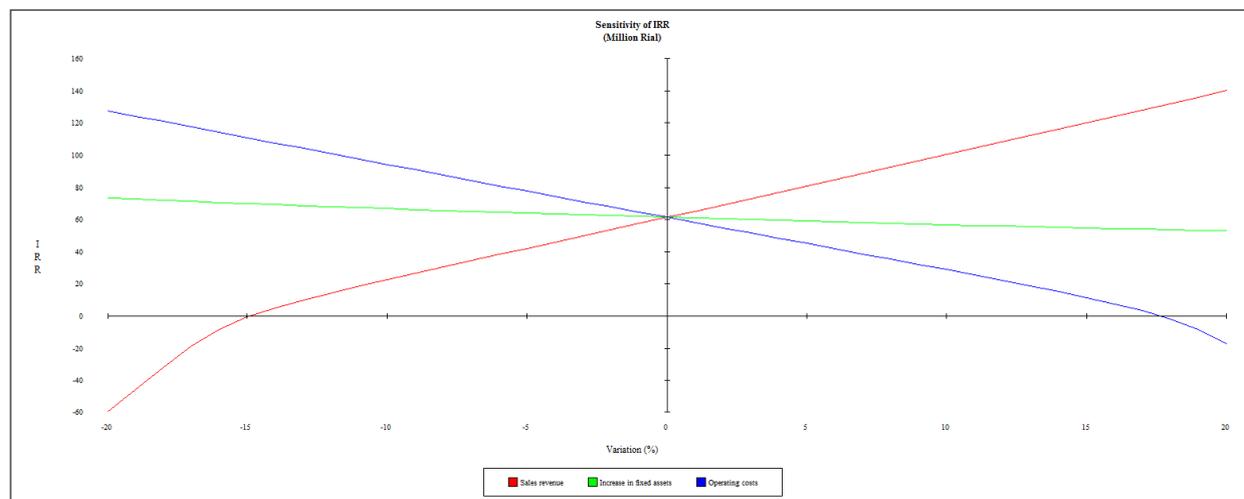


Figure 3: Sensitivity Analysis of IRR

6 Duration of Project Operation

Table 23: Action Plan and Implementaion Schedule

Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Land Purchase	■																								
Constructing Buildings		■	■	■	■	■	■	■	■	■															
Execution of Facilities										■	■														
Order, Purchase of Machinery												■	■												
Landscaping													■	■											
Machinery Strat-up and Trial Production																									

7 Incentives, Features and Advantages of Project

North Khorasan Province is a province located in northeastern Iran. Bojnord is the capital of the province. This province contains many historical and natural attractions, such as mineral water springs, small lakes, recreational areas, caves and protected regions, and various hiking areas. Advantages of the agriculture of this province involves favorable and diverse climatic conditions and other parameters affecting growth.