In the name of Allah

Pre-feasibility studies

Project Name: Dairy Production

(Pre-cheese, Ripened brined Cheese, Fresh white cheese, Clotted Cream 60-65% fat, Ricotta Cheese, non-carbonated Buttermilk and Yoghurt)

Project Owner:
Milk Industry Blossoms Company

Advisor of the project:
Zahra Badoei

Project address: Khuzestan, Izeh Industrial Estate

Date of P.F.S: March , 2021

Summary of pre-feasibility plan

General Specification	
Name of The Project	Dairy Production(Pre-cheese, Ripened brined Cheese, Fresh white cheese, Clotted Cream 60-65% fat, Ricotta Cheese, non-carbonated Buttermilk and Yoghurt
Project Capacity	7449 tons
Personnel Number	46 persons
Working Days	250 days
Product Usage	As raw materials for Pizza cheese and cream factories, daily edible consumption
Marketing	
Product Global Price	Cheese: 3.3 Euro/kg, yoghurt: 0.5 Euro/kg, buttermilk: 0.3 Euro/kg
Domestic Demand	1.92 million ton
Domestic Production	2.04 million ton
Import	-
Export	120.9 thousand ton
Technical Study	
Land Area	12360 m^2
Building Area	1376 m^2
Main Raw Materials	cow's and sheep's raw milk, Stabilizers , starter, packaging materials
Supplying Place of Raw Materials	Domestic
Power Requirement	245 KW
Water Requirement	5000 m^3
Fuel Requirement	300,000 m^3 gas
Economical & Financial Study	
Fixed Investment Cost	116,526.40 million Rails ≅ 0.425 million Euro
Working Capital	95,909.23 million Rail's ≅ 0.350 million Euro
Total Investment Cost	212,435.63 million Rail's ≅ 0.775 million Euro
Annual Sale (100% capacity)	1, 121,130.0 million Rails≅ 4.09 million Euro
Net Present Value(NPV)	322,443.53 million Rail's≅ 1.17 million Euro
Break Even Point(BEP)	27.75 %
Internal Rate of Return(IRR)	62.28 %
Investment Return Period	3 years
Investment Sources Ratio: Equity:63% Finance: 37%	 139,899.03 million Rails ≅ 0.489 million Euro 78,536.6 million Rails ≅ 0.286 million Euro

Index	Page No.
Introduction:	**4**
1.Product introduction	**7**
1.1. Product name and ISIC code	10
1.2. Customs tariff code	10
1.3. Import and export products conditions	11
1.4. Review and presentation of standard (national or international)	12
1.5. Review and provide information about domestic production prices and global price of the product	12
1.6. Explaining the usage and application of the product in the domestic and foreign markets	13
1.7. Evaluation of alternative products, competitors and analysis and its effects on consumption of the product	15
1.8. The strategic importance of the product in Iran and foreign markets	15
1.9. The major producing countries and product consumer	16
2. Situation of supply and demand in Iran and foreign markets	**17**
2.1. Study of utilization capacity and production process since the beginning of the Sixth Five Year Economic Development Plan of the Islamic Republic of Iran, unit location, the number and level of technology of available units, nominal capacity, practical capacity, lack of full capacity utilization reasons, the name of country and manufacturer of machinery used in production	17
2.2. Study of the status of new projects and under construction development projects (In terms of number, capacity, operation place, the physical progress rate and the level of their technology and investments by both foreign exchange and other required) and semi-finished projects	20
2.3. The trend of imports of the product in the last five years	23
2.4.The trend of consumption in the last five years	24
2.5. The trend of export product in the last five years and the possibility of its development	24
2.6. Reviewing of products needs based on export priority	31
3- Overview of technology and production methods and product supply in the country and compare it with other countries	**32**
4. Determine the strengths and weaknesses of known technologies (in outline) in the production process	**35**

Index	Page No.
5. Determine the minimum economic capacity includes the estimated volume of fixed investment estimated volume with the separation of Rials and foreign exchange (Using information of available and under construction units, UNIDO, internet, the global data banks, technology selling companies and equipment, etc.)	**36**
6-The annual major required raw materials and annual and to supply outside or inside the country, domestic and foreign exchange and checking the major developments in the supply of essential required items in the past and future	**49**
7. The risk analysis of the project	**51**
8. Human resources and employment status	**53**
9.Determine the amount of water, electricity, gas, telecommunications and communication facilities (road - rail - Airport - Port ...) and how to provide them in the appropriate area to implementation	**53**
10. Economic and trade support for plan	**54**
10.1. Supporting of Customs tariff (products and machines) with global tariff	55
10.2. financial support (existing units and projects) banks - investment firms	55
11.Analyzes And providing summary and final offer	**56**
12. Summary of pre-feasibility plan	**58**

Introduction:

For many years, man has been producing various milk products in the primary and traditional ways. Gradually, the process of optimizing the milk industry evolved and adapted to the needs of the urban population. At present, the milk industry and its products have a special place the food industry, as the economic basis of many countries rests on the industry.

In Iran, the life of the modern milk industry goes back more than half a century, while thousands of years ago, along with some other tribes in the Near East were also founders of the traditional milk industry. With development of technology in the milk industry and the production of various products in the field, consumption of these products has gradually increased to the level of the general public.

The Milk Industry Blossoms company was established in 2007 with the aim of producing dairy products in Khuzestan province, Izeh city in northern Khuzestan which has great potential for livestock and milk production. To execute the land plot of 12360 m^2 in Izeh industrial estate was prepared and executed Its products were initially Nomashak (Yakhmak) and Jelly under the brand “Abkouh” and “Atila” which were ordered by Rooz Tehran Company and were used to supply their own products directly to " Beh Limoo 33" brand. The company also produced lactic cheese, milk and buttermilk in 2018.

At present, this company has decided to expand the plant and produce other high consumption dairy products such as pre-cheese for pizza, fresh and ripened brined white cheese, as well as yoghurt and non-carbonated buttermilk. In addition to satisfying domestic demand, especially the high-consumption market of Khuzestan and neighboring provinces, this production will also target exports in the future. Therefore, the present plan is designed to attract investors to finance the completion and start-up costs of the dairy sector.

It should be noted that it will be welcomed if the investor wishes to import and supply up-to-date machinery with high technology .


Armenia
Azerbaijan
Turkey
AZ
Caspian Sea
Turkmenistan
Tabriz
East Azerbaijan
Ardabil
Urmia
West Azerbaijan
Rasht
Gilan
Zanjan
Qazvin
Golestan
Gorgan
Bojnourd
North Khorasan
Kurdistan
Sanandaj
Alborz
Sari
Mazandaran
Karaj
Tehran
Semnan
Mashhad
Razavi Khorasan
Hamadan
Kermanshah
Qom
Markazi
Arak
Ilam
Khorramabad
Lorestan
Isfahan
Iraq
Shahrekord
Chahar Mahal and Bakhtiari
Khuzestan
Ahvaz
Yazd
Birjand
South Khorasan
Afghanistan
Kohgiluyeh and Boyer-Ahmad
Yasuj
Kuwait
Kerman
Shiraz
Fars
Bushehr
Zahedan
Persian Gulf
Hormozgan
Bandar Abbas
Sistan and Baluchestan
Saudi Arabia
Bahrain
Qatar
Oman
United Arab Emirates
Pakistan
Gulf of Oman
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Izeh
Location of project

Iran milk production divided by province in 2020

province	Milk production – thousand tons	rank
Esfahan	1,374.50	1
Tehran	1,226.70	2
Khorasan, Razavi	1,066.30	3
Fars	633.40	4
Qazvin	572.80	5
Eest Azerbaijan	553.90	6
Mazandaran	507.90	7
West Azerbaijan	411.30	8
Alborz	393.00	9
Hamadan	386.50	10
Golestan	386.00	11
Khuzestan	341.1	12
Markazi	304.20	13
Ardabil	276.20	14
Chahar Mahaal and Bakhtiari	270.00	15
Lorestan	256.10	16
Yazd	252.00	17
Kermanshah	229.00	18
Kerman	225.00	19
Gilan	180.70	20
Semnan	166.40	21
Zanjan	151.00	22
Qom	143.80	23
Kurdistan	116.40	24
Khorasan, South	116.20	25
Khorasan, North	104.30	26
Ilam	91.30	27
Sistan and Baluchestan	75.70	28
Kohgiluyeh and Boyer-Ahmad	70.50	29
South Kerman	54.20	30
Bushehr	40.40	31
Hormozgān	25.10	32
total	**11,002.00**	

Source: Ministry of Agriculture - Jihad

1.Product introduction:

Cheese is a fresh or ripened product that is divided into four groups according to the texture: Soft, Semi-Hard, Hard and Extra-Hard.

- **Pre-cheese**

Pre-cheese is a product obtained as a result of enzymatic coagulation of milk which is pasteurized by one of the conventional methods and is frozen. This product is used as a raw material in various cheese and processed cheese factories.

Pre-cheese has a special form of self-clotting dehydrated milk and its color is pale white to pale yellow.

Pre-cheese is packaged in hygienic conditions in the heat-resistant, moisture-and-light packages of a suitable food grade and certified by the country's legal authority (Ministry of Health and Medical Education).

Pre-cheese packaging is multilayer polyethylene bags and resistant to moisture, fat and cold. The net weight of each package shall not exceed 25 kg.

Two by-products are available in the primary cheese production process.

1. Clotted Cream 60-65% fat
In the process of pre-cheese production, after the milk is pasteurized, it is stirred by the milk separator which separates the cream (fat) and milk. The resulting cream contains 60-65% fat and is used as raw material for the production of types of cream or breakfast cream.

2. Ricotta Cheese
The whey produced from pre cheese is cooked to mild heat and turns into Ricotta cheese (Ricotta literally means: re-cooked) which is used as a pizza cheese raw material.

Like other whey, ricotta is made from coagulation of the remaining milk proteins used in cheese production and the most important of these proteins are albumin and globulin.

- **Ripened Brined Cheese**

This Cheese that is not consumable immediately after production and must be stored at specific time and temperatures for certain physical and biochemical changes. Brined cheese is in a group of ripened cheeses that it ripens at a certain temperature and time and are stored in saltwater till using. These cheeses have a moisture content.

The Various types of ripened cheeses in brine are produced in Eastern Europe, the Balkans and the Middle East. The names of these cheeses may vary from region to region. Some types of ripened cheeses in brine include:

Feta، Akawi, Hallomi and in Iran Lighvan

These cheeses are made from cow's milk, sheep and goat milk or a mixture of them. Lighvan Cheese is one of the most consumed traditional Iranian cheeses that is produced in the village of Lighvan in southeast of Tabriz in northwest of Iran. Nowadays its production is widespread and is traditionally produced in different places.

Chemical properties of cheese ripened in brine

Specifications	Acceptable range
Acidity (based on lactic acid)	0.8 min
PH	4.8 max
Salt (percent by weight of cheese)	3-4.5
moisture(percent by weight of cheese)	60% max
Fat (based on dry matter)	40≤fat<60
Sterols other than cholesterol (percentage of cholesterol)	3 max

Source: Institute of Standards and Industrial Research of Iran

- **Iranian Fresh white cheese**

It is cheese that is ready for consumption after preparation (without any specific ripening steps). Cow's milk is suitable for this cheese which, after standardizing its fat and protein and pasteurization, is manufactured using the Rennet and Starter method. Characteristics of this cheese are low acidity, mild salt and mild taste. By consuming one hundred grams of this cheese which contains 20-30% biologically valuable protein, the human needs for protein are supplied 30-30% daily.

- **Yoghurt:**

Yoghurt is a product mainly produced by using cow's milk and doing by the process of pasteurization, homogenization, homogenization fat, condensation with dry milk and the addition of lactic starter (yogurt liquid) to it. Milk consumed for yogurt contains 0.5% to 10% fat (depending on yogurt).Yogurt is a good alternative to milk for people with lactose deficiency, so

the side effects of this enzyme deficiency do not appear. Yogurt produces about 56 calories which increases the amount of fat added to the calories produced. Yogurt is also a very good source of calcium (about 120mg / 100 g). The shelf life of yogurt varies from 14 to 25 days depending on the type of packaging and process.

In this plan, a variety of pasteurized and long life yoghurt which will be produced in either simple or flavored yoghurt. The yogurt is packed in buckets, flasks and glasses in 2.5, 2, 1.5 kg and 100 grams.



- **Buttermilk (doogh) without gas (non-carbonated):**

The buttermilk is a product made from a mixture of hygienic yogurt (made from pasteurized cow's milk) at least 40%, pasteurized water up to 60% and aromatic and salt essential oils less than 1%. Buttermilk has the beneficial properties of yogurt in terms of the activity of beneficial lactic bacteria and in terms of quantity has at least half the nutritional value of yogurt. It produces about 20 calories per 100 gr of energy. In this plan, packages of this product are offered in 900 gram bag and 230 cc glass. Buttermilk proteins are better digested in the gastrointestinal tract than milk proteins and because of this reason has less bloating in people with sensitive stomachs because of their lower lactose content.

At present, the international standard of this drink is registered in the name of Iran and is recognized as a cultural heritage of Iranian food.


1.1. Product name and ISIC code

ISIC is the most common classification and categorization of economic activities. ISIC classification is defined as: classification and categorization of the international standard industrial classification of all economic activities. This classification is allocated to one of the 2, 4, and 10 digit codes based on the type of industry and product. the ISIC codes related to dairy products of this project are given in the table below.

Product name	*ISIC Code*	*Unit*
Cheese cured used as raw material in cheese industry	1520412760	ton
Fresh white cheese	1520512789	ton
White cheese ripened in brine	1520512583	ton
Yoghurt (Pasteurized and Long life yoghurt)	1520312627	ton
Pasteurized clotted cream	1520512380	ton
non-carbonated pasteurized buttermilk	1520612685	ton
Flavored non-carbonated buttermilk, Pasteurized	1520612689	ton

Source: organization of Industry, mine and trade

1.2. Customs tariff code

Based on the export and import regulation of Islamic republic of Iran the custom tariff for ice cream is as follows:

It is necessary to note that the customs tariff number is general and generally includes all different types of a product, for example code 04069000 includes all types of cheese and cannot separated fresh white cheese from this code or tariff code 04039090 includes all types of carbonated and non-carbonated buttermilk.

Heading subheading No.	**Description**
0402	Milk and cream, concentrated or containing added sugar or other sweetening matter.
040291	-- Not containing added sugar or other sweetening matter:
04029110	--- Milk cream
0403	Buttermilk, curdled milk and cream, yogurt, kephir and other fermented or acidified milk and cream, whether or not concentrated or containing added sugar or other sweetening matter or flavored or containing added fruit, nuts or cocoa
04031090	--- yoghurt
04039090	---Buttermilk and other
04061000	- fresh cheese (unripened or uncured), including whey cheese
04069000	- other cheese

Source : export-import regulations (2020)

1.3. Import and export products conditions

Given the conditions for product import and export in Islamic republic of Iran, conditions and tariffs for import and export of the dairy products of this project are as follows:

Heading Subheading No.	Description	SUQ	Import duty
0402	Milk and cream, concentrated or containing added sugar or other sweetening matter.		
040291	-- Not containing added sugar or other sweetening matter:		
04029110	--- Milk cream	kg	40
0403	Buttermilk, curdled milk and cream, yogurt, kephir and other fermented or acidified milk and cream, whether or not concentrated or containing added sugar or other sweetening matter or flavored or containing added fruit, nuts or cocoa		
04031090	--- yoghurt	kg	32
04039090	---Buttermilk and other	kg	55
04061000	- fresh cheese (unripened or uncured), including whey cheese	kg	55
04069000	- other cheese	kg	55

Source : export-import regulations (2020)

Import terms:

- the importation of all these goods is subject to the observance of Article 16 of the Law on Foodstuffs and Beverages adopted in the year 1967. The clearance of these goods shall depend on the submission of health certificate issued by the country of origin.

- The importation of products of Subheading 04039090 with the Previous outhorization of Ministry of Agriculture –Jihad.

1.4. Review and presentation of standard (national or international)

- national Standard

Number	Title	Country
93:2016	Pasteurized milk Specifications & test method	Iran
13418:2017	Milk and Milk products- Pre-cheese- Specifications and test methods	Iran
2243:1995	Specifications for cheese tin - containers	Iran
2344-1: 2016	Brined Cheese- Specifications and Test Methods	Iran
2344: 2002	Cheese- General Specifications	Iran
1881: 2002	Hermetically sealed metal cans for preserved foodstuff- Specifications	Iran
695: 2009	Yoghurt – Specifications and test methods	Iran
5562: 2002	Yoghurt-code hygienic manufacture	Iran
4046: 2017	Milk and milk products -Flavored yoghurt Specifications and test methods	Iran
2453: 2009	Doogh (buttermilk) – Specifications and test method	Iran
10528: 2002	Doogh (buttermilk) - Code of practice and production	Iran
11324: 2009	Probiotic doogh (buttermilk) – Specifications and test methods	Iran

Source: Institute of Standards and Industrial Research of Iran

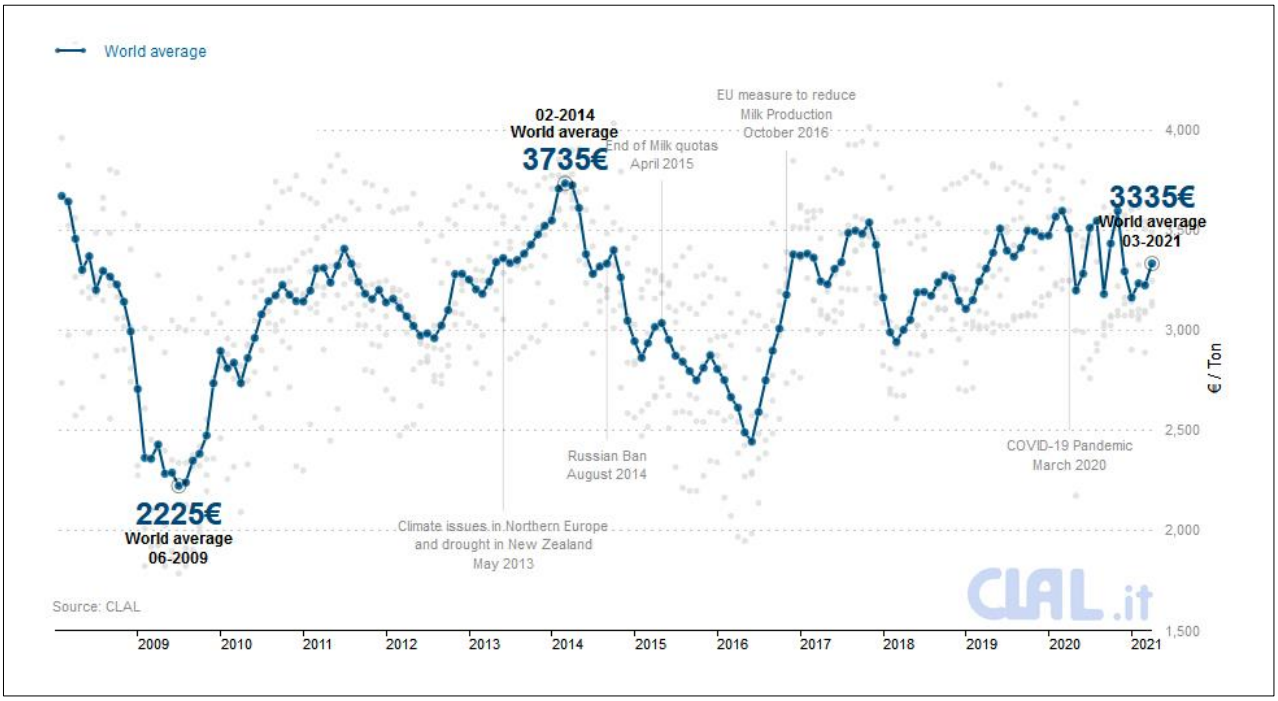
International Standard

- U.S. Code of Federal Regulations (CFR) :131& 133, Standards of Identity Milk, Cheeses, Yogurt
- Codex Alimentarius Commission A6: 1999 Standard for Cheese
- Codex 208:1999, Amendment 2010, Standard for Cheeses in Brine
- ISO 6785, Milk and milk products — Detection of Salmonella spp.
- ISO 10560, Milk and milk products — Detection of Listeria monocytogenes

1.5. Review and provide information about domestic production prices and global price of the product

The Price of dairy products is vary Variable by type and composition , however the global price of chees is 3.3 EUR/kg. Also the global prices of yoghurt and buttermilk Respectively are 0.5 and 0.3 EUR/kg.

Global Cheese prices (€/ton)



Sourse: https://www.clal.it, Cheese Prices Overview (2021)

Domestic price of dairy products are as follows:

Pre-cheese	320,000 Rials per kilogram ≅1.16 EUR
Cream 60-65% fat	320,000 Rials per kilogram ≅1.16 EUR
Ricotta Cheese	320,000Rials per kilogram ≅1.16 EUR
Ripened brined Cheese	550,000 Rials per kilogram ≅2 EUR
Fresh white cheese	350,000 Rials per kilogram ≅1.28 EUR
Yoghurt	92,000 Rials per kilogram ≅0.34 EUR
non-carbonated pasteurized buttermilk	47,000 Rials per kilogram ≅0.17 EUR

1.6. Explaining the usage and application of the product in the domestic and foreign markets

The dairy industry is one of the most important loops in the agricultural food chain and the most advanced conversion and supplement industry that is ranking first in the consumer and value-added market among other industries in the sector, so this indicates the lucrative investment and the importance of policy making in this sector for the future. The production of dairy products creates adds value and better opportunities for producers to enter national and regional markets than raw milk.

The most important consumption of milk other than direct use is the production of dairy products that each country focuses on producing according to its people's tastes, for example in the

European countries more cheese production is booming while the taste of our people has led us to produce more yoghurt.

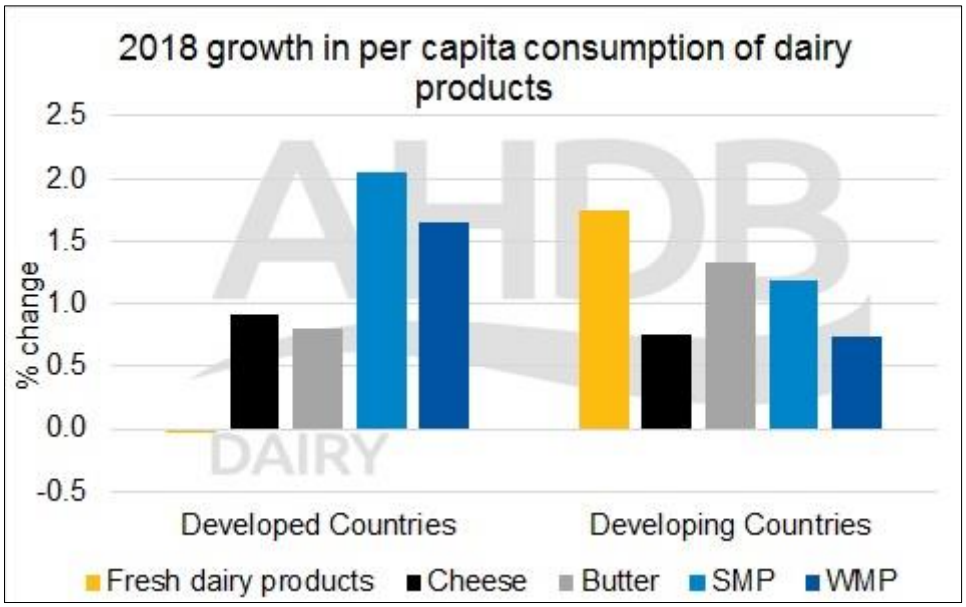
The Dairy products are full of protein, calcium and phosphorus. According to statistics, the per capita consumption of dairy products in Iran is less than half of the world per capita. Per capita dairy consumption in Europe is 425 kg, in the world 165 kg and in Iran 66 kg. It is noteworthy that the Sixth Economic and Social Development Plan of the country provides for the consumption of 160 kg milk and dairy products per person in 2022.

Daily consumption of cheese for adults is recommended 25 to 35 grams of cheese per day (13 kg/ year) by national and international organizations; per capita consumption of soft cheese in Iran is 5 to 5.5 kg per person per year, and While consumption in other countries, such as Greece, has the highest consumption of cheese in the world about 29 kg, and cheese consumption in France and Germany is 25 and 24 kg respectively (Iranian Association of Dairy Industries).

This factory produces two kinds of white ripened brine and fresh white cheese which both of them are widely used by children and adults because of their different taste and texture and their nutritional value. On the whole, it should be noted that cheese along with the other two dairy product (milk and yoghurt) is one of the most consumed dairy products, in fact cheese is always used at breakfast and as a valuable food in today's diet.

Yoghurt is also one of the most consumed dairy products and it is a good alternative to milk for people with lactose deficiency, so the side effects of this enzyme deficiency do not appear.

Raw cheese and Ricotta are used as raw materials for the cheese industry, especially pizza cheese. High fat clotted cream with 65-60% fat is also used for creaming in industrial and traditional cream production workshops.



Source: FAO, 2018

1.7. Evaluation of alternative products, competitors and analysis and its effects on consumption of the product

Dairy is one of the major food pyramid groups which include milk, yogurt, cheese, yogurt, ice cream and whey which are equally nutritious and can replace each other. For example, if a glass of yogurt or 60 grams of cheese is consumed instead of a glass of milk, it has the same nutritional value in terms of calcium, protein and other nutrients. One unit of this group is:

- A glass of milk or low-fat yogurt (less than 2.5 percent fat)
- 45 to 60 grams of plain cheese
- A quarter cup of curd
- 2 cups of buttermilk
- one and a half glasses of pasteurized ice cream

Cheese is very important in human life because of its high nutritional value and general use. It is like other dairy products in the human food pyramid, always provides a part of the body's needs including protein and certain vitamins and especially calcium. Since several types of cheese are produced in the country, other cheeses such as dairy, creamy, processed, etc. can be substituted for fresh ripe white cheese.

In general, dairy is one of the sources of animal protein and as a result of rising prices for protein products (red and white meat), so they are one of the most important meat substitutes.

Top competitors in the field of dairy production (cheese, yogurt and buttermilk) in the country are brands of Kaleh, Calber, Roozaneh, Damdaran, Mihan, Pegah, Choopan, Ramak, Pak, Sabah, Haraz, Mi Mas and Arjan. Given the low cost and the quality of the products at the Milk Industry Blossoms company, competition with these brands is not unexpected.

1.8. The strategic importance of the product in Iran and foreign markets

One of the most important and strategic industries in the country that deals directly with people's health is dairy. Dairy can replace many foods. Therefore, if the dairy basket has an acceptable share of households, many diseases are practically prevented.

The dairy industry is one of the most advanced food industries in the world which is growing rapidly. Much of this effort goes into producing new products with a variety of formulations. There are hundreds of different types of dairy products currently in production.

According to the WHO report, Finland is ranked first with a consumption of 361 kg per capita, Sweden is ranked second in the world in terms of high consumption of dairy products, but in Iran it is 66 kg per capita. More than two-thirds of calcium intake in Western countries is provided by dairy products (Ministry of Health and Medical Education).

The milk and its products provide 3 to 4 percent of dietary energy supply in Africa and Asia, compared with 9 percent in Europe and Oceania; 6 to 8 percent of dietary protein supply in Africa and Asia, compared with 19 percent in Europe; and 7 percent of dietary fat supply in Africa and Asia, compared with 12 to 14 percent in Europe, Oceania and the Americas.

1.9. The major producing countries and product consumer

The largest producers of milk are also the largest producers of dairy products and include India, the European Union, the United States, China, Brazil, Russia, New Zealand. They are also the largest consumer of milk and dairy products. The top 10 milk and dairy producing countries in 2018 are as follows.

The top 10 dairy producing countries in the word in 2018

No.	Country	Million tonnes
1	USA	91.3
2	India	60.6
3	China	35.7
4	Brazil	34.3
5	Germany	31.1
6	Russia	30.3
7	France	23.7
8	New Zealand	18.9
9	Turkey	16.7
10	UK	13.9

Source: FAO, 2018

milk and dairy consumption in the world

Rank	Country	Consumption (thousand tons)
1	India	160,000.0
2	EU	154,960.0
3	United States	98,038.0
4	China	37,553.0
5	Brazil	34,258.0
6	Russia	30,950.0
7	New Zealand	21,622.0
8	Mexico	12,413.0
9	Ukraine	10,509.0
10	Argentina	10,384.0
11	Canada	9,489.0
12	Australia	8,915.0
13	Japan	7,400.0
14	Belarus	7,085.0
15	South Korea	2,083.0
16	Taiwan	445.0
17	Philippines	72.0

Source: FAO, 2018

Yoghurt	
Top Producer:	Saudi Arabia
Top Exporter:	Germany
Top Importer	Italy

2. Situation of supply and demand in Iran and foreign markets

2.1. Study of utilization capacity and production process since the beginning of the Sixth Five Year Economic Development Plan, unit location, the number and level of technology of available units, nominal capacity, practical capacity, lack of full capacity utilization reasons, the name of country and manufacturer of machinery used in production

According to information obtained from the Organization of Industry, Mining and Commerce, the number and quantity of dairy production units are as follows.

The dairy industry has always been the focus of many domestic and foreign investors; it has faced many ups and downs in recent years due to changes in raw milk prices.

One of the most important reasons for the lack of full utilization of capacities is the fluctuations in milk and dairy prices that are also changing the consumer market. The rise in prices of agricultural goods consequently is caused the rise in milk prices in recent years, so it has led to an increase in the cost of dairy products and household consumption has declined somewhat. Despite the increase in dairy consumption over the years, population growth has decreased, but per capita consumption has fallen due to inflation and declining household income.

The standard service life of machinery in the milk industry and its products is 10 years, which is dependent on factory maintenance and repair systems. Owning a large part of the private industry, industry owners have sought to establish a competitive edge and gain greater market share, increase exports, reduce costs and increase their unit profit, install modern machinery and increase diversity and quality. Existing technology is almost modern and up-to-date, with most of the new ones being upgraded, so 13% of the factories have foreign machines.

It should be noted that the quality of the products produced in the field of cheese production and other products is comparable and competitive with foreign samples.

According to field surveys, all the dairy machines are manufactured in Iran but some of the big companies that have good financial ability buy their machines from countries such as Germany, Italy and ... . There is no human intervention in any part due to the hygiene tips that are very important in the food industry.

The largest and most important dairy companies in Iran are as follows:

1. Iran Dairy Industries Company (Pegah)	
- Pegah Golpayegan Pasteurized Milk Company	Isfahan-Golpayegan
- Pegah Isfahan Pasteurized Milk	Isfahan - Isfahan
- Pegah East Azarbaijan Pasteurized Milk	East Azarbaijan-Tabriz
- Pegah West Azarbaijan Pasteurized Milk	West Azarbaijan- Orumiyeh
- Pegah Khorasan Pasteurized Milk	Khorasan, Razavi- Mashhad
- Pegah Gonabad Pasteurized Milk	Khorasan, Razavi- Gonabad
- Pegah Khouzestan Pasteurized Milk	Khouzestan- Shush
- Pegah Zanjan Pasteurized Milk	Zanjan- Zanjan
- Pegah Gilan Pasteurized Milk	Gilan- Rasht
- Pegah Fars Pasteurized Milk	Fars - Shiraz
- Pegah Lorestan Pasteurized Milk	Lorestan- Khorramabad
- Pegah Gorgan Pasteurized Milk	Golestan- Gorgan
2. Fajr Gonabad Milk Industries	Golestan - Azadshahr
3. Domino's Dairy and Ice Cream	Tehran-Islamshahr
4. Tien Dairy Products	Tehran-Ghods
5. Mihan Food Industries Complex	Tehran - Islamshahr
6. Arjan Food Complex	Fars - Shiraz
7. Ramak Dairy Products Shiraz	Fars - Shiraz
8. 121 Bahar Dalhousie Manizan Corporative Co.	Kermanshah - West Islamabad
9. Kalleh Dairy Products	Mazandaran - Amol
10. Dairy Kalber	Markazi- Arak
11. Golestan Sabah Dairy Company	Golestan - Azadshahr
12. Pak Pasteurized Dairy Company	
- Pasteurized Dairy Company of Sanandaj	Kurdistan-Sanandaj
- Pure Dairy Products	Chaharmahal&Bakhtiari- Shahrekord
- Paksar Sari Dairy Products	Mazandaran - Sari
13. Zarin Ghazal Company (Daiti-Apadha)	Fars - Shiraz
14. Pakban Dairy Products Company	Tehran - Hashtgerd

Of licensed operation unit in the field of dairy production

No.	*Province*	*Pre-cheese*		*Cheese*		*Yoghurt*		*Buttermilk*		*Milk cream*	
		Number of units	*Capacity (tons)*	*Number of units*	*Capacity (tons)*	*Number of units*	*Capacity (tons)*	*Number of units*	*Capacity (tons)*	*Number of units*	*Capacity (tons)*
1	Ardabil	-	-	7	15,940	9	39,100	15	89,000	-	-
2	Esfahan	-	-	12	113,500	16	92,950	6	63,000	-	-
3	Alborz	-	-	8	11,115	15	41,400	5	4300	-	-
4	Ilam	-	-	1	170	2	3,000	2	3600	-	-
5	Eest Azerbaijan	-	-	13	20,532	16	49,300	9	74,500	-	-
6	West Azerbaijan	2	620	12	24,612	13	38,300	9	64,000	-	-
7	Tehran	2	1200	27	24,257	42	210,000	17	42,000	4	14090
8	Chahar Mahaal and Bakhtiari	-	-	3	5,170	4	25,100	-	-	-	-
9	Khorasan south	-	-	-	-	1	2,800	-	-	-	-
10	Khorasan Razavi	1	280	10	52,800	15	66,780	7	27,200	1	3000
11	Khorasan North	1	500	1	500	1	1,400	-	-	-	-
12	Khuzestan	-	-	1	2,500	5	29,900	3	3,700	1	50
13	Zanjan	-	-	1	10,000	3	8,785	1	1,400	-	-
14	Semnan	-	-	1	11,700	2	12,700	1	2,300	-	-
15	Sistan and Baluchestan	-	-	-	-	2	28,500	1	2,600	-	-
16	Fars	-	-	7	45,325	12	75,000	5	15,000	-	-
17	Qazvin	1	1500	7	37,005	11	112,800	7	89,000	-	-
18	Qom	-	-	3	8,200	2	1,800	1	600	-	-
19	Kurdistan	-	-	1	4,200	3	6,800	2	1500	-	-
20	Kerman	-	-	3	5,948	5	23,000	3	18,000	-	-
21	Kermanshah	-	-	4	19,100	7	49,730	6	30,500	-	-
22	Kohgiluyeh and Boyer-Ahmad	-	-	-	-	2	4,500	2	2600	-	-
23	Golestan	1	3000	8	57,233	4	21,500	4	9,000	-	-
24	Gilan	-	-	3	12,900	7	40,000	6	37,200	-	-
25	Lorestan	-	-	3	11,300	5	36,700	5	24,500	-	-
26	Mazandaran	1	50	8	57,700	9	541,890	6	48,760	-	-
27	Markazi	-	-	2	11,050	4	20,500	3	25,700	-	-
28	Hormozgān	-	-	-	-	1	12,600			-	-
29	Hamadan	1	200	3	8,140	4	15,000	2	7,700	-	-
30	Yazd	-	-	1	70	2	11,000	2	8,300	-	-
nominal Total capacity		10	7,350	109	570,967	224	1,622,835		695,960	6	17,140
Practical capacity (70%)			5,146		399,677		1,135,985		487,172		12,000
		310 units			**2,039,980 ton**				**48,374,976.05 Million Rials 177 Million EUR**		

Source: organization of Industry, Mine and Trade

2.2. Study of the status of new projects and under construction development projects (In terms of number, capacity, operation place, the physical progress rate and the level of their technology and investments by both foreign exchange and other required) and semi-finished projects

According to data from the Organization of Industry, Mining and Commerce, units under construction to produce dairy products similar to this plan and their production levels are presented in the following table. There are 4 units under construction in Khuzestan province with the following specifications that one of these units is under construction.

Parsiyan Shir Zagros Co.	Izeh	Physical progress: % 85
Ali Salboukhi	Arvand Free zone	Physical progress: % 65
Milk Industry Blossoms Co.	Izeh	Physical progress: % 80
Hossein Kangariyan	Bandar Mahshar	Physical progress: % 41

Due to the very good quality of the products of the leading companies in the field of cheese and yogurt and buttermilk such as Pegah, Roozaneh, Kalleh, Pak, Ramak, etc., in order to compete with these products, one must inevitably have desirable technology to produce high quality products. He said that managers of industrial units are currently considering this issue.

Therefore, Milk Industry Blossoms Company located in Khuzestan province, Izeh city, Izeh industrial city, with the demand for dairy products in Khuzestan province and also with the aim of exporting, is expanding its factory and producing fresh white cheese, ripe brine cheese, yoghurt, non- carbonated buttermilk, and pre-cheese have been made using foreign machines similar to the external samples.

Under Construction Units of dairy production with 60-99% of physical progress

No.	Province	Pre-cheese		Cheese		Yoghurt		Buttermilk		Milk cream	
		Number of units	Capacity (tons)	Number of units	Capacity (tons)	Number of units	Capacity (tons)	Number of units	Capacity (tons)	Number of units	Capacity (tons)
1	Ardabil	-	-	1	80	1	1800	1	200	-	-
2	Esfahan	-	-	4	13900	8	12800	2	1700	-	-
3	Alborz	-	-	2	2500	7	980	3	10425	-	-
4	Ilam	-	-	-	-	1	1971	1	2190	-	-
5	Eest Azerbaijan	-	-	2	2100	3	12550	1	10000	-	-
6	West Azerbaijan	-	-	1	150	1	2000	-	-	-	-
7	Tehran	-	-	8	25700	7	321990	3	7350	-	-
8	Chahar Mahaal and Bakhtiari	-	-	-	-	1	800	-	-	-	-
9	Khorasan south	-	-	-	-	-	-	-	-	-	-
10	Khorasan Razavi	-	-	2	1200	4	7000	1	500	-	-
11	Khorasan North	-	-	1	3210	-	-	-	-	-	-
12	Khuzestan	-	-	3	8650	4	39900	-	-	-	-
13	Zanjan	-	-	-	-	1	600	1	9000	-	-
14	Semnan	-	-	-	-	1	4500	-	-	-	-
15	Sistan and Baluchestan	-	-	-	-	2	5800	-	-	-	-
16	Fars	-	-	-	-	2	6300	-	-	-	-
17	Qazvin	-	-	2	7000	5	11050	-	-	-	-
18	Qom	-	-	1	5000	1	12000	-	-	-	-
19	Kurdistan	-	-	1	360	-	-	-	-	-	-
20	Kerman	-	-	-	-	-	-	-	-	-	-
21	Kermanshah	-	-	1	980	1	15750	1	7000	-	-
22	Kohgiluyeh and Boyer-Ahmad	-	-	-	-	-	-	-	-	-	-
23	Golestan	-	-	2	5000	1	2100	-	-	-	-
24	Gilan	-	-	-	-	3	5035	1	1200	-	-
25	Lorestan	-	-	-	-	2	1400	1	2000	-	-
26	Mazandaran	-	-	1	1800	5	306500	1	3000	-	-
27	Markazi	-	-	1	3600	2	4030	1	9000	-	-
28	Hormozgān	-	-	-	-	-	-	-	-	-	-
29	Hamadan	-	-	-	-	-	-	-	-	-	-
30	Yazd	1	500	1	12000	-	-	-	-	-	-
nominal Total capacity		**1**	**500**	**34**	**93,230**	63	**776,856**	**18**	**63,565**		**-**
Total capacity		**934,151 tons**									

Source: organization of Industry, Mine and Trade

Under Construction Units of dairy production with 20-59% of physical progress

No.	*Province*	*Pre-cheese*		*Cheese*		*Yoghurt*		*Buttermilk*		*Milk cream*	
		Number of units	*Capacity (tons)*	*Number of units*	*Capacity (tons)*	*Number of units*	*Capacity (tons)*	*Number of units*	*Capacity (tons)*	*Number of units*	*Capacity (tons)*
1	Ardabil	-	-	-	-	-	-	-	-	-	-
2	Esfahan	-	-	2	3020	5	17000	1	500	-	-
3	Alborz	-	-	4	71975	5	312300	4	14700	-	-
4	Ilam	-	-	-	-	-	-	-	-	-	-
5	Eest Azerbaijan	-	-	1	3000	-	-	1	4500	-	-
6	West Azerbaijan	-	-	2	5050	3	11120	-	-	-	-
7	Tehran	-	-	6	18250	10	76120	7	11400	2	2550
8	Chahar Mahaal and Bakhtiari	-	-	-	-	-	-	-	-	1	10000
9	Khorasan south	-	-	-	-	-	-	1	1500	-	-
10	Khorasan Razavi	-	-	2	3500	2	1950	1	2000	-	-
11	Khorasan North	-	-	-	-	1	2000			-	-
12	Khuzestan	-	-	-	-	1	1000	1	1000	-	-
13	Zanjan	-	-	1	3000	1	4000	-	-	-	-
14	Semnan	-	-	-	-	1	1200	-	-	-	-
15	Sistan and Baluchestan	-	-	-	-	-	-	-	-	-	-
16	Fars	-	-	-	-	-	-	-	-	-	-
17	Qazvin	-	-	1	2500	6	17777	3	5430		
18	Qom	-	-	-	-	-	-	-	-	-	-
19	Kurdistan	-	-	-	-	-	-	-	-	-	-
20	Kerman	-	-	-	-	-	-	-	-	-	-
21	Kermanshah	-	-	-	-	-	-	-	-	-	-
22	Kohgiluyeh and Boyer-Ahmad	-	-	1	200	1	2000			-	-
23	Golestan	-	-	-	-		3000	1	6000	-	-
24	Gilan	-	-	-	-	1	1000	1	4000	-	-
25	Lorestan	-	-	-	-	-	-	-	-	-	-
26	Mazandaran	-	-	1	877	7	27014	6	75200	-	-
27	Markazi	-	-	1	7000	2	21500	1	25000	-	-
28	Hormozgān	-	-	-	-	-	-	-	-	-	-
29	Hamadan	-	-	-	-	-	-	-	-	-	-
30	Yazd	-	-	-	-	-	-	-	-	-	-
nominal Total capacity		**-**	**-**	**22**	**118,372**	46	**498,981**	**28**	**151,230**	3	**12,550**
Total products		**781,133 tons**									

Source: organization of Industry, Mine and Trade

2.3. The trend of imports of the product in the last five years

According to the Customs Statistics of the Islamic Republic of Iran, the imported dairy products subject to the present project include raw cheese, cheese, yogurt and milk cream almost zero for the past 5 years and The country is also an exporter of these products in the case of self-sufficiency. It should be noted that the country's major imports are dairy, butter and high-fat dairy products which cost about $ 600 million annually.

Imports of dairy products in the last 5 years

year		Weight (ton)	Rails value	Dollar value	Description
2018-19	yoghurt	0	0	0	-
	buttermilk	0	0	0	-
	milk cream	0	0	0	-
	pre-cheese	0	0	0	-
	cheese	0	0	0	-
2017-18	yoghurt	0	0	0	-
	buttermilk	0	0	0	-
	milk cream	0	0	0	-
	pre-cheese	0	0	0	-
	cheese	0	0	0	-
2016-17	yoghurt	17.94	518,771,877	17043	Iraq:100%
	buttermilk	0	0	0	-
	milk cream	0	0	0	-
	pre-cheese	0	0	0	-
	cheese	0	0	0	-
2015-16	yoghurt	5.7	161,141,760	5380	Iraq:100%
	buttermilk	0	0	0	-
	milk cream	0	0	0	-
	pre-cheese	0	0	0	-
	cheese	0	0	0	-
2014-15	yoghurt	1.52	38,485,488	1,444	Turkmenistan: 100%
	buttermilk	0	0	0	
	milk cream	0	0	0	
	pre-cheese	0	0	0	
	cheese	0	0	0	

Source :The Islamic Republic of Iran Customs Administration (2020)

2.4.The trend of consumption in the last five years

One of the common methods of calculating the amount of internal consumption is to estimate the amount of apparent consumption, which is calculated in the following table. Based on the apparent consumption over the past years, the average consumption of dairy products (similar to products of this project) has grown by 8.3% annually to 1.9 million tonnes in 2020 years.

Estimating apparent consumption of (yoghurt, non-carbonated buttermilk, pre- cheese, fresh white and brine ripened cheese) in the country over the past 5 years (2014-2020)

	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Domestic production (tons)	1,437,653	1,557,874	1,657,864	1,769,477	1,906,437	2,039,980
Imports (tons)	0.0	0.0	0.0	0.0	0.0	0.0
Export (tons)*	149,627	144,030	152,334	130,539	120,950	120,950
The apparent consumption	1,288,026	1,413,844	1,505,530	1,638,938	1,785,487	1,919,030

* Given the variety of export products, exports of similar products are projected to account for 50% of total product exports in the years 2014 to 2019 (mentioned in paragraph 2.5 of this report).

2.5. The trend of export product in the last five years and the possibility of its development

The customs statistics of the Islamic Republic of Iran on the export of dairy products including pre-cheese, cheese, yoghurt and buttermilk showed that the export trend decreased from 2014 to 2019 and decreased from 299.3 thousand tons to 241.2 tons.

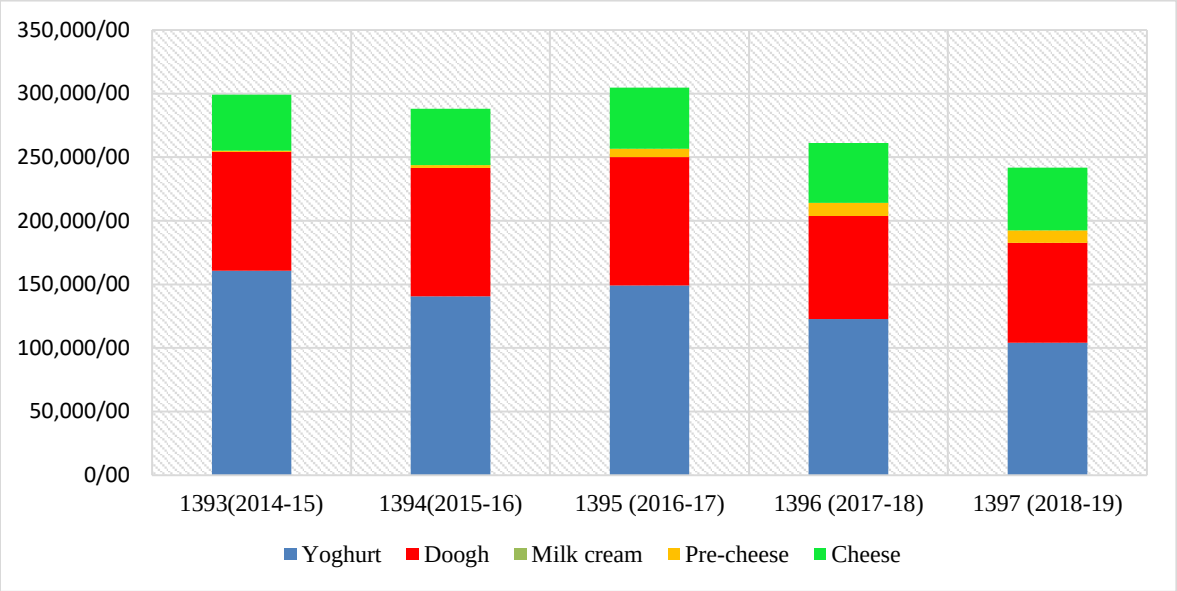
The export markets of these products are mainly Iraq, Afghanistan and Pakistan. Iraq is the country's main trading partner and target market. Khuzestan Province to expand exports to the country through its proximity to the border and access to land and sea routes. Currently, about 90 percent of exports to the country are worth $ 292 million.

Exports of dairy products in the last 5 years

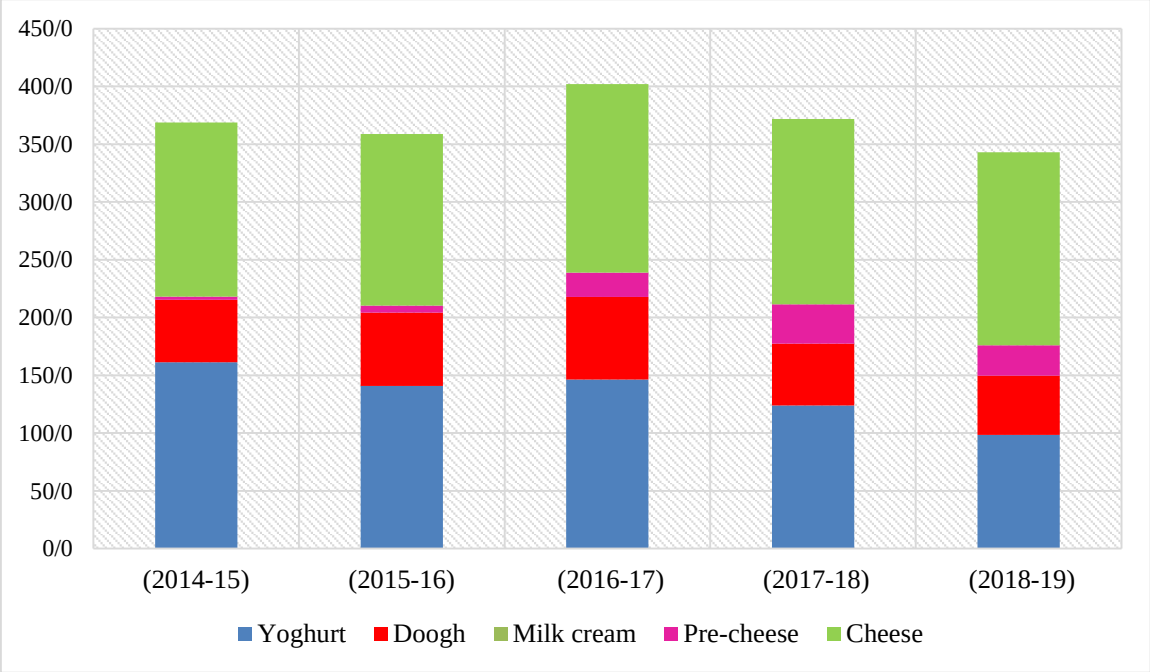
year		Weight (ton)	Rails value	Dollar value	Description
2018-19	yoghurt	104,090.2	5,471,587,403,537	98,483,877	Iraq:%93
	buttermilk	78,524.8	2,878,969,695,332	51,307,375	Iraq:%85, Afghanistan: %7
	milk cream	0.0	0.0	0.0	
	pre-cheese	9,884.1	1,648,549,425,632	26,292,586	Iraq:%75,Afghanistan:%11
	cheese	49,401.4	9,996,439,577,314	166,977,997	Iraq:%83,Afghanistan:%13
	total	241,900.50	19,995,546,101,815	343,061,835	
2017-18	yoghurt	122,835.8	4,203,864,598,394	123,803,276	Iraq:%95
	buttermilk	80,897.6	1,803,299,388,158	53,482,781	Iraq:%89, Afghanistan: %4
	milk cream	0.0	0.0	0.0	
	pre-cheese	10,306.7	1,152,619,824,406	34,205,203	Iraq:%62, Afghanistan: %32
	cheese	47,037.4	5,455,262,399,441	160,324,908	Iraq:%89, Afghanistan: %6
	total	261,077.50	12,615,046,210,399	371,816,168	
2016-17	yoghurt	149,254.2	4,575,050,925,556	146,393,231	
	buttermilk	100,855.6	2,214,812,787,492	71,348,510	
	milk cream	0.0	0.0	0.0	
	pre-cheese	6,538.6	675,229,938,790	21,109,456	
	cheese	48,020.0	5,113,864,001,394	163,049,954	
	total	304,668.40	12,578,957,653,232	401,901,151	
2015-16	yoghurt	140,741.2	4,141,294,657,252	140,863,030	
	buttermilk	100,903.7	1,865,109,464,572	63,413,229	
	milk cream	0.0	0.0	0.0	
	pre-cheese	2,136.1	179,716,611,701	6,129,482	
	cheese	44,279.1	4,373,900,654,327	148,494,520	
	total	288,060.10	10,560,021,387,852	358,900,261	
2014-15	yoghurt	160,767.5	4,265,945,088,084	161,379,175	
	buttermilk	93,301.3	1,416,802,255,179	53,997,058	
	milk cream	0.0	0.0	0.0	
	pre-cheese	989.2	76,231,170,938	2,791,859	
	cheese	44,195.6	3,989,706,918,693	150,591,077	
	total	299,253.60	9,748,685,432,894	368,759,169	

Source :The Islamic Republic of Iran Customs Administration (2020)

Dairy products exports during last 5 years (ton)



Value of dairy products exported over 5 years (million dollars)



Exports of yoghurt divided by country in 2018-2019

No.	Country	Weight (ton)	Value (Rials)	Value(Dollar)	Weight %
1	Afghanistan	4,094.1	197,317,689,452	3,652,986	3.93
2	United Arab Emirates	841.6	49,130,455,981	798,755	0.81
3	United States	3	109,234,940	2,646	0.00
4	Bahrain	1.92	159,721,861	3,712	0.00
5	Pakistan	1,750.2	99,771,183,463	1,627,988	1.68
6	Turkmenistan	38.9	2,608,658,237	41,947	0.04
7	Other countries	18.4	753,388,000	17,480	0.02
8	Iraq	97,258.5	5,116,712,281,049	92,252,076	93.44
9	Oman	0.2	11,674,504	199	0.00
10	Federation Russian	0.6	18,529,720	230	0.00
11	Qatar	61.6	3,612,896,536	60,837	0.06
12	Kuwait	17.1	1,137,871,934	20,046	0.02
13	Malaysia	3.7	243,817,860	4,974	0.00
Sum		104,090.2	5,471,587,403,537	98,483,876	100

Source: Islamic Republic of Iran Customs Administration (2020)

Exports of yoghurt divided by country in 2017-2018

No.	Country	Weight (ton)	Value (Rials)	Value(Dollar)	Weight %
1	Australia	5.3	97,331,568	2,634	0.004
2	Afghanistan	5,006.2	161,888,728,049	4,754,080	4.08
3	United Arab Emirates	653.7	21,661,946,044	633,352	0.53
4	United States	6.6	263,120,782	7,271	0.01
5	Azerbaijan	2.3	78,219,057	2,166	0.002
6	Bahrain	61.8	2,230,387,549	65,890	0.05
7	Pakistan	459.0	14,533,375,766	428,705	0.37
8	Turkmenistan	9.0	294,682,135	8,699	0.01
9	China	0.6	55,568,007	1,713	0.00
10	Iraq	116,289.3	3,988,503,670,270	117,473,706	94.67
11	Oman	1.2	52,708,872	1,493	0.001
12	Qatar	276.7	11,486,029,707	344,541	0.23
13	Kuwait	54.1	2,091,030,446	60,574	0.04
14	Malaysia	10.1	627,800,142	18,452	0.01
Sum		122,835.90	4,203,864,598,394	123,803,276	100

Source: Islamic Republic of Iran Customs Administration (2020)

Exports of buttermilk (doogh) divided by country in 2018-2019

No.	Country	Weight (ton)	Value (Rials)	Value(Dollar)	Weight %
1	Afghanistan	4,109.8	448,730,444,141	7,218,691	5.23
2	United Arab Emirates	345.5	11,966,100,045	207,083	0.44
3	United States	5.1	196,066,052	4,667	0.01
4	Germany	12.1	234,302,050	5,013	0.02
5	Bahrain	74.4	2,651,746,228	52,851	0.09
6	Pakistan	5,194.4	159,478,271,320	2,817,205	6.61
7	Turkmenistan	42	1,452,997,517	28,684	0.05
8	Syria	57.7	2,189,092,209	55,643	0.07
9	Iraq	66,588.8	2,170,365,944,703	39,481,835	84.80
10	Oman	743.7	28,196,031,859	492,781	0.95
11	Qatar	344.5	13,131,271,872	239,500	0.44
12	Kuwait	958.1	38,401,789,321	661,303	1.22
13	Lebanon	17.5	880,572,000	20,966	0.02
14	Special zones	24.2	597,688,875	14,175	0.03
15	Other countries	7.2	497,377,140	6,977	0.01
Sum		78,525.0	2,878,969,695,332	51,307,374	100

Source: Islamic Republic of Iran Customs Administration (2020)

Exports of buttermilk (doogh) divided by country in 2017-2018

No.	Country	Weight (ton)	Value (Rials)	Value(Dollar)	Weight %
1	Afghanistan	3,141.4	174,511,635,245	5,037,883	3.88
2	United Arab Emirates	269.9	4,885,093,215	143,367	0.33
3	United States	8.9	343,420,320	9,324	0.01
4	Azerbaijan	2.4	74,885,319	2,148	0.00
5	Germany	9.2	131,235,932	3,736	0.01
6	Bahrain	61.5	2,010,273,269	58,521	0.08
7	Pakistan	1,836.0	35,186,531,405	1,039,782	2.27
8	Turkmenistan	80.90	2,399,973,530	72,791	0.10
9	Syria	140.9	5,770,181,119	165,476	0.17
10	Iraq	72,109.3	1,501,063,680,214	44,676,544	89.14
11	Oman	994.6	21,616,314,679	638,622	1.23
12	Qatar	1,380.5	37,137,682,138	1,099,530	1.71
13	Canada	16.9	343,505,114	10,586	0.02
14	Kuwait	843.5	17,725,229,203	521,526	1.04
15	Other countries	1.6	99,747,456	2,945	0.00
Sum		80,897.6	1,803,299,388,158	53,482,781	100

Source: Islamic Republic of Iran Customs Administration (2020)

Exports of pre-cheese divided by country in 2018-2019

No.	Country	Weight (ton)	Value (Rials)	Value(Dollar)	Weight %
1	Australia	15.4	2,493,397,576	32,430	0.16
2	Afghanistan	1,091.1	164,645,418,727	2,558,125	11.04
3	United Arab Emirates	53.9	8,745,748,716	109,428	0.55
4	United States	16.4	1,664,190,659	38,953	0.17
5	Azerbaijan	83.2	16,900,437,848	233,870	0.84
6	Germany	77.6	10,004,733,832	169,665	0.78
7	Bahrain	30.6	4,473,635,594	60,264	0.31
8	Pakistan	390.7	62,740,437,246	880,472	3.95
9	Turkmenistan	211.0	32,972,013,001	611,326	2.13
10	Iraq	7,421.8	1,288,763,088,579	20,497,532	75.09
11	Russia	175.6	19,698,609,171	439,129	1.78
12	Kazakhstan	72.7	9,646,982,692	167,603	0.74
13	Canada	125.7	10,844,056,119	218,870	1.27
14	Kuwait	19.2	2,410,370,249	44,918	0.19
15	Netherlands	76.9	9,010,455,799	170,219	0.78
	Other countries	22.3	3,535,849,824	59,783	0.23
Sum		9,884.1	1,648,549,425,632	26,292,587	100.00

Source: Islamic Republic of Iran Customs Administration (2020)

Exports of pre-cheese divided by country in 2017-2018

No.	Country	Weight (ton)	Value (Rials)	Value(Dollar)	Weight %
1	Australia	26.7	1,727,601,124	50,123	0.26
2	Afghanistan	3,324.4	394,755,106,063	11,545,685	32.25
3	United Arab Emirates	34.5	2,154,467,791	61,294	0.33
4	Azerbaijan	43.3	4,378,249,732	127,084	0.42
5	Germany	51.4	3,732,742,557	107,837	0.50
6	Pakistan	117.3	14,244,969,208	408,117	1.14
7	Turkmenistan	151.7	15,130,296,127	446,490	1.47
8	Iraq	6,412.8	704,199,192,899	21,115,813	62.22
9	Russia	52.9	5,848,534,697	159,118	0.51
10	Canada	34.5	2,290,988,602	65,641	0.33
11	Other countries	57.3	4,157,675,606	118,001	0.56
Sum		10,306.7	1,152,619,824,406	34,205,203	100

Source: Islamic Republic of Iran Customs Administration (2020)

Exports of cheese divided by country in 2018-2019

No.	Country	Weight (ton)	Value (Rials)	Value(Dollar)	Weight %
1	Afghanistan	6,369.7	1,174,461,102,894	21,119,761	12.89
2	United Arab Emirates	52.8	12,340,892,258	179,442	0.11
3	United States	9.2	1,286,853,540	30,483	0.02
4	Azerbaijan	116.0	20,284,803,016	343,231	0.23
5	Bahrain	32.6	7,006,703,152	113,842	0.07
6	Pakistan	323.6	66,588,508,288	1,014,620	0.66
7	Turkmenistan	142.6	26,093,986,859	437,257	0.29
8	Iraq	41,109.1	8,452,927,630,133	139,597,168	83.21
9	Oman	9.7	1,415,400,000	33,700	0.02
10	Russia	1,000.9	199,141,237,051	3,472,413	2.03
11	Kazakhstan	209.1	29,906,059,270	549,963	0.42
12	Qatar	10.0	1,947,736,497	33,148	0.02
13	Other countries	16.0	3,038,664,356	52,968	0.03
Sum		49,401.4	9,996,439,577,314	166,977,996	100

Source: Islamic Republic of Iran Customs Administration (2020)

Exports of cheese divided by country in 2017-2018

No.	Country	Weight (ton)	Value (Rials)	Value(Dollar)	Weight %
1	Afghanistan	2,987.9	364,437,947,971	10,791,368	6.35
2	United Arab Emirates	39.1	5,262,906,372	154,430	0.08
3	United States	18.6	2,243,589,313	63,586	0.04
4	Azerbaijan	102.02	8,710,471,477	247,639	0.22
5	Germany	48.7	3,924,236,609	108,535	0.10
6	Bahrain	21.4	2,538,271,058	72,339	0.05
7	Pakistan	85.3	7,326,842,426	219,984	0.18
8	Turkmenistan	224.0	23,049,092,427	681,797	0.48
9	Iraq	42,027.2	4,884,089,759,539	143,515,172	89.35
10	Russia	1,120.0	123,972,552,234	3,611,723	2.38
11	Kazakhstan	172.7	12,392,476,532	350,287	0.37
12	Qatar	78.1	8,496,236,101	250,890	0.17
13	Other countries	112.4	8,818,017,382	257,158	0.24
Sum		47,037.42	5,455,262,399,441	160,324,908	100

Source: Islamic Republic of Iran Customs Administration (2020)

2.6.Reviewing of products needs based on export priority

Regarding to the importance of milk and dairy consumption, one of the major goals of the National Nutrition and Food Security Document is to increase the average consumption of milk and dairy products. This issue is so important to the health of the community that the Sixth Economic, Social and Cultural Development Plan (Draft Law of 2018-2022) provides for the consumption of 160 kg of dairy per person. Despite the fact that two years have passed since the sixth plan of economic development of the country, this goal has not been achieved and the per capita consumption is 66 kg.

Currently, groups of products are considered as one of the cheapest and most applicable legal group in the household consumption code. This product comes with community revenues and has a great deal of productivity, as well as support for the community. The calculations show that each kilogram milk is cheaper than other domestically grouped products.

In our country, milk production has increased due to changes in the milk production sector, especially the replacement of low-profit cattle with crossbreed cattle or noble breeds. On the basis of estimates and statistics of exported products, the inputs have been introduced as the output of the parent products in the food industry. The industry has a forestry certificate in the field that can have the added value of a solid foundation with supportive planning. The 30% share of dairy products in food exports justifies the importance of paying attention to dairy exports.

As noted in the previous sections, dairy consumption has grown 49 percent over the past five years due to population growth because of normal population growth rates. So, given the 8.3 percent annual increase in dairy consumption (due to population growth as well as cultivation to increase dairy consumption for community health) and with 10 percent of exports, we will face a shortfall of 178,000 tonnes over the next five years, which will go up. To make up for this shortage, existing units (in operation and under construction) must be developed, new units built, or product imported.

Khuzestan province is one of the largest consumers of dairy products with a production of 326.30 thousand milk and a population of 4.7 million. The province which has only 5 active dairy plants (yogurt, buttermilk, cheese), with a nominal capacity of about 36,000 tons, supplies all its dairy products outside the province, including Tehran, Isfahan and Fars, Mazandran provides long distances and high shipping costs.

It should be noted that Khuzestan province has a favorable position for exporting dairy products due to its shared land and water border with the Persian Gulf countries, as well as cultural ties especially with Iraq, while exporting about 90 percent of dairy products to Iraq.

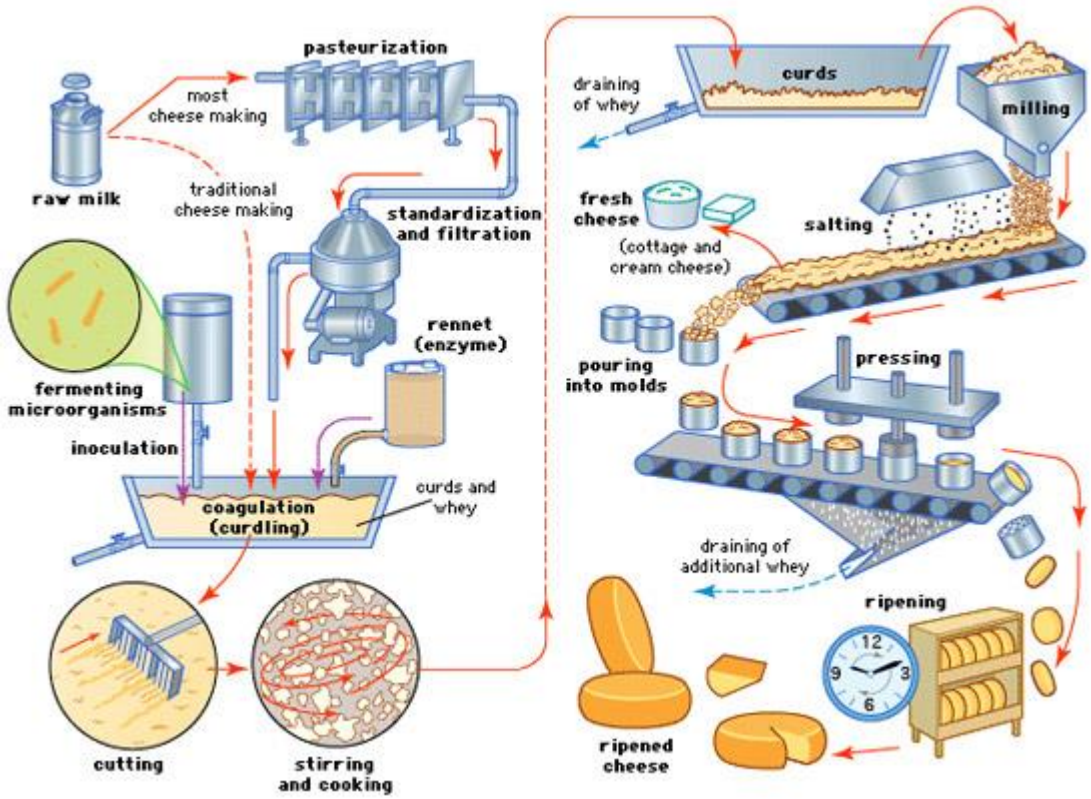
Estimates of product demand over the next 5 years

Production	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
The domestic consumption (tons)	2,078,309	2,250,809	2,437,626	2,639,949	2,859,065
Export (tons)	207,831	225,081	243,763	263,995	285,907
Total demand (tons)	**2,286,140**	**2,475,890**	**2,681,389**	**2,903,944**	**3,144,972**
Output of current units (tons)	2,039,980	2,039,980	2,039,980	2,039,980	2,039,980
Production of new operational units (tons)	226,732	645,527	748,444	851,361	926,253
Total supply (tons)	**2,266,712**	**2,685,507**	**2,788,424**	**2,891,341**	**2,966,233**
(Shortage) / surplus	**(19,428)**	**209,617**	**107,035**	**(12,603)**	**(178,738)**

3- Overview of technology and production methods and product supply in the country and compare it with other countries

In advanced countries such as Germany, Italy, Switzerland and ... the production lines are fully automatic and due to the hygiene tips that are very important in the food industry, human is not involved but in the conventional methods in Iran the production process is semi-automatic and is partly involved in the production process.
Cheese: Cheese making can be defined as a process by which water, lactose, and some minerals are removed from the milk to produce concentrates of protein and fat from the milk.
Raw materials for cheese production are: milk, fermenting cheese agent (starter), salt (calcium chloride), stabilizer, enzyme (rent)

Cheese Production Process:



Pre-cheese (and other milk products: milk cream 60-65% fat and ricotta cheese):

Pre-cheese is a product of the enzymatic coagulation of milk that is pasteurized and frozen. Raw milk after pasteurization is mechanically stirred by the separator and the cream is separated, the cream having 60 to 65 percent fat which is packaged in nylon and stored in a refrigerator below zero and delivered to industrial plants or a workshop for the production of cream.

It is added to the skim milk, fermented cheese agent, and after about 15 minutes the curd is formed. After stirring the clots are precipitated and the whey is separated. The clots are separated from the whey and rinsed and washed until the water is completely separated. After moulding and placing in nylon bags in the refrigerator at a maximum temperature of -12°C and then distributed and sold.

The most suitable packaging for raw cheese is permitted multilayer polyethylene bags resistant to moisture, fat and cold. The net weight of each package should not exceed 25 kg. It should be noted that the packages are also marked with product specifications, production and expiration date, weight, license number issued by the Ministry of Health and Medical Education and so on.

Whey produced from the process and production of raw cheese is cooked through mild heat and transformed into Ricotta cheese, which is used as pizza cheese raw material. Packaging is also done in 25 kg nylon bags and refrigerated.

Summary of fresh and ripened brine white cheese production

1. Get raw milk

2. Sampling

3. Standardize milk and pasteurization: Standardization means the regulation of protein, fat and dry matter by type of cheese. Milk pasteurization is performed at 15-72 ° C for 72 seconds.

4. Adding a starter: Adding the starter to the milk at 42 °C and releasing it for 40-45 minutes to lower the pH

5. Adding Rennet: Rennet is the main compound of milk coagulant and cheese clot maker. The appropriate temperature for inoculation is between 32-42 °C and a suitable pH of about 6.4. Whey with water. The sterile distillate is diluted and added to the milk. After the cheese is added to the milk and as a result of a series of enzymatic reactions, the caseins precipitate and appear clots.

6. Cutting and dehydrating the curd

7. Salting: The purpose of salting is to improve taste, regulate moisture, prevent the growth of pathogenic microbes, improve tissue properties and increase the storage capacity of cheese.

8. Packaging

9. Refrigeration: Packaged cheeses are stored in the refrigerator at about 6°C and 12% brine until shipped.

10. Final product quality control

Ripending the Cheese: During storage, a set of favorable enzymatic and microbial reactions are performed on the cheese curd, resulting changing in altered carbohydrates, fats and proteins, so comes favorite aroma and taste in texture and the cheese tastes good. This set of changes is called "Cheese Ripening Cheese." During this period, microbes produce gases that cause cavities in the cheese tissue. Different types of cheese have different ripening periods This can take months to complete. In general, there is a reverse relationship between cheese ripening time and cheese moisture content. Cheese delivery can be done in final packaging. At this stage, the cheese is stored for 7 to 20 days at 14-18 ° C. During this time the pH of the cheese is regularly monitored and when the limit is reached, the products are delivered to the refrigerator at 5-8 ° C.

In Ligwan cheese production, if using raw milk, it should be kept in metal boxes in the fridge for at least 45 days until it ripens.

Yoghurt production process:

Yoghurt should be standardized for yogurt production. The standard fat for yogurt production is 2.5-5% and the best temperature for creaming is 45-50 ° C. Milk fat in the storage tank is 3.5% which should be reduced to about 3%.

After separating cream from milk at 45-50 degrees Celsius and its fat is standardized, its density increases. For the production of yogurt, the density of milk should be at least 34%, using 2% lean milk. After density control, it is stored in the tank by the milk laboratory.

To pasteurize and homogenize the milk, the milk is first exchanged with condensed water and the temperature reaches 50-60 °C and is homogenized at this temperature. Then its temperature in the hot steam exchange reaches 90 °C and is kept in the holding tank for 20-30 minutes. Then in cold water the temperature reached 44-45 °C, which is the best temperature for inoculation. The yogurt tank has 2 spiral mixers.

When milk passes, the yogurt is added to the packing machine. In this machine, one set of pistons lifts the cups one by one and the particles are removed from the cup by a vacuum pump and the cups are molded and moved forward and molded by part of the machine from side to side and going ahead towards Filling. After the cups are filled, they go to the refrigerator and stay at 45°C for 3 hours. After the yoghurt is formed, they are then refrigerated and then shredded and marketed.

Buttermilk Production Process:

The raw milk is entered into the factory laboratory for the necessary tests, after approval of the quality control, it is sent to the raw milk storage tanks.

Milk is led to the production line and pasteurized machine. In some formulations, the milk fat is first separated, but it is better to be made from whole milk to give a better taste of buttermilk. The final milk enters the process tanks and is heated to 95 °C for 15 minutes. It is then added to a 45 °C cold starter or yoghurt and left for 12 hours to reach Ph 3.8. Then adding 1 to 2% of the salt mixed with 50 to 50% water and pasteurized at 85 °C for 20 seconds then cooled to 10 °C (flavor or essence can also be added) and to be steamed. It is then transferred to the fridge at +2 °C. Then comes the quality control phase and finally the product shipment.

4. Determine the strengths and weaknesses of known technologies (in outline) in the production process

- Benefits:

1. Desirable quality of Iranian dairy products
2. Neighboring countries tendency to Iranian dairy products
3. Low energy consumption and reduced production costs
4. Use of new technology in large factories

- Disadvantages:

1. The high cost of buying equipment and machinery
2. High cost of replacement parts
3. Semi-automatic production lines and manpower intervention in most units

5. Determine the minimum economic capacity includes the estimated volume of fixed investment estimated volume with the separation of Rials and foreign exchange (Using information of available and under construction units, UNIDO, internet, the global data banks, technology selling companies and equipment, etc.)

According to the domestic market needs especially Khuzestan province and considering export and considering the amount of milk supply to the factory (60 tons per day) and the production capacity of the machines, the annual project capacity of 7449 tons of products Dairy is estimated as follows. If you provide the necessary cash to buy the necessary machinery and equipment, this amount will be achieved during the 250 working days and three shifts per day. It will take 6 months to get the equipment up and running.

Plan production and sales over the next 5 years

Years of operation		**first year 6 month**	**second year**	**third year**	**forth year**	**Fifth year**
Percentage of capacity		60	70	80	90	100
Pre-cheese		184.50	430.00	492.0	553.5	615.0
Clotted cream 60-65% fat		168.75	393.75	450.0	506.3	562.5
Ricotta Cheese		78.75	183.75	210.0	236.3	262.5
Ripened Brined Cheese		90.00	210.00	240.0	270.0	300.0
Fresh white cheese		137.70	321.30	367.2	413.1	459.0
Yoghurt		675.00	1,575.00	1,800.0	2,025.0	2,250.0
Buttermilk		900.00	2,100.00	2,400.0	2,700.0	3,000.0
Total production		**2,234.70**	**5,213.80**	**5,959.20**	**6,704.10**	**7,449.00**
The outcome of selling						
pre-cheese (317 million Rails/ ton)		58,486.5	136,310.0	155,964.0	175,459.5	194,955.0
Clotted cream 60-65% fat (317 million Rails/ ton)		53,493.75	124,818.0	142,650.0	160,481.25	187,312.5
Ricotta Cheese (317 million Rails/ ton)		24,963.75	58,248.75	66,570.0	74,891.25	83,212.5
Ripened Brined Cheese (520 million Rails/ ton)		46,800.0	109,200.0	124,800.0	140,400.0	156,000.0
Fresh white cheese (350 million Rails/ ton)		48,195.0	112,455.0	128,520.0	144,585.0	160,650.0
Yoghurt (92 million Rails/ ton)		62,100.0	144,900.0	165,600.0	186,300.0	207,000.0
Buttermilk (47 million Rails/ ton)		42,300.0	98,700.0	112,800.0	126,900.0	141,000.0
Total sales	**million Rails**	**336,339.0**	**874,632.5**	**896,904.0**	**1,009,017.0**	**1,121,130.0**
	Million Euro	**1.23**	**2.86**	**3.27**	**3.68**	**4.09**

Table of Project Investment

Description	incurred Costs (million Rails)	required Costs				Total	
		The Foreign currency		Local Currency	Total (Million Rails)	Million Rails	Equivalent in Million Euro
		Million Euro	Equivalent Rails (Million Rails)	Million Rails			
land	12,360.00	0.00	0.00	0.00	0.00	12,360.00	0.045
landscaping	9,118.40	0.00	0.00	0.00	0.00	9,118.50	0.033
Construction	32,690.00	0.00	0.00	1500.00	1500.00	34,190.00	0.125
utilities	4,800.00	0.00	0.00	0.00	0.00	4,800.00	0.018
Equipment& Machinery	35,748.00	0.00	0.00	15,810.00	15,810.00	51,558.00	0.188
laboratory equipment	800.00	0.00	0.00	0.00	0.00	800.00	0.003
transportation	0.00	0.00	0.00	0.00	0.00	0.00	0.000
Office Equipment & Supplies	500.00	0.00	0.00	0.00	0.00	500.00	0.002
Other and unpredicted	0.00	0.00	0.00	1,700.00	1,700.00	1,700.00	0.006
total	96,016.40	0.00	0.00	19,010.00	19,010.00	115,026.40	0.420
Pre-Production expenditures	500.00	0.00	0.00	1000.00	1000.00	1,500.00	0.005
Total of fixed Capital	96,516.40	0.00	0.00	20,010.00	20,010.00	116,526.40	0.425
Working capital	0.00	0.00	0.00	95,909.23	95,909.23	95,909.23	0.350
Total Investment	**96,516.40**	**0.00**	**0.00**	**115,919.23**	**115,919.23**	**212,435.63**	**0.775**

Exchange rate:

1 Euro ≅ 274,000 Rails
1 Dollar≅228,000 Rails

land specification of project as follows as:

Description	Area (m^2)		Cost (million Rails)			Equivalent in Euro
	done	required	done	required	Total	
land	12,360	0.0	12,360	0.0	12,360	45,109.0

landscaping price as follows as:

Description	Area (m^2)		Cost (million Rails)			Equivalent in Euro
	done	required	done	required	Total	
Back filling and leveling	6,180 m^3	0.0	1,236.0	0.0	1,236.0	4,510.90
Wall (2.5 meters high)	460 m	0.0	3,680.0	0.0	3,680.0	13,430.70
Concrete enclosure	2,472 m^2	0.0	1,977.6	0.0	1,977.6	7,217.50
Green space and lighting	1,854 m^2	0.0	2,224.8	0.0	2,224.8	8,119.70
total			**9,118.4**	0.0	**9,118.4**	33,278.80

Construction items Information:

Description	Building Type	Square meters area		Total cost (million Rails)			Equivalent in Euro
		Done	Required	Done	Required	Total	
Production salon	Industrial shed - Tiling up to ceiling - ceramic floor	400	0	10,000.0	0.0	10,000.0	36,496.4
Raw materials and product warehouse	Half floor up shed	210	0	5,250.0	0.0	5,250.0	19,106.6
Milk salon	Tiling up to the ceiling - Ceramic floor	98	0	2,450.0	0.0	2,450.0	8,941.6
Fridge above zero and below zero	18 * 7m	126	0	3,150.0	0.0	3,150.0	11,496.4
Office section and laboratory	First floor of production salon	300	0	7,500.0	0.0	7,500.0	27,372. 3
electronic room	Made of bricks	12	0	240.0	0.0	240.0	875.9
Gate guard	Made of bricks	30	0	600.0	0.0	600.0	2,189.8
Guesthouses and resorts	masonry structure-Semi-finished brick building	200	0	3,500.0	1500.0	5,000.0	18,248.2
Total infrastructure and costs		1376	0	32,690.0	1500.0	34,190.0	124,781.0

the view of the factory

Administrative buildings

Utilities:

Description	Technical Specifications	Required costs (million Rail's)			Equivalent in Euro
		Done	Required	Total	
Electrification	Electric power 200 KW and Electrical supplying	3,000.0	0.0	3,000.0	10,949.0
Water	Split 1 ", water supply and piping	500.0	0.0	500.0	1,825.0
Fuel	Split and gas piping	500.0	0.0	500.0	1,825.0
Heating and Cooling Appliances	Split Air conditioner and heater	600.0	0.0	600.0	2,190.0
Safety and Security system	CCTV and fire extinguisher capsule	200.0	0.0	200.0	730
Total		**4,800.0**	0.0	**4,800.0**	**17,518.0**

Equipment& Machinery product line:

No.	Description	Qty		The foreign currency (EUR)		Equivalent Rails (million Rails)	Local Currency (million Rails)		Total costs (million Rails)	Equivalent in Euro
		Done	Required	Done	Required		Done	Required		
1	Reception & storage									
1-1	Weighting machine capacity 1000 lit- stainless steel	1	0	0	0	0	90	0	90	328.5
2-1	Reception vat- 2000lit	1	0	0	0	0	150	0	150	547.4
3-1	In line-filter	3	0	0	0	0	63	0	63	229.9
4-1	Double in line- filter	1	0	0	0	0	60	0	60	219
5-1	Storage tank of raw milk - capacity 20ton	2	0	0	0	0	2,340	0	2,340	8,540.1
2	Pastorisation & standardization of fat		0	0	0	0	1,800	0	1,800	6,569.3
1-2	Plate pastorisator capacity 20 ton/h	1	0	0	0	0	510	0	510	1,861.3
2-2	De-aerator device (Deodorant milk) 5ton/h	1	0	0	0	0	3,420	0	3,420	12,481.8
3	Processing tank capacity 2000 lit- with a stirrer process scrub	6	0	0	0	0	2,400	0	2,400	8,759.1
4	Filling a glass of three nozzles	1	0	0	0	0	2,100	0	2,100	7,664.2
5	C.I.P semi-automatic unit	2	0	0	0	0	1,800	0	1,800	6,569.3
6	Refrigeration system below zero									
1-6	Refrigerating capacity of 198 m^3 of body and cold walls, along with two 20HP power unit compressor and condenser units 25HP	1 set	0	0	0	0	2,100	0	2,100	7,664.2
2-6	ICE BANK- capacity 63m^3	1	0	0	0	0	2,940	0	2,940	10,729.9
7	Electronic and electrical equipment	1	0	0	0	0	1,200	0	1,200	4,379.6
8	Boiler capacity 3 ton	1	0	0	0	0	2,250	0	2,250	8,211. 7
9	Cases Double: 1 ton	3	0	0	0	0	750	0	750	2,737.2

No.	Description	Qty		The foreign currency (EUR)		Equivalent Rails (million Rails)	Local Currency (million Rails)		Total costs (million Rails)	Equivalent in Euro
		Done	Required	Done	Required		Done	Required		
10	Semi-automatic shrink pack	1	0	0	0	0	690	0	690	2,518.2
11	Air compressor with dryer- capacity 5m^3	1	0	0	0	0	1,020	0	1,020	3,722.6
12	Preparations for Installation									
1-12	Planning, construction and installation steel Section of factory	1	0	0	0	0	1,050	0	1,050	3,832.1
2-12	Planning, construction and installation The factory installations	1	0	0	0	0	1,050	0	1,050	3,832.1
3-12	Planning, construction and installation Electrical parts	1	0	0	0	0	450	0	450	1,642.3
13	Clarification machine –OSCP.5	1	0	0	0	0	900	0	900	3,284.7
14	Three blender capacity 3 ton	1	0	0	0	0	360	0	360	1,313.9
15	Cheese vat 3 ton	2	0	0	0	0	510	0	510	1,861.3
16	Van Whey- capacity 500kg	1	0	0	0	0	180	0	180	656.9
17	Van with press	1	0	0	0	0	630	0	630	2,299. 3
18	Packing table	3	0	0	0	0	315	0	315	1,149.6
19	Homogenizer 5ton	1	0	0	0	0	1,140	0	1,140	4,160.6
20	Water salt van 1 ton	2	0	0	0	0	180	0	180	656.9
21	Filling for cheese	10	0	0	0	0	3,300	0	3,300	12,043.8
22	Filler bucket for yoghurt	0	1	0	0	0	0	2,720	2,720	9,927.0
23	Creamy separator: 5 tons	0	1	0	0	0	0	5,950	5,950	21,715.3
24	Press Aleppo (tin) for cheese	0	1	0	0	0	0	2,040	2,040	7,445.3
25	Refrigerating equipment	0	1	0	0	0	0	5,100	5,100	18,613.1
Total				0	0	0	35,748.0	15,810.0	51,558.0	188,167.9

laboratory equipment

Description	Qty		The foreign currency (EUR)		Equivalent Rails (million Rails)	Local Currency (million Rails)		Total costs (million Rails)	Equivalent in Euro
	Done	Required	Done	Required		Done	Required		
Incubator, balance and Laboratory equipment	Complete series	0	**0.0**	**0.0**	**0.0**	800.0	0.0	800.0	2,919.7
Total	**1**	**0**	**0**	**0**	**0**	**800.0**	**0.0**	**800.0**	**2,919.7**

Transportation

Description	Qty		The foreign currency (EUR)		Equivalent Rails (million Rails)	Local Currency (million Rails)		Total costs (million Rails)	Equivalent in Euro
	Done	Required	Done	Required		Done	Required		
-	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	0	0	0

Office Equipment & Supplies and Services:

Description	Qty		The foreign currency (EUR)		Equivalent Rails (million Rails)	Local Currency (million Rails)		Total costs (million Rails)	Equivalent in Euro
	Done	Required	Done	Required		Done	Required		
Office Equipment & Supplies	1	0	**0.0**	**0.0**	**0.0**	500.0	0.0	500.0	1,824.8
Total			**0.0**	**0.0**	**0.0**	**500.0**	**0.0**	**500.0**	**1,824.8**

Working capital:

Description	duration	The foreign currency		Local Currency	Total (Million Rails)	Equivalent in Million Euro
		Million Euro	Equivalent Rails (Million Rails)	Million Rails		
Supplementary Raw Material and Packaging	20 days	0	0	50,057.44	50,057.44	0.183
Cash in hand	1 Month	0	0	5,170.49	5,170.49	0.019
Account receivable	15 days	0	0	40,689.30	40,689.30	0.148
Total		**0**	**0**	**95,909.23**	**95,909.23**	**0.350**

Production costs:

Description	Amount (Million Rials)	Equivalent in (Million Euro)
Costs of materials	901,034.00	3.288
Cost of production personnel salary	25,535.00	0.093
Cost of utilities (fuel and electricity, water ...)	2,060.00	0.008
Cost of repair and maintenance	3,944.7	0.014
cost of unforeseen production(5%)	27,977.00	0.102
Depreciation expense	8,115.65	0.030
Administrative personnel salary	4,132.80	0.015
Costs of administrative and sales	11,211.30	0.041
Factory insurance	457.00	0.002
Total sum	**984,466.30**	**3.593**

6-The annual major required raw materials and annual and to supply outside or inside the country, domestic and foreign exchange and checking the major developments in the supply of essential required items in the past and future

The main raw material required for the project is raw milk which Izeh city has a lot of potential for livestock and milk production in Khuzestan province and it is easy to supply it within the city. The price of milk in the country has considerable fluctuations and is currently priced at 50,000 Rials per kilogram.

During the past years, much of the needed milk was supplied from abroad which is now banned from import and used domestically.

Major additives such as Stabilizer, Rent and Enzyme are mainly imported from domestic resellers and from provinces of Tehran and Isfahan.

Description	Consumption per product unit	Unit	The amount required for all capacity	Price of unit million) (Rails	Currency prices		Cost (million Rails)	Supplying Place	Total cost (million Rails)	Equivalent in Million Euro
					The currency (million dollar)	Equivalent Rails million) (Rails				
1. Pre-cheese, 65%clotted cream, Ricotta cheese: 1440 tons										
Raw cow's milk	5.2	ton	7,500	49	0	0	367,500.0	Domestic	367,500.0	0.804
starter	0.052	kg	75	6	0	0	450.0	Domestic	450.0	0.002
multilayer nylon	40	pcs	57,600	0.035	0	0	2,016.0	Domestic	2,016.0	0.007
Total					0	0	369,966.8	Domestic	369,966.8	1.350
Fresh white cheese:495 **tons**										
Raw cow's milk	4.9	ton	2,250	49	0	0	110,250.0	Domestic	110,250.0	0.402
milk powder	0.02	ton	9	310	0	0	2,845.8	Domestic	2,845.8	0.010
stabilizer	1.8	kg	826	1	0	0	826.2	Domestic	826.2	0.003
starter	0.015	kg	34	6	0	0	202.5	Domestic	202.5	0.001
Salt	0.02	ton	9	32	0	0	288.0	Domestic	288.0	0.001
tin containers17kg	74	pcs	14,815	0.28	0	0	4,148.2	Domestic	4,148.2	0.015
pp containers 300gr.	3710	pcs	960,890	0.012	0	0	11,530.7	Domestic	11,530.7	0.042
Total					0	0	130,091.4		130,091.4	0.475
Ripened Brined Cheese:300 **tons**										
Raw sheep's milk	4	ton	1,200	70	0	0	84,000.0	Domestic	84,000.0	0.307
Raw cow's milk	2	ton	600	49	0	0	29,400.0	Domestic	29,400.0	0.107
starter	0.05	kg	15	6	0	0	90.0	Domestic	90.0	0.0003
Salt	0.02	ton	6	30	0	0	180.0	Domestic	180.0	0.001
tin containers17kg	74	pcs	11,100	0.28	0	0	3,108.0	Domestic	3,108.0	0.011
tin containers8kg	37	pcs	1,850	0.19	0	0	351.5	Domestic	351.5	0.001
pp containers300 gr.	3710	pcs	371,000	0.015	0	0	5,565.0	Domestic	5,565.0	0.020
Total					0	0	122,694.5		122,694.5	0.448
Yoghurt:2250 **tons**										
Milk	1	ton	2,250	49	0	0	110,250.0	Domestic	110,250.0	0.402
Starter	0.01	kg	23	2	0	0	45.0	Domestic	45.0	0.0001
milk powder	0.015	ton	34	250	0	0	8,437.5	Domestic	8,437.5	0.031
stabilizer	0.004	ton	9	650	0	0	5,850.0	Domestic	5,850.0	0.021
bucket 2kg	500	pcs	1,025,000	0.03	0	0	30,750.0	Domestic	30,750.0	0.112
pp container100 gr	10000	pcs	2,000,000	0.005	0	0	10,000.0	Domestic	10,000.0	0.036
Nylon Shrink		ton	3	400	0	0	1,200.0	Domestic	1,200.0	0.004
Total					0	0	166,532.5	Domestic	166,532.5	0.608
Buttermilk:3000 **tons**										
Milk	0.5	ton	1,500	49	0	0	73,500.0	Domestic	73,500.0	0.268
Starter	0.01	kg	15	2	0	0	30.0	Domestic	30.0	0.0001
stabilizer	0.003	ton	9	650	0	0	5,850.0	Domestic	5,850.0	0.021
Water	0.5	ton	1,500	0.02	0	0	30.0	Domestic	30.0	0.0001
Nylon (Bag) 900 cc	1112	pcs	2,224,000	0.006	0	0	13,344.0	Domestic	13,344.0	0.049
Nylon Shrink		ton	2	400	0	0	800.0	Domestic	800.0	0.003
230cc PP glass	4350	pcs	4,350,000	0.0035	0	0	15,225.0	Domestic	15,225.0	0.056
Total					0	0	108,749.3		108,749.3	0.397
detergents					0	0	3,000.0	Domestic	3,000.0	0.011
Total					**0**	**0**	**901,033.7**	Domestic	**901,033.7**	**3.288**

7. The risk analysis of the project

Strengths:

- Ease of access to high quality cow and sheep raw milk in the region (due to rangelands and suitable climatic conditions in Izeh and Animal Farm boom)
- Variety of production
- No import
- Access to cheap energy
- Neighbors' taste in Iranian dairy products
- The production method is the same in Iran and other countries of the world
- Appropriate communication infrastructures such as transit roads, railways and waterways are available to access domestic and foreign markets, especially Iraq and the Gulf States.
- Close to important commercial ports such as Imam Khomeini Port and Khorramshahr for export
- High internal rate of return and low return period

Weakness:

- Lack of liquidity to supply machinery and working capital
- Full competition market
- Government price control policies

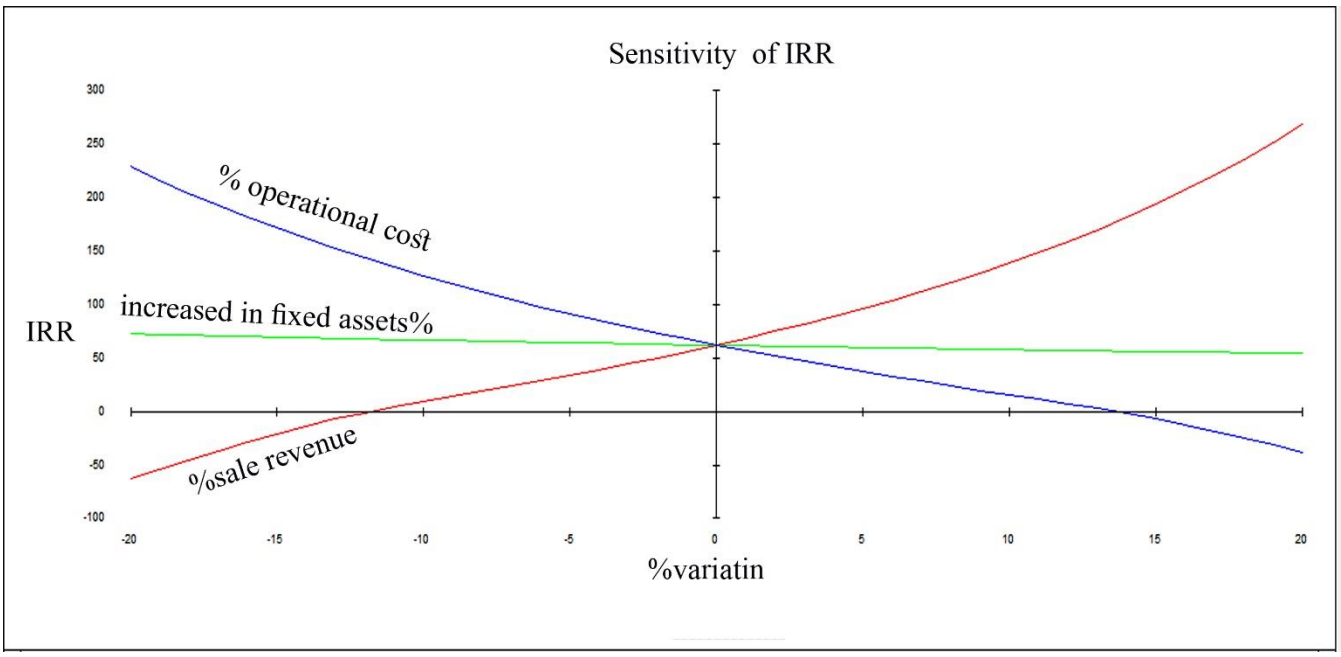
Opportunities:

- Existence of a very large consumption market in the project area (4.7 million population of Khuzestan province)
- Support domestic production
- Support attracting foreign investors
- Access to major axes and infrastructure such as freeway, south to north railway, access to open water for export
- Tax exemption

Threats:

- US sanctions
- The important competitors in the dairy industry
- Political and regional changes in the Middle East
- Variable inflation rates and rising production prices

Sensitivity analysis of IRR based on the changes in sale revenue, increased in fixed assets and operational cost



8. Human resources and employment status

The project Employment rate is 46 people, 40 of these rate will be in production and 6 persons in office. Due to the existence of universities and Valid technical and professional centers in Khuzestan province and Izeh province, access to specialist human resources is provided.

Job Title	Sex		Required			Monthly salaries per person (million Rails)	Monthly salaries (million Rails)	Annual salaries (million Rails)	Equivalent in Euro
	F	M	Qty	Shift	Sum				
CEO		✓	1	1	1	65	65	1,066	3,890.5
Finance director, sales,administrative	✓	✓	1	1	1	48	48	787.0	2,873.0
Financial personnel, sales office	✓	✓	1	1	1	42	42	679.0	2,513.9
warehouse keeper		✓	1	3	3	42	126	2,066.0	7,541.6
Processes manager	✓	✓	1	1	1	45	45	738	2,693.4
Line Supervisor	✓	✓	1	3	3	42	126	2,066	7,541.6
Skilled worker	✓	✓	4	3	12	42	504	8,266	30,166.4
Worker	✓	✓	6	3	18	37	666	10,922.0	39,862.8
Service worker		✓	1	3	3	30	90	1,476	5,386.9
Secretary	✓		1	1	1	37	37	607	2,214.6
Guard		✓	1	2	2	30	60	984	3,591.2
Total			**19**		**46**		**1089**	**29,668**	**108,275.9**

9. Determine the amount of water, electricity, gas, telecommunications and communication facilities (road - rail - Airport - Port ...) and how to provide them in the appropriate area to implementation

Izeh Industrial Estate has basic infrastructure such as water, electricity, gas and telecommunication facilities. It is 180 kilometers from Izeh to Ahvaz (the capital of the province), providing access to all airport, rail and transit facilities, these possibilities is facilitating trade. the distance to port is 280km.

Description	unit	Annual consumption	Price per unit (Rails)	Total price (million Rails)	Equivalent in Euro
Electricity	KW	800,000	1,300	1040	3,795.6
water	m^3	5,000	20,000	100	365.0
Gas	m^3	300,000	1,400	420	1,532.8
Other				500	1,824.8
total				**2,060.0**	**7,518.2**

10. Economic and trade support for plan

To stimulate the industrial section and related to the resistance to economy, several projects are implemented and the following are mentioned

- In order to study, exchange of views and coordination to resolve the problems and obstacles faced by manufacturing units, "the Working Group of facilitate and remove of production obstacles " is formed in all provinces and with membership of the governor (chairman), head of the provincial Ministry of Industry, Mine and Trade (Secretary), management and planning organization chairman, President of the Chamber of commerce, Industries, mines and Agriculture of province and chairman of the house of industry, mine and trade. The main tasks of this working group can be mentioned as follows:

  - Helping to expedite the completion and commissioning of the production of semi-finished projects and develop
  - Support and contribute to the export development of provincial products.
  - Investigating slowdown causes or production units suspension and problem solving coordination.

- **Working Group on Economy of Resistance (boom):** Regarding to the economy resistive of Ministry of Industries and Business in Act 12868 dated 2016.21.4, the funding are considered in order to completing industrial plans with a physical progress more than 60% and also improving the competitiveness of small and medium production units to increase exports.

- **Investment Guarantee Fund of Small Industries**: The credit guarantees issuance is guaranteed to facilitate financing was through small business facilities and securitized principal and interest and credit facilities granted by banks and financial institutions to small firms. This credit guaranties have been issued for applicants after expert review and validation, obtaining fees with the required securities and warranty credit.

- **Other support for the dairy industry include:**

  - Determining the approved rate for milk purchases to control raw milk prices

  - Cultivation for milk and dairy consumption, especially in schools

  - Support and development of industrial dairy farms and dairy breeding centers

  - Expanding livestock feed plans

10.1. Supporting of Customs tariff (products and machines) with global tariff

In order to support domestic production and ease of technology supply, the machines input rights to the project are relatively low at around 10%. Also Imported raw materials such as rennet, enzyme and stabilizer have relatively low input rights and about 5%.

In order to support domestic production and to prevent imports, dairy product input rates are high and around 32-55%.

10.2. financial support (existing units and projects) banks - investment firms

The most important sources of financial credit from banks, can be cited as follows.

1. **Foreign exchange reserves:** The surplus proceeds from the sale of crude oil facility will be provided support and finance of part of the foreign exchange needs of producers and exporters of private and cooperative sectors. In the framework of contracts and Islamic banking laws and regulations enacted by the opening credits are awarded based on the provisions of the import and export of goods and services.

2. **Economy of Resistance Committee (boom):** Now, funding is considered for the completion of a physical progress with 60% and industrial production units as well as enhance the competitiveness of small and medium enterprises to increase exports.

3. Foreign Investment Promotion and support Act:

Since 1955, the legal framework for foreign investment in Iran has been the Attraction and support of Foreign Investments law. In line with reforms in the economic structure of the country, the Iranian parliament has offered the foreign investment plan as a Foreign Investment Promotion and Support Act which legislated finally in 1381. This will lead to the development of the legal framework and operational environment for foreign investors in Iran. Some of the new developments in the field of foreign investments include:

• Islamic Republic of Iran is welcome of foreign investments by foreign persons, whether natural or legal persons in all areas of economic activity.

• Recognition of new investment methods in addition to foreign direct investment

• Short and quick process and approval application and foreign investment approval.

• Creating an unique organization called the Center for Foreign Investment Service Organization for Investment, Economic and Technical Assistance of Iran in order to focused and effective support of the activities of foreign investors in Iran

• Further liberalization of foreign exchange mechanisms for more use by foreign investors

In case of absorbing foreign investor, the government considers some bonus, such as:

1. Tax exemption for the products of foreign investing companies
2. Presenting insurance coverage for the investors
3. Presenting customs exemptions for importing equipment required by foreign investing companies
4. Granting subside for training local manpower
5. Preparing free zones for investment
6. Granting infrastructure facilities and less expensive public services such as water and power
7. Guaranteeing return on profit and the main capital and prevention from their confiscation and nationalization

11.Analyzes And providing summary and final offer

Regarding to the importance of milk and dairy consumption, one of the major goals of the national document, Nutrition and Food Security is to increase the average consumption of milk and dairy products. This is so important to the health of the community that is forecasted in the national development prospects of 2025, the production of 15 million tonnes and near to per capita of 169 kg and the law of the Sixth Economic, Social and Cultural Development Program of the country (2017-2022) 160 kg of dairy consumption per year. However, milk consumption in developed countries is per capita 250 to 400 kg and in Iran 66 kg which is relatively close to the desired level. At present, government policies are aimed at increasing dairy consumption in society and supporting domestic production.

Now, the dairy products are the cheapest and high quality animal protein in household consumption basket which all the people can have it as well as employment income from production to processing to cause a large and community health guarantee. The calculations indicate that the core groups of each patient are cheaper than the other domicile products.

Milk production has increased in the country with changes in the milk production sector, in particular the replacement of low-income cattle with dairy cattle or breeds. In addition to technological advances and domestic demand, exports have also been very successful, accounting for 30% of the food industry's exports.

According to surveys, it was determined that in the next five years we would be faced with a shortage of 178,000 tonnes. In order to overcome this shortage, existing units (in operation and under construction) would have to be expanded or building new units or attempted to import the product.

On the other hand, Khuzestan province with a production of 326.6 thousand milk and a population of 4.7 million is one of the largest consumers of dairy products with only five dairy plants (yogurt, buttermilk, cheese) with a nominal capacity 36 thousand tonnes. The nessecera dairy product of this province is supplying most of its from outside the province, such as the provinces of Tehran, Isfahan and Fars, Mazandarans with high distance and high shipping costs. Therefore, the development and commissioning of a factory for Milk Industry Blossoms company in Izeh as one of the livestock centers of Khuzestan province with a capacity of 7449 tons is justified.

High internal rate of return (62.28%) and low return period (3 years) are major advantages of the plan.

It should be noted that Khuzestan province enjoys a favorable position for exporting this product, due to its common land and water border with the Persian Gulf countries and the compliance of Iranian dairy products with their tastes, while about 90% of dairy products are exported which is exported to Iraq. It is also possible to export to other countries due to the port and access to free waters.

Cost of products (ton)	**pre-cheese**	285 million Rails ≅ 1,040 Euro
	Clotted cream 60-65% fat	285 million Rails ≅ 1,040 Euro
	Ricotta Cheese	285 million Rails ≅ 1,040 Euro
	Ripened Brined Cheese	455 million Rails ≅ 1,660.0 Euro
	fresh white cheese	313 million Rails ≅ 1,142 Euro
	Yoghurt	81 million Rails ≅ 296 Euro
	buttermilk	41 million Rails ≅ 149 Euro
Sale price of products (ton)	**pre-cheese**	317 million Rails ≅ 1157 Euro
	Clotted cream 60-65% fat	317 million Rails ≅ 1157 Euro
	Ricotta Cheese	317 million Rails ≅ 1157 Euro
	Ripened Brined Cheese	520 million Rails ≅ 1,898.0 Euro
	fresh white cheese	350 million Rails ≅ 1,277 Euro
	Yoghurt	92 million Rails ≅ 336 Euro
	buttermilk	47 million Rails ≅ 171 Euro
total Sales (in 100% capacity)		1,121,130.0 million Rails≅ 4.09 million Euro
Present sales in break-even point		27.75%
Profit (in 100% capacity)		109,330.54 million Rails≅ 0.40 million Euro
Gross value added		214,092.3 million Rails≅ 0.78 million Euro
Net value added (million Rail's)		205,976.6 million Rails≅ 0.75 million Euro
The Gross value added to total Sales		19.10%
The Net value added to total Sales		18.37%
The Gross value added to Investment		1.01%
Investment Return Period		3 years

Exchange rate:

1 Euro ≅ 274,000 Rails
1 Dollar≅228,000 Rails

12- Summary of pre-feasibility plan

General Specification	
Name of The Project	Dairy Production(Pre-cheese, Ripened brined Cheese, Fresh white cheese, Clotted Cream 60-65% fat, Ricotta Cheese, non-carbonated Buttermilk and Yoghurt
Project Capacity	7449 tons
Personnel Number	46 persons
Working Days	250 days
Product Usage	As raw materials for Pizza cheese and cream factories, daily edible consumption
Marketing	
Product Global Price	Cheese: 3.3 Euro/kg, yoghurt: 0.5 Euro/kg, buttermilk: 0.3 Euro/kg
Domestic Demand	1.92 million ton
Domestic Production	2.04 million ton
Import	-
Export	120.9 thousand ton
Technical Study	
Land Area	12360 m^2
Building Area	1376 m^2
Main Raw Materials	cow's and sheep's raw milk, Stabilizers , starter, packaging materials
Supplying Place of Raw Materials	Domestic
Power Requirement	245 KW
Water Requirement	5000 m^3
Fuel Requirement	300,000 m^3 gas
Economical & Financial Study	
Fixed Investment Cost	116,526.40 million Rails ≅ 0.425 million Euro
Working Capital	95,909.23 million Rail's ≅ 0.350 million Euro
Total Investment Cost	212,435.63 million Rail's ≅ 0.775 million Euro
Annual Sale (100% capacity)	1, 121,130.0 million Rails≅ 4.09 million Euro
Net Present Value(NPV)	322,443.53 million Rail's≅ 1.17 million Euro
Break Even Point(BEP)	27.75 %
Internal Rate of Return(IRR)	62.28 %
Investment Return Period	3 years
Investment Sources Ratio: Equity:63% Finance: 37%	 133,899.03 million Rails ≅ 0.489 million Euro 78,536.6 million Rails ≅ 0.286 million Euro