In the name of Allah

Pre-feasibility studies

Project Name:
Date packaging and production of date syrup and pasteurized paste

Project Owner:
Mr. Abdolmahdi Alboghobeish

Advisor of the project:
Zahra Badoei

Project address: Khuzestan, Mahshahr Industrial Estate

Date of P.F.S: March, 2021

Summary of pre-feasibility plan

General Specification	
Name of The Project	Date packaging and production of date syrup and pasteurized paste
Project Capacity	Packaged date (mostly Sayer and Zahedi): 3000 tones Pasteurized date paste: 600 tones, Date syrup: 1750 tones
Personnel Number	80 persons
Working Days	250 days
Product Usage	The very valuable food staffs, used in confectionary and chocolate and other food and beverage industries
Marketing	
Product Global Price	900-1200 $/ton
Domestic Demand	Packaged date : 175,452 tones, date paste: 8,408 tones, Date syrup: 25,520 tones
Domestic Production	Packaged date : 431,024 tones, date paste: 8,850 tones, Date syrup: 26,863 tones
Import	-
Export	date : 225,572 tones, date paste: 443 tones, Date syrup: 1343 tones
Technical Study	
Land Area	4800 m^2
Building Area	2656 m^2
Main Raw Materials	Date, carton, packaging containers
Supplying Place of Raw Materials	Domestic
Power Requirement	100 KW
Water Requirement	3000 m^3
Fuel Requirement	100,000 m^3 gas
Economical & Financial Study	
Fixed Investment Cost	150,660.0 million Rails ≅ 0.55 million Euro
Working Capital	271.016.16 million Rail's ≅ 0.989 million Euro
Total Investment Cost	421,676.16 million Rail's ≅ 1.539 million Euro
Annual Sale	809,815.50 million Rail's≅ 2.96 million Euro
Net Present Value(NPV)	416,136.66 million Rail's≅ 1.519 million Euro
Break Even Point(BEP)	20.86 %
Internal Rate of Return(IRR)	57.75%
Investment Return Period	3 years
Investment Sources Ratio: Equity:37% Bank facilities:2% Finance: 61%	 155,312.16 million Rails ≅ 0.567 million Euro 10,000.0 million Rails ≅ 0.036 million Euro 256,346.0 million Rails ≅ 0.936 million Euro

Introduction:

Date is one of the main agricultural products in Iran, which is a chief Source to acquire foreign currency for country. Date fruit is sold in the market in shape of fresh date, dried date, and other forms of processed by-products. Although Iran ranks is the second place in the date producers in the world after Egypt, but is at fourth rank in the exporting countries in the world. One of the most important and effective reason for this affair is not to consider the packaging and hygienic issues.

The most important problems in date industry are unsuitable storage conditions which cause changes in its physical and chemical properties and unsuitable packaging. Considering the importance of this product, it is essential an appropriate packaging and storage condition to increase shelf life and preserve the quality in order to increase the export of this product. in other words date packaging is a technical-economic performance, which minimizes distribution charges and maximizes the sale amount and safe distribution to the final consumers.

From ancient times cultivation of palm trees and date production have been correlated to southern part of the country especially Khuzestan. Suitable climate and fertile lands are the leading factors for growing date tree in this area. 75 species of date tree is cultivated in Khuzestan and total date production reaches to 190 thousand tones per year. Khuzestan is at third rank in producing date in the country. Currently 34 percent of total export of date is related to Khuzestan which in the year 2018 has earned about 85 million Dollars for Country. Due to easy and cheap access to dates, Khuzestan is one of the desirable provinces for packaging and producing by-products date. Considering the economic Feasibility study of this production in Khuzestan, Mr. Abdolmahdi Alboghobeish, who has more than 15 years experience in this field, decided to establish a date packaging unit in Mahshahr industrial estate in 2019. Also to increase value added, it is programed to expand the factory to produce date syrup and paste.

The target market, in addition to domestic market, is mostly exportation. At present, this industrial unit works at the 20 percent of its nominal capacity just on date packaging due to liquidity shortage. The aim of this feasibility study is to attract investors to provide enough cash for buying date and required machineries to produce syrup and paste. If the investor can provide and import up-to-date machines with modern Technology, would be welcomed.


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

1.Product introduction:

The purpose of this project is date packaging (date grade 1, 2) with the capacity of 3000 tones per year. It is also desired beside date packaging , establish a process line to produce date paste an syrup (date grade 3) with capacity of 600 and1750 tones accordingly.

- **packaged dates**

Date packaging is mainly made to protect dates from harm and damages resulting from transportation and warehousing, humidity, pests, dust, and so forth. in other words date packaging is a technical - economic performance that its aim is to minimize the distribution costs and also maximizing selling amount and safety distribution to receive the final consumer and increase exporting amount. The plant packaged dates including all date species, mostly Zahedi and Sayer, in type of with or without seed in different weighs according to consumer order.

Sayer date (Estameran date) is one of the most sweet dates in the world and its sugar is over than 75%. so is a main exporting kind (90% of export) mostly to European countries.

The palm groves of Estameran date are in Khuzestan province and contains over 75% of total palm grovies in this province. This date is a semi dried kind with less than 18% moisture. So is a good kind for keeping it safe for a longer time in proportion to other kinds.

Sayer date is chiefly to export to Europe, Russia, north America, New Zealand, and Arabian countries. The most common package for Sayer date is 5 and 10 kilograms karton. possibility of safe transportation to far countries without using icebox containers is one of the advantages of these kind dates.

- **Date syrup**

Date syrup is a brown to red color liquid with brix 65 to 70, insoluble in water, contains some kinds of reducing sugars, pectin, mineral materials and water. The date syrup is a valuable source of carbohydrates.

- **pasteurized date paste**

Date paste is a product from date without seed and cap in the shape of dough. To produce this paste, the date with grade 3 should be used. At this time different kinds of Iranian produced date paste is exported to countries like: America, Europe, Far East, Russia, Australia, and Canada.

pasteurized and homogenized date paste have a long term lasting because dates are baked. Application of date paste is in confectioneries as cakes, muffin and biscuits core, and in varieties of sweets like halva and bread and in making fruit rolls (Lavashak), chocolates.

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 "date syrup and paste and packaged date" are given in the table below.

Product name	*ISIC Code*	*Unit*
Date packaging	7495412367	ton
Date syrup	1513512426	ton
Date paste	1513512427	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 date is as follows:

Heading subheading No.	Description
80410	Dates
8041010	Estameran
8041020	Kabkab
8041030	Piarom
8041040	Mozafaty
8041050	Shahany
8041060	Zahedi
8041090	Other

Source : export-import regulations (2020)

According to customs regulation book, date syrup and paste have no special tariff number. But are eligible to tariff No. 13023900 (all kinds of syrup and vegetal juice) and 20079990 (all kinds of nut purée and fruit or nut paste and vegetables).

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 date is as follows:

Heading Subheading No.	Description	SUQ	Import duty
8041010	Estameran	kg	55
8041020	Kabkab	kg	55
8041030	Piarom	kg	55
8041040	Mozafaty	kg	55
8041050	Shahany	kg	55
8041060	Zahedi	kg	55
8041090	Other	kg	55

Source : export-import regulations (2020)

Import terms:

1. Import and entry of the ice cream is subject to the substantive of Article 16 of the Food and Drinks and hygienic law and article 11 of vegetable preservation law approved in 1967 .
2. Date is subject to mandatory export standards.

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

- national Standard

Number	Title	Country
285:2012	Sayer dates-Specifications and test methods	Iran
2496: 2018	Specification for Sayer dates for industrial purposes	Iran
5998: 2003	Packaging of date -Specification	Iran
2381	Dates- Code of hygenic practice of harvesting, processing and packaging	Iran
5720: 2002	Dates Paste-Specifications And test Methods	Iran
5075: 2013	Date syrup-specifications and tests methods	Iran

Source: Institute of Standards and Industrial Research of Iran

International Standard

No.	Topic of standard	Number of standard
1	CODEX STANDARD FOR DATES	FAO

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

Universal date price as average is about 0.5 to 8 Dollars for wholesale that depends to dates grade and quality and also kind of package. For Sayer and Zahedi dates the price is about 0.9 to 1.2 Dollars, in Iran the price is 150 to 1000 thousand Rials per kilogram depending to the date grade and package. Date paste price is 100 to 150 thousand Rials per kilogram and for date syrup is from 150 to 400 thousand Rials per kilogram.

NO.	Product	price
1	Packaged date in domestic market	150-1000 thousand Rials ≅ 0.55-3.6 Euro
2	Date paste	100-150 thousand Rials ≅ 0.36-0.55 Euro
3	Syrup date	160-400 thousand Rials ≅ 0.58-1.46 Euro

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

Date mostly use as fresh and using in food industries. This fruit is rather cheap and accessible. In 100 grams of date is about 7.5 grams suitable fibers for food diet. Date is a much enriched source of potassium which is 350 percent more than Banana. Date consumption cases is as table below.

Sorted and packaged date	Eating fresh and directly
Dried date	Consuming daily and food, it is known as date sugar and used to sweeten confectionaries and detonators
Cheeps date	Daily used and in candies like cakes and date bread
Pitted Date	With high percent amount of sweet , usually use mixture with walnut and hazelnut to make chocolates. also can be used to make date paste for making beverages
Date paste	Used in confectionary an chocolate, cake and other food industry like roll fruit
Date syrup	Daily usage as food , also used in sweets and drink beverages
Date seed	Used to make palm oil and food for animals and birds
Sayer date	Mostly exported and used in food and drink industries.

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

As substitute goods for date can be named as dried nuts like : dried mulberry , Raisin and fig, but considering special feature of date in price and food point of view , these competing goods cannot have acceptable effect on date and its by–products such as date syrup and paste consumption amount.

Sugar and cube sugar are also somehow competitor good for date, but considering their harm effects and probability of affliction to diabetes, and society culture, their consumption is downward trend.

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

Because of so many benefits of dates, has obtained a good place in the world. The nutritional value of this crop is high due to natural sugars such as glucose, sucrose, fructose, iron, fiber and protein. In addition to food value, date as one strategic product has a good commercial-economic importance too. This fruit grows just in a special hot climate conditions, and Iran has a good conditions per its farming.

Date's importance for country economic, because of its currency incomes, and in resistance economic policy conditions, is very noticeable.

1.9. The major producing countries and product consumer

Egypt is at first and then Iran are the big producers of dates in table below the chief world date producers and amount of their production is presented.

Top Global Date Producing Country in 2018

Country		Rank	Production Volume(ton)	Production Share%
	Egypt	1	1,694,813	20
	Iran	2	1,065,704	12.6
	Algeria	3	1,029,596	12.2
	Saudi Arabia	4	964,536	11.4
	United Arab Emirates	5	671,891	7.9
	Iraq	6	615,211	7.3
	Pakistan	7	494,601	5.8
	Sudan	8	439,120	5.2
	Oman	9	348,642	4.1
	Tunisia	10	241,000	2.8
	Libya	11	173,546	2.1
	China	12	159,144	1.9
	Morocco	13	125,329	1.5
	Kuwait	14	98,366	1.2
	Yemen	15	57,726	0.7

The largest producers, exporters and importers are Egypt, Tunisia and India respectively.. Tunisia in production rank is eighth grade, but in exporting is as first grade, Iran is as second grade in producing and fourth grade in exporting.

Top Producer	Egypt
Top Exporter	Tunisia
Top Importer	India

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 the statistics of the units with active operating licenses presented by the Industry, Mine and Trade organization and organization of Agriculture Jihad, at present 157 industrial plants with nominal capacity of 500 thousands tones for date packaging are active in all over the country, the chief ones are located in Khuzestan, Kerman, Bushehr, sistan and Baluchesten and Tehran provinces. Their production situation are as Table below.

lack of well-equipped and modern industrial unit for sorting and packaging dates, deficiency of packaging methods, seed separating and disinfecting the dates and lack of expert labor, non-observance of sanitation, especially at packaging stage, and also weakness of financial strength of owners, are all the difficulties in existing workshops.

About machinery manufactures Countries, mostly are from Italy, Espain and China, however in recent years machinery Technology has been native in Iran. The best machinery manufactures in Iran are as fallow:

- Ghadir Machinery Co,
- Arad Date Machinery group,
- Mahdi Industrial Machineries
- Kara Machinery Co.
- Adili machineries Co.

Of licensed operation unit in the field of packaging of date

No.	*Province*	*Number of units*	*Capacity (tons)*	*investment*	
				Million Rials	Million Euro
1	Isfahan	4	480	22,380	0
2	Alborz	7	11,824	159,057	0
3	East Azerbaijan	6	9,760	132,861	0
4	West Azerbaijan	5	4,800	41,364	0
5	Bushehr	20	60,000	82,596	4.278
6	Tehran	6	30,940	221,793	0
7	Chahar Mahaal and Bakhtiari	2	12,000	54,000	0
8	Khorasan Razavi	5	2,340	63,126	0
9	Khuzestan	30	121,440	449,682	3
10	Sistan and Baluchestan	8	62,400	112,884	0
11	Fars	14	32,800	192,927	0
12	Qazvin	6	4,600	30,069	5
13	Qom	4	3,840	29,469	0
14	Kerman	22	102,960	630,159	15.711
15	Mazandaran	8	3,892	156,555	4.646
16	Markazi	4	26,000	632,583	12.957
17	Hormozgān	4	4,200	123,486	0
18	Yazd	2	6,000	54,642	0
nominal Total capacity		**157**	**500,276**	**3,189,633**	**37.6**
Practical capacity (%90)		**141**	**450,248**		

Source: organization of Industry, Mine and Trade

at present, there were 26 industrial units of date paste with nominal capacity of about 10 thousands tones have got license in whole country. The case that what kind of date should be used to produce date paste and the method used is a very important item specially at marketing and selling.in producing pasteurized date paste, due to baking the dates, shelf life is longer and caused more demand in market. Most of producers use the tradition methods with quality not so desired. The status and amount of production of these units are presented in the following table:

Of licensed operation unit in the field of date paste production

No.	*Province*	*Number of units*	*Capacity (tons)*	*investment*	
				Million Rials	Million Euro
1	Isfahan	1	200	6,260	0
2	Alborz	1	500	62,100	0
3	East Azerbaijan	6	1,000	162,835	0
4	West Azerbaijan	1	300	18,900	0
5	Tehran	2	950	65,004	0
6	Chahar Mahaal and Bakhtiari	1	250	30,330	0
7	Khuzestan	3	1,300	85,242	0
8	Fars	2	1,100	52,380	0
9	Kerman	3	960	107,936	0
10	Kermanshah	1	170	6,690	0
11	Mazandaran	4	2,500	12,941	0
12	Hormozgān	1	600	26,582	0
nominal Total capacity		**26**	**9,830**	**637,200**	0
Practical capacity (%90)		**23**	**8,850**		

Source: organization of Industry, Mine and Trade

At present, there were 66 units of producing date syrup with nominal capacity 38 thousand tonnes. The most units are located in Fars and East Azerbaijan provinces. Most of units are using traditional methods. The status and amount of production of these units are presented in the following table:

Of licensed operation unit in the field of date syrup production

No.	*Province*	*Number of units*	*Capacity (tons)*	*investment*	
				Million Rials	Million Euro
1	Isfahan	6	1,042	121,912	0.7
2	Alborz	2	300	67,300	0
3	Eest Azerbaijan	10	2,551	104,110	0
4	West Azerbaijan	2	600	51,214	0
5	Tehran	5	1,800	135,640	0
6	Chahar Mahaal and Bakhtiari	3	2,530	45,165	0
7	Khorasan Razavi	3	400	114,226	0
8	Khuzestan	4	980	90,783	0.001
9	Zanjan	1	50	96	0
10	Sistan and Baluchestan	1	10,000	62,784	0
11	Fars	8	6,930	42,888	0
12	Kerman	4	2,000	136,878	0
13	Lorestan	5	313	33,586	0
14	Mazandaran	4	2,750	41,754	0
15	Hormozgān	2	3,950	41,162	0
16	Hamadan	1	170	3,440	0
17	Yazd	5	2,010	105,366	0
nominal Total capacity		**66**	**38,376**	**1,198,304**	**0.701**
Practical capacity (%70)		**46**	**26.863**		

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

Based on information from the organization of Industry, Mine and Trade, packaging date, date paste and syrup production units under construction and their production levels are presented in the table below.

Technology used in these units are mostly local and about 5 percent of units have used the foreign machineries.

Under Construction Units of packaging date with 20-99% of physical progress

No.	Province	Number of units	Capacity (tons)	investment	
				Million Rials	Million Euro
Under Construction Units with 60-99% of physical progress					
1	West Azerbaijan	2	400	57,810	0
2	Tehran	2	4,800	21,519	0
3	Khuzestan	8	15,200	507,468	0
4	Kerman	10	21,200	277,890	0
5	Yazd	2	6,000	228,300	0
Total		**24**	**47,600**	**1,092,987**	**0**
Under Construction Units with 20-59% of physical progress					
1	Isfahan	2	2,000	36,600	0
2	Khuzestan	4	9,200	95,250	0
3	Sistan and Baluchestan	2	36,000	81,621	1.47
4	Kerman	2	6,000	14,865	0
5	Mazandaran	2	12,000	43,770	0
6	Hamadan	2	2,000	255,000	0
Total		**14**	**67,200**	**527,106**	**1.47**

Source: organization of Industry, Mine and Trade

Under Construction Units of date paste production with 20-99% of physical progress

No.	Province	Number of units	Capacity (tons)	investment	
				Million Rials	Million Euro
Under Construction Units with 60-99% of physical progress					
1	East Azerbaijan	1	900	32,500	0
2	Kerman	4	1,200	493,667	0
3	Semnan	1	300	24,463	0
4	Gilan	1	500	18,200	0
5	Lorestan	1	1,250	9,079	0
6	Mazandaran	3	1,500	54,682	0
Total		**11**	**5,650**	**632,591**	**0**
Under Construction Units with 20-59% of physical progress					
1	Isfahan	2	1,300	66,928	0.6
2	Kerman	1	2,000	26,380	0
3	Chahar Mahaal and Bakhtiari	1	3,000	26,000	1.1
4	Hamadan	2	530	89,300	0
Total		**6**	**6,830**	**208,608**	**1.7**

Source: organization of Industry, Mine and Trade

Under Construction Units of date syrup production with 20-99% of physical progress

No.	Province	Number of units	Capacity (tons)	investment	
				Million Rials	Million Euro
Under Construction Units with 60-99% of physical progress					
1	Isfahan	1	20	14,600	0
2	East Azerbaijan	1	900	32,500	0
3	West Azerbaijan	1	30	19,270	0
4	Chahar Mahaal and Bakhtiari	1	50	19,410	0
5	Khuzestan	4	3,700	169,156	0
6	Semnan	1	300	24,463	0
7	Qom	1	1,000	55,000	0
8	Kerman	5	2,250	517,909	0
9	Mazandaran	3	600	54,682	0
10	Hamadan	2	480	73,360	0
11	Yazd	2	2,200	151,060	0
Total		**22**	**11,530**	**1,131,410**	**0**
Under Construction Units with 20-59% of physical progress					
1	Isfahan	2	1,000	71,878	0.6
2	Kerman	1	2,000	26,380	0
3	Chahar Mahaal and Bakhtiari	1	100	12,264	0
4	Khuzestan	1	600	25,750	0
5	Mazandaran	1	1,000	14,590	0
6	Hamadan	2	1,035	89,300	0
Total		**8**	**5,735**	**240,162**	**0.6**

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 country during the 5 years, no import of the mentioned goods has been carried out into the country.

2.4.The trend of consumption in the last five years

In Iran per capita date consumption is variable from 7 to 10 kilograms which is average of South provinces with 25 kilograms per capita and other provinces with 1 Kilograms. In Saudi Arabia per capita consumption of date is 34 kilograms and in Egypt is 16 kilograms.

In Iran 1.1 million tones date is produced in a year, and its chief consumption is at Ramazan (9th month of the Islamic lunar calendaring which all able-bodied Muslims are required to fast).

In the year 2018 , the south region of Kerman province with 181 thousands and 800 tones has produced the largest portion of internal production. Other parts of Kerman produced 117thousands and 600 tones. the second producer after kerman is sistan and baluchestan province with 178 thousands and 199 tones and in proper order is khuzestan with 144 thousands tones, Bushehr with 142 thousands tones, Fars with138 thousands tones and Hormozgan with 125 thousands tones.

Every year 20 percent of Iran date production is exported, 50 percent gets domestic consumption and 30 percent is defected during different stages of harvest and get spoiled.

As the table shows, date consumption in the year 2019-2020 is estimated 175 thousands tones, but it should be noted that this amount of consumption is merely restricted to packaged dates and does not include unpacked dates. Date paste and syrup is estimated 8 and 25 thousands tones.

Estimating apparent consumption of packaged date in the country over the past 5 years (2014-2019)

	2014-2015	2015-2016	2016-2017	2014-2015	2015-2016	2019-2020
Domestic production (tons)	261,095	299,780	342,620	384,307	386,388	431,024
Imports (tons)	0	0	0	0	0	0
Export (tons)	167,322	170,990	209,460	256,276	255,572	255,572
The apparent consumption	93,773	128,790	133,160	128,031	130,816	175,452

Estimating apparent consumption of date paste in the country over the past 5 years (2014-2019)

	2014-2015	2015-2016	2016-2017	2014-2015	2015-2016	2019-2020
Domestic production (tons)	1,842	2,285	3,006	4,954	7,141	8,850
Imports (tons)	0	0	0	0	0	0
Export* (tons)	92	114	150	248	357	443
The apparent consumption	1,750	2,171	2,856	4,706	6,783	8,408

*there is no exact statistics of export amount but according to field statistics about 5 percent of products is appointed to export.

Estimating apparent consumption of date syrup in the country over the past 5 years (2014-2019)

	2014-2015	2015-2016	2016-2017	2014-2015	2015-2016	2019-2020
Domestic production (tons)	10,417	12,877	14,710	18,286	21,428	26,863
Imports (tons)	0	0	0	0	0	0
Export* (tons)	521	644	736	914	1,071	1,343
The apparent consumption	9,896	12,233	13,975	17,372	20,357	25,520

*there is no exact statistics of export amount but according to field statistics about 5 percent of products is appointed to export.

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

Date export diagram, both the weight and export amount, has a growing trend such that 167 thousands tones in 2014 has been reached to 256 thousands tones in 2019. Most of the export amount destination is India, Pakistan, Kazakhstan and Turkey. Increased this product's price and also increased price of foreign currency, have caused increase value of its export.

Since there is no special tariff code for date paste and syrup, there is no clear export statistics for these two products, so only export and import of date statistics can be extracted.

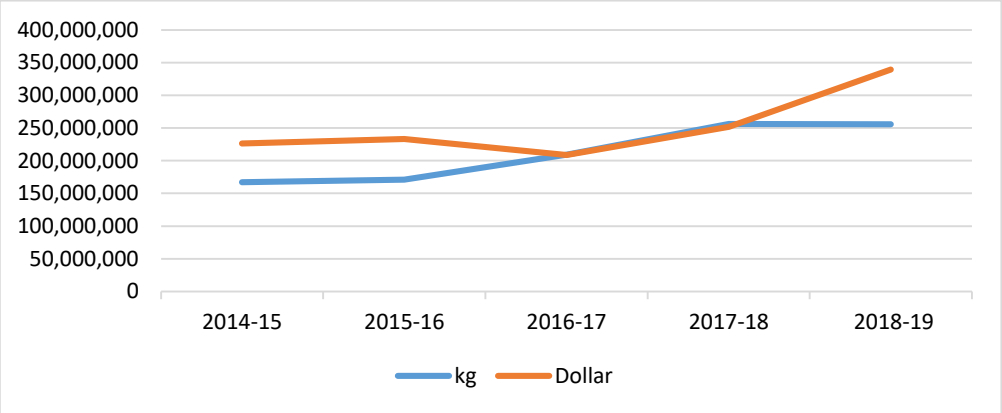
Exporting date paste in the recent years have increased, because it is a good substitude for artificial sweeteners, it causes a good taste to the sweet and also has very lower harm.

Exports of date in the last 5 years (2014-2019)

year	Weight (ton)	Rail's value	Dollar value	Description
2018-19	255,572	20,727,517,245,793	339,680,283	23% India, 13% Kazakhstan, 11% Turkey
2017-18	256,276	8,754,161,860,828	251,881,567	17%Pakistan, 15%India, 11% Kazakhstan
2016-17	209,460	6,556,388,871,337	208,548,011	
2015-16	170,990	6,869,564,124,893	232,981,317	
2014-15	167,322	5,982,149,507,792	226,173,606	

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

The chart of exported date in the last 5 years



Exporting market of dates of Iran

Exports of date divided by country in 2018-2019

counterparty country	Weight (Kg)	Rail's value	Dollar value	Weight ratio (Wt%)
India	59,428,266	4,494,111,411,957	72,789,869	23.25
Kazakhstan	32,741,603	1,880,888,325,176	29,264,154	12.81
Turkey	28,313,154	1,830,290,578,624	30,290,332	11.08
Afghanistan	22,361,454	1,137,338,660,078	19,989,248	8.75
United Arab Emirates	20,579,304	1,653,921,123,325	24,249,525	8.05
Iraq	19,848,059	1,425,550,487,665	25,890,736	7.77
Russia	8,317,385	450,090,938,968	8,382,711	3.25
Azerbaijan	4,980,912	340,720,670,476	5,938,121	1.95
Ukraine	4,788,892	305,485,800,476	4,496,675	1.87
Malaysia	3,958,728	518,893,343,580	6,992,506	1.55
Indonesia	3,674,290	232,493,638,324	3,208,576	1.44
Kyrgyzstan	3,514,688	197,721,205,028	3,098,461	1.38
Canada	3,372,976	216,758,206,911	3,431,829	1.32
Turkmenistan	2,920,503	147,399,780,576	2,568,687	1.14
Denmark	2,421,705	196,862,099,556	3,364,191	0.95
Australia	2,263,432	128,425,462,254	2,386,172	0.89
Pakistan	2,223,453	3,471,071,700,019	59,416,010	0.87
Syria	2,047,665	128,847,696,708	2,049,008	0.80
England	1,816,583	125,963,373,362	2,073,247	0.71
Poland	1,792,143	117,712,876,944	1,914,966	0.70
China	1,675,501	131,232,563,144	1,926,381	0.66
Qatar	1,544,856	55,846,071,232	1,007,064	0.60
Netherlands	1,456,094	112,141,634,719	1,807,134	0.57
Germany	1,398,621	98,878,876,118	1,647,204	0.55
Serbia	1,315,277	109,569,569,963	1,827,438	0.51
New Zealand	1,248,327	78,207,214,056	1,365,746	0.49
Bulgaria	1,235,482	97,884,705,035	1,609,795	0.48
Sweden	1,225,895	92,176,208,019	1,593,547	0.48
Lebanon	1,098,305	87,890,044,706	1,332,254	0.43
North Macedonia	990,595	72,306,729,744	1,299,251	0.39
other country	11,018,534	790,836,249,050	12,469,444	4.31
Total	**255,572,682**	**20,727,517,245,793**	**339,680,283**	**100**

Source: Islamic Republic of Iran Customs Administration (2020)

Exports of date divided by country in 2017-2018

counterparty country	Weight (Kg)	Rail's value	Dollar value	Weight ratio (Wt%)
Pakistan	43,649,040	1,167,788,587,346	33,553,678	17.03
India	39,709,910	1,540,003,196,464	43,892,621	15.49
Kazakhstan	28,086,070	937,575,652,142	26,804,373	10.96
Turkey	23,834,658	809,145,346,655	23,446,911	9.30
Afghanistan	21,592,164	531,221,799,937	15,533,808	8.43
United Arab Emirates	14,561,076	554,604,318,957	15,796,984	5.68
Iraq	12,779,154	577,545,240,514	16,992,604	4.99
Russia	9,458,115	301,825,642,170	8,799,154	3.69
Canada	5,118,031	171,523,689,900	4,929,034	2.00
Australia	4,785,691	156,633,999,147	4,546,714	1.87
Malaysia	4,263,403	227,975,036,938	6,410,643	1.66
Azerbaijan	4,226,791	176,186,477,337	5,129,186	1.65
Indonesia	4,085,784	141,869,077,737	3,974,684	1.59
Ukraine	3,985,341	115,290,784,609	3,285,219	1.56
China	2,527,491	91,907,460,168	2,665,007	0.99
England	2,423,009	85,524,063,231	2,462,813	0.95
Poland	2,263,237	81,396,315,762	2,334,744	0.88
Denmark	1,837,604	78,253,701,621	2,290,851	0.72
New Zealand	1,720,921	60,993,852,560	1,771,706	0.67
Germany	1,716,030	78,343,872,326	2,247,103	0.67
Syria	1,588,502	53,382,284,385	1,532,133	0.62
Netherlands	1,551,589	65,600,328,826	1,887,112	0.61
Sweden	1,462,689	71,007,054,685	2,052,542	0.57
Kyrgyzstan	1,403,909	37,447,611,349	1,104,103	0.55
Turkmenistan	1,343,782	41,015,029,726	1,197,574	0.52
Bulgaria	1,221,961	47,482,718,093	1,371,820	0.48
Uzbekistan	1,039,990	30,891,481,262	875,446	0.41
Qatar	986,231	24,275,353,093	672,878	0.38
Bosnia&Herzegovina	902,197	40,672,135,078	1,179,121	0.35
Serbia	882,131	37,530,992,361	1,088,784	0.34
other country	11,270,066	419,248,756,449	12,052,217	4.40
Total	256,276,566	8,754,161,860,828	251,881,567	100.00

Source: Islamic Republic of Iran Customs Administration (2020)

2.6. Reviewing of products needs based on export priority

considering growing trend of date packaged consumption during last 5 years ago, has been on the average 13 percent growth per year, in the most cautiously state about half the growth (6 percent) can be desired for years 2020 to 2025, and also considering resistant economy policy, oil sanctions, and necessity of attention on growing non-oil products that gain foreign currency, export growth can be estimated 8 percent and according to these date amount of shortage or surplus of packaged date can be calculated for the next 5 years.

According to Table below, the country would be faced to shortage of about 53 thousands tones packaged date in 2025, that means we should either expand existing units or establish new plants or import the product.

Estimates of date (packaged) demand over the next 5 years

Production	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
The domestic consumption (tons)	185,980	197,138	208,967	221,505	234,795
Export (tons)	268,351	281,768	295,857	310,649	326,182
Total demand (tons)	**454,330**	**478,906**	**504,823**	**532,154**	**560,977**
Output of current units (tons)	431,024	431,024	431,024	431,024	431,024
Production of new operational units (tons)	10,662	39,469	61,824	69,664	75,981
Total supply (tons)	**441,687**	**470,493**	**492,848**	**500,688**	**507,005**
(Shortage) / surplus	**(12,643)**	**(8,413)**	**(11,975)**	**(31,466)**	**(53,972)**

As growing trend of date paste consumption during 5 years ago, has gained growth rate on the average 38 percent per year, so according to all data we consume growth rate of 25 percent for consumption and 10 percent for exportation for the next 5 years. As table shows, up to year 2025, Country could be faced to shortage of 12 thousands tones date paste, that means we should either expand existing units or establish new plants or import the product.

Estimates of date paste demand over the next 5 years

Production	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
The domestic consumption (tons)	11,063	13,828	17,285	21,606	27,008
Export (tons)	1,106	1,383	1,729	2,161	2,701
Total demand (tons)	**12,169**	**15,211**	**19,014**	**23,767**	**29,709**
Output of current units (tons)	8,850	8,850	8,850	8,850	8,850
Production of new operational units (tons)	1,266	4,492	6,829	7,691	8,372
Total supply (tons)	**10,116**	**13,342**	**15,679**	**16,541**	**17,222**
(Shortage) / surplus	**(2,053)**	**(1,869)**	**(3,335)**	**(7,226)**	**(12,487)**

About estimating date syrup need in coming 5 years, considering growth rate of syrup consumption during last 5 years ago and considering 10 percent for expert, the product need during years 2020 to 2025 have been calculated. As the table below shows, up to year 2025, country would be faced to about 10 thousands tones shortage of date syrup, that means we should either expand existing units or establish new plants or import the product.

Estimates of date syrup demand over the next 5 years

Production	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
The domestic consumption (tons)	29,348	32,723	36,486	40,682	45,360
Export (tons)	2935	3272	3649	4068	4536
Total demand (tons)	**32,283**	**35,995**	**40,135**	**44,750**	**49,896**
Output of current units (tons)	26,863	26,863	26,863	26,863	26,863
Production of new operational units (tons)	2,583	7,789	10,295	11,561	12,459
Total supply (tons)	**29,446**	**34,652**	**37,158**	**38,424**	**39,322**
(Shortage) / surplus	**(2,837)**	**(1,343)**	**(2,977)**	**(6,326)**	**(10,574)**

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

- **date Packaging**

The date process and packaging includes stages as below:

A) Date disinfect

B) Washing

C) Getting out the moisture

D) Polishing

E) Sorting

F) packaging

At first dates should be categorized according to weigh, Then is time to disinfecting which is somehow Time-consuming and its aim is to prevent the date to be contaminated, for this washing machine is used, after that in a hot and hygienic environment product get dried. Then clean dates will be packed and weighed. The weigh by Kilogram as is international. at end for quality control the final product randomly would be selected and gets all necessary laboratory tests.

- **Date paste**

Date →disinfection → Sorting → washing→ adjusting moisture →Separating caps →Separating seed→ eliminate redundant materials→ Pasteurization→ cutting to pieces → Homogenization of primary materials → Final homogenization→ packaging

Date paste production line is located after washing line, date after harvest needs sorting which is done in two states. First state is Sorting machine and sieve that separates redundant materials. It is belter Sieve outline be thrown on sorting conveyor belt and workers on both sides of conveyor separate redundant materials out, in this case these materials do not convey throw all the line length. Date from sorting conveyor by elevator comes to washing machine, this machine by moving date on conveyor in wan steel, by having boiling state and water spray system washes dates and at the end washed date goes to water extracting conveyor. This conveyor by air pressure causes separation water from date and extra water goes out from the bottom of a wire mesh conveyor. From this point the clean and sorted date is ready to be packed or transferring to seed removing machine. Date without seed as paste comes out of machine and is ready to be packed.
the final stage of package is using shrink pack machine for product. In some Cases date paste is packed in vacuum bags by vertical vacuum machine.

- **Date Syrup**

For producing date syrup, dates come to process reservoir and full steel extracting machine. There is two systems for extraction, the first is one stage process which has one extracting and process tank and second is two stage which uses two process and extracting full steel tanks.
In one stage process, date paste inters to process steel tank and with adding water and giving thermal process, outlet syrup goes to filtration system and gets ready to infer the final concentration Tanks and to filling and packaging machine, but the two stage concentrate system has high quality and efficiency. In this system filtered date paste and syrup supplied by Second process tank comes to first process tank and Syrup from this tank goes to filtration system and final concentration tank and pressed caked supplied by first tank goes to second tank and by effect of cullet syrup from Second tank would be added to date paste from first process and so concentration operation in two stage causes quality and efficiency increases.
After filtration, syrup goes to final concentration process tanks which could be calculated according to number of steel tanks and their volume efficiency and number of steel tanks, then concentration tanks outlets goes to filling machine, and here according to packaging machine type, some cases could be done:

1. package date syrup in bottles : linear filling machine per concentrated liquids is proper for filling date syrup in glass bottles and at final stage is packing with Shrink pack machine.
2.packing date syrup in disposable containers : using tri-sealer or from fill sealer machine which has concentrated liquid filling system, is suitable for filling and packing date syrup in disposable containers, and final stage is packing with shrink pack machine.

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

According to technology introduced for processing this product, the strength and weak points of process is as below:

- Using traditional production methods and not knowing the modern an scientific methods especially in the field of disinfectant, grading, and suitable package to be presented to European market and acquiring current ISO.
– not being compulsion to observe international standards in process
- lack of suitable and scientific knowledge of producers on suitable methods for collecting and gathering, transport and householding the product.
- lack of local powerful process association for guidance producers to increase their knowledge for process quality.
- Not enough amount of budget for researching organs for improve and substitute export items.

strength points:
- High quality of products and respecting sanitation criteria and national and international standards.
_ using hair burning and metal finder machines per eliminate polluted redundant materials.
- producing sanitary pasteurized date paste

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.)

Regarding the need of the domestic market especially Khuzestan province and considering the export, the nominal annual capacity of the project is:

Packaged date (mostly Sayer and Zahedi): 3000 tones

Pasteurized date paste: 600 tones

Date syrup: 1750 tones

The practical capacity of the project is predicted to be 70, 80, 90 and 100 percent of nominal capacity, respectively, considering the need for cash to supply raw materials, manpower efficiency and unforeseen factors during the first forth years of operation.

It takes about 4 months to complete and purchase the equipment. The product is also expected to be produced in 250 working days and a 12-hour shift per day.

Plan production and sales over the next 4 years

Years of operation		first year 8 month	second year	third year	Forth year
Percentage of capacity		70	80	90	100
Packaged date		1,400.0	2,400.0	2,700.0	3,000.0
Date paste		280.0	480.0	540.0	600.0
Date syrup		816.0	1,400.0	1,575.0	1,750.0
Scrap (date seeds ,…)		374.5	642.0	722.25	802.5
Total production (ton)		**2,870.5**	**4,922.0**	**5,537.25**	**6,152.5**
The outcome of selling					
Packaged date (155 million Rials/ton)		217,000.00	372,000.00	418,500.00	465,000.0
Date paste (100 million Rials/ton)		28,000.00	48,000.00	54,000.00	60,000.0
Dale syrup (160 million Rials/ton)		130,560.00	224,000.00	252,000.00	280,000.0
Scrap (date seeds ,…) (5 million Rials/ton)		1,872.50	3,210.00	3,611.25	4,012.5
Total sales	**million Rails**	**377,432.50**	**647,210.00**	**728,111.25**	**809,012.50**
	Million Euro	**1.38**	**2.36**	**2.66**	**2.95**

Exchange rate:

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

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	5,760	0	0	0	0.0	5,760.00	0.021
landscaping	5,310	0	0	0	0.0	5,310.00	0.019
Construction	79,680	0	0	0	0.0	79,680.00	0.291
utilities	3,060	0	0	0	0.0	3,060.00	0.011
Equipment& Machinery	10,290	0	0	40,000	40,000.0	50,290.00	0.184
laboratory equipment	0	0	0	1,000	1,000.0	1,000.00	0.004
transportation	0	0	0	0	0.0	0.00	0.000
Office Equipment & Supplies	300	0	0	760	760.0	1,060.00	0.004
Other and unpredicted	0	0	0	3,000	3,000.0	3,000.00	0.011
total	104,400	0	0	44,760	44,760.0	149,160.00	0.544
Pre-Production expenditures	500	0	0	1,000	1,000.0	1,500.00	0.005
Total of fixed Capital	104,900	0	0	45,760	45,760.0	150,660.00	0.550
Working capital	0	0	0	271,016.0	271,016.0	271,016.0	0.989
Total Investment	**104,900.0**	**0**	**0**	**316,776.16**	**316,776.16**	**421,676.16**	**1.539**

Exchange rate:

1 Euro ≅ 274,000 Rails
1Dollar≅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	4800.0	0.0	5,760.0	0.0	5,760.0	20,719.4

landscaping price as follows as:

Description	Area(m^2)		Cost (million Rails)			Equivalent in Euro
	done	required	done	required	Total	
filling and leveling	1080 m^3	0.0	270.0	0.0	270.0	985.0
Wall (2.5 meters high)	290 m	0.0	2,900.0	0.0	2,900.0	10,584.0
Flooring the site with marble stone	2140 m^2	0.0	2,140.0	0.0	2,140.0	7,810.0
total			5,310.0	0.0	4,310.0	19,380.0

Construction items Information:

Description	Building Type	Square meters area		Total cost (million Rails)			Equivalent in Euro
		Done	Required	Done	Required	Total	
Production and warehouse salon	Industrial shed - Tiling up to ceiling - Ceramic floor	1,000	0.0	30,000	0.0	30,000	109,489.1
Export and disinfection and sampling dates salon	Industrial shed - Tiling up to the ceiling - Ceramic floor	336	0.0	10,080	0.0	10,080	36,788.3
Administrative buildings building ,Gate guard and Electronic room	Made of bricks	650	0.0	19,500	0.0	19,500	71,167.9
Raw material salon	Industrial shed - Tiling up to ceiling - Ceramic floor	670	0.0	20,100	0.0	20,100	73,357.7
Total infrastructure and costs		**2,656**	**0.0**	**79,670**	**0.0**	**79,680.0**	**290,803.0**

the view of the factory

Utilities:

Description	Number/amount Technical Specifications		Required costs (million Rail's)			Equivalent in Euro
	Done	Required	Done	Required	Total	
Electrification	Electric power 100 KW	0	2,000	0.0	2,000	7,299.0
Water	Split 1 ", water supply and piping	0	500	0.0	500	1,825.0
Fuel	Split and piping for gas	0	500	0.0	500	1,825.0
Water tank	5000 lit	0	60	0.0	60	219.0
Total			**3,060.0**	**0.0**	**3,060.0**	**11,168.0**

Equipment& Machinery product line:

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		
Date packaging	Washing machine	1	0	0	0	0	7500.0	0.0	7500.0	27,372.3
	Dryer	1	0							
	Sorting sieve	1	0							
	Oil spraying and polishing machine	1	0							
	Packaging conveyer	1	0							
	Hair burner	1	0	0	0	0	1000	0.0	1000	3,649.6
	Stick machine	1	0	0	0	0	240	0.0	240	875.9
	shrink machine	1	0	0	0	0	1000	0.0	1000	3,649.6
	Metal detector	1	0	0	0	0	350	0.0	350	1,277.4
	Labelling machine	1	0	0	0	0	200	0.0	200	729.9
	total			0	0	0	10290	0.0	10,290	37,554.7
Pasteurized date paste	Lift transfer date to cooking tunnel	0	1	0	0	0	0	10,000	10,000	36,496.4
	Date cooking (heat treatment and fumigation) tunnel	0	1							
	Dates Core Remover Machine	0	1							
	Receiving and mixer tank	0	1							
	Date paste packaging machine	0	1							
	Cooling tower	0	1							
	Boiler	0	1							
	Pre- heater	0	1							
	total			0	0	0	0	10,000	10,000	36,496.4
Date syrup	Two stage batch	0	1	0	0	0	0	30,000	30,000	109,489.1
	Elevator 6 m without van	0	1							
	Preheater with jacket	0	1							
	Preheater frame8ton	0	1							
	Dates Seed Remover Machine	0	1							
	Store tank 5 ton	0	1							
	Filter press 80 plat	0	1							
	Cooling tower	0	1							
	Boiler	0	1							
	Switch board of syrup line	0	1							
	Consumables items	0	1							
	total			0	0	0	0	30,000	30,000	109,489.1
	Total			0	0	0	10,290.0	40,000	50,290	183,540.0

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		
Incubators, scales and other laboratory equipment	0	Complete series	**0.0**	**0.0**	**0.0**	**0.0**	1000.0	1000.0	3,650.0
Total	**1**	**0**	**0**	**0**	**0**	**0.0**	**1000.0**	**1000.0**	**3,650.0**

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 furniture	0	1set	0	0	0	0	100	100	365.0
Tables and chairs	0	2sets	0	0	0	0	60	60	219.0
Dining table and chair		40					400	400	1,460.0
Fax	1	0	0	0	0	40	0	40	146.0
Phone / Modem	1	0	0	0	0	20	0	20	73
Computers and Laptops	1	1	0	0	0	100	100	200	730
Printer	1	0	0	0	0	40	0	40	146
Refrigerator	1	1	0	0	0	100	100	200	730
Total			**0**	**0**	**0**	**300**	**760**	**1,060.0**	**3,869.0**

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	Date: 6 Month Material of Packaging: 1 Month	0	0	217,417.71	217,471.71	0.793
Account receivable	1 Month	0	0	47,595.30	47,595.30	0.174
Cash in hand	1 Month	0	0	6,003.19	6,003.19	0.022
Total		**0**	**0**	**271,016.16**	**271,016.16**	**0.989**

Production costs:

Description	Amount (Million Rials)	Equivalent in (Million Euro)
Costs of materials	489,887.5	1.788
Cost of production personnel salary	35,506.00	0.130
Cost of utilities (fuel and electricity, water ...)	1,120.0	0.004
Cost of repair and maintenance	4,523.3	0.017
cost of unforeseen production(5%)	26,551.00	0.097
Depreciation expense	10,372.14	0.038
Administrative personnel salary	4,657.60	0.017
Costs of administrative and sales	8,098.15	0.03
Factory insurance	800.00	0.003
Total sum	**581,515.69**	**2.122**

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

Date is one of the most important agricultural product in Iran, with more than 1.2 million tones production, has allocated 10 percent of all orchard production to itself. More than 97 percent of country dates is produced in Kerman, Sistan and Baluchestan, Khuzestan, Bushehr, Fars and Hormozgan provinces, and in 2018-2019 Khuzestan with 190 thousand tonnes date production has been third ranking in the country. At time 34 percent of date export is from Khuzestan which means earning about 85 million dollars foreign currency in that year.

Required Raw materials

Description	Consumption per product unit	Unit Consumption	The amount required for all capacity	Price of unit millio) n (Rails	Currency prices		Cost (million Rails)	Supplying Place	Total cost (million Rails)	Equivalent in Million Euro
					The currenc y (million dollar)	Equivalen t Rails million) (Rails				
Packaged date: 3000 ton										
Sayer date	1.2	ton	3,360	75	0	0	252,000	Domestic	252,000	0.920
Carton capacity:10kg	100	pcs	280,000	0.08	0	0	22,400	Domestic	22,400	0.082
Zahrdi date	1.2	ton	240	100	0	0	24,000	Domestic	24,000	0.088
Carton capacity: 5kg	200	pcs	40,000	0.04	0	0	1,600	Domestic	1,600	0.006
nylon	0.0033	ton	10.0	400	0	0	4,000	Domestic	4,000	0.015
Disinfectants	2	pcs	6,000.0	0.03	0	0	180	Domestic	180	0.001
Edible Oil	0.0045	ton	13.5	150	0	0	2,025	Domestic	2,025	0.007
total							306,205.0		306,205.0	1.118
Date paste: 600 ton										
Date grade 3	1.1	ton	660	45	**0**	**0**	29,700	Domestic	29,700	0.108
Containers: capacity:20kg	50	pcs	15,000	0.3	**0**	**0**	4,500	Domestic	4,500	0.016
nylon	50	pcs	15,000	0.035	**0**	**0**	525	Domestic	525	0.002
Label	50	pcs	30,000	0.004	**0**	**0**	120	Domestic	120	0.000
total					**0**	**0**	34,845.0		34,845.0	0.127
Date syrup: 1750 ton										
Date grade 3	1.5	ton	2,625	45	**0**	**0**	118,125	Domestic	118,125	0.431
Containers: capacity:20lit	50	pcs	43,750	0.3	**0**	**0**	13,125	Domestic	13,125	0.048
Pet containers with with lid: capacity: 2lit	500	pcs	262,500	0.025	**0**	**0**	6,563	Domestic	6,563	0.024
Pet containers with with lid: capacity: 0.5lit	2000	pcs	700,000	0.01	**0**	**0**	7,000	Domestic	7,000	0.026
Label	575	pcs	1,006,250	0.004	**0**	**0**	4,025	Domestic	4,025	0.015
shrink	0.0046	ton	4	400	**0**	**0**	1,600	Domestic	1,600	0.006
total					**0**	**0**	148,838.0		148,838.0	0.543
Total					**0**	**0**			**489,888.0**	**1.788**

7. The risk analysis of the project

Strengths:

- Existence of high quality raw materials inside the state and neighboring provinces
- Possibility of mass production and capability of commercial orders on a large scale
- Packaging by respecting all export standards
- Having all national and international official permits
- Having all of the sanitation standards of the Ministry of Health
- Low risk of investment because of high domestic and global demands
- Suitable connecting infrastructures like transit road, rail and sea way to access domestic and foreign markets.
- Locating near to commercial Imam Khomeini port and almost ease to export product to European and Asian countries.
- High rate of return and low pay back period of investment

Weakness:

- Cash shortage to buy and supply date
- Competitive market
- Increasing date and package materials price

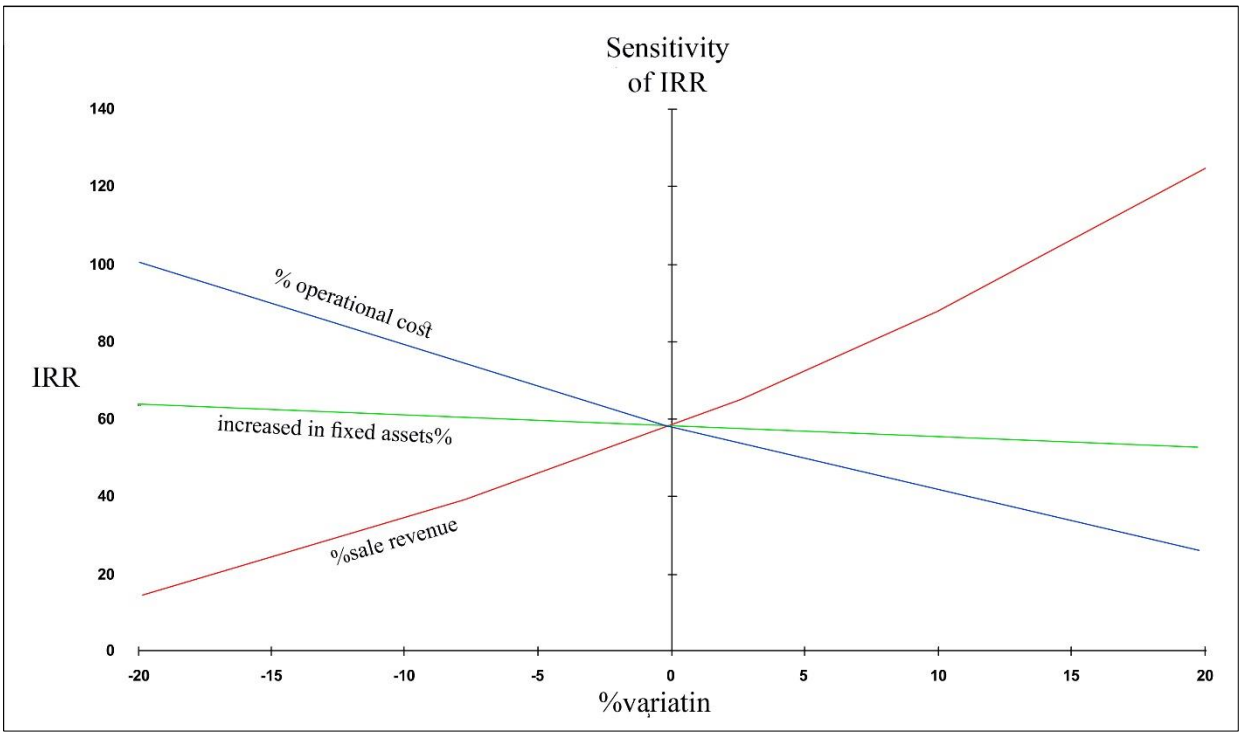
Opportunities:

- Supporting domestic production
- Supporting to attract foreign investors with protecting policy
- Existence of big consumption markets around the plan location.
- Access to major axes and infrastructure such as highway, south-north rail, access to international water for export
- Tax exemptions duo to located in industrial estate

Threats:

- US sanctions and its effect on exporting
- Variable inflation rates and increase 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 80 people, 73 of these person will be in production part and 7 persons will be in office. Because of reliable university and Technical and Vocational Training Centers in Khuzestan and Mahshahr, it's easy to access needed manpower. Because the project located in Mahshar, and there are so many industrial and traditional packaging workshops, therefor manpower mostly have Proper experience to work in this industrial plant.

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	60	60	984.0	3,591.2
Finance director, sales, administrative	✓	✓	1	1	1	45	45	738.0	2,693.4
Financial personnel, sales office	✓	✓	2	1	2	42	84	1,377.6	5,027.7
Processes manager	✓	✓	3	1	3	45	135	2,214.0	8,080.3
Skilled worker	✓	✓	10	1	10	35	350	5,740.0	20,948.9
Worker	✓	✓	60	1	60	28	1680	27,552.0	100,554.7
Secretary	✓		1	1	1	35	35	574.0	2,094.9
Guard		✓	2	1	2	30	60	984.0	3,591.2
Total			**80**		**80**		2,449	**40,163.6**	**146,583.0**

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

Mahshar industrial estate has all basic infrastructure such as water, electricity, gas and telecommunication facilities. The distance Mahshar to Ahvaz (province center) is 100 kilometers, also due to Imam Khomeini port, which is just 10 kilometers distance, all facilities of airport, railway and transit are available.

Description	unit	Annual consumption	Price per unit (Rails)	Total price (million Rails)	Equivalent in Euro
Electricity	KW	300,000	1,400	420	1,532.8
water	m^3	3,000	20,000	60	219
Gas	m^3	100,000	1,400	120	510.9
Other				500	1,824.8
total				**1120.0**	**4,087.6**

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.

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 the import right of the product for import is very high and about 55%, thus supporting domestic production.

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

Bearing in mind that Iran is second date producer and fourth date exporter in the world, and it can supply domestic demands without any import, in aim of earning more foreign currency, economic development, and job-creation, the following instances indicate feasibility of this project.

- Although domestic market is balanced and date products with different packages have costumer, the production of this unit because of its hygienic quality and having been produced and packed by up-to-date technology, would be more welcomed in markets by consumers.
- The date and its products supply in the world is less than its demands. So world market demands date and its products. Therefore respecting scientific processing and package principles and standards can effect on plant's success.

- Our country has various kinds of date. Collecting, processing, packaging and distributing of this dates and also producing by-products like date paste and syrup can make a good value added for the plan.
- In the country main part of harvested date, is used to produce its by-products like date syrup, cake, several kinds of muffin and so. That means investing in by-product industries, in addition to job-creating, can increase this kind of product export.
- Currently due to lack of suitable processing and packaging, Iran's exporting date price is lower than other exporters. In this plant the processing and packaging operation is considered, so in addition that date products can be presented to developed countries, it can be sold by appropriate price.
- The plant location in Mahshahr city, southern part of Khuzestan and at the distance of two kilometers from Emam Khomeini port, has provided a very exceptional situation for the plant: accessing to cheap and suitable dates, a good infrastructures of road, rail, marine, and air (an airport is located in 10 kilometers distance of the plant) for access to domestic market and foreign markets like Persian gulf margin, Europe, Asia, and Oceania.

Therefore, in the line with aforementioned goals and the use of the opportunity in export markets in Russia and European and Asian countries and Oceania and also decreasing dependence to mono product export, oil, expansion of Mr. Alboghobeish plant is necessary and essential, the plant has suitable internal rate of return and payback period. In the other words it has appropriate economic feasibility.

Cost of (ton)	Packaged date	128.4 million Rails ≅ 468.61 Euro
	Pasteurized date paste	79.51 million Rails ≅ 290.18 Euro
	Date syrup	110.45 million Rails ≅ 403.1 Euro
Sale price of (ton)	Packaged date	155 million Rails ≅ 565.69 Euro
	Pasteurized date paste	100 million Rails ≅ 364.96 Euro
	Date syrup	160 million Rails ≅ 583.94 Euro
	Scrap (date seeds ,…)	5 million Rails ≅ 18.25 Euro
total Sales (in 100% capacity)		809,815.00 million Rails≅ 2.96 million Euro
Present sales in break-even point		20.86%
Profit in 100% capacity		181,997.45 million Rails≅ 0.664 million Euro
Gross value added		313,481.7 million Rails≅ 1.44 million Euro
Net value added (million Rail's)		303,109.6 million Rails≅ 1.10 million Euro
The Gross value added to total Sales		38.75%
The Net value added to total Sales		37.47%
The Gross value added to Investment		74%
Investment Return Period		3 years

Exchange rate:
1 Euro ≅ 274,000 Rails
1Dollar≅228,000 Rails

12- Summary of pre-feasibility plan

General Specification	
Name of The Project	Date packaging and production of date syrup and pasteurized paste
Project Capacity	Packaged date (mostly Sayer and Zahedi): 3000 tones Pasteurized date paste: 600 tones, Date syrup: 1750 tones
Personnel Number	80 persons
Working Days	250 days
Product Usage	The very valuable food staffs, used in confectionary and chocolate and other food and beverage industries
Marketing	
Product Global Price	900-1200 $/ton
Domestic Demand	Packaged date : 175,452 tones, date paste: 8,408 tones, Date syrup: 25,520 tones
Domestic Production	Packaged date : 431,024 tones, date paste: 8,850 tones, Date syrup: 26,863 tones
Import	-
Export	date : 225,572 tones, date paste: 443 tones, Date syrup: 1343 tones
Technical Study	
Land Area	4800 m^2
Building Area	2656 m^2
Main Raw Materials	Date, carton, packaging containers
Supplying Place of Raw Materials	Domestic
Power Requirement	100 KW
Water Requirement	3000 m^3
Fuel Requirement	100,000 m^3 gas
Economical & Financial Study	
Fixed Investment Cost	150,660.0 million Rails ≅ 0.55 million Euro
Working Capital	271,016.16 million Rail's ≅ 0.989 million Euro
Total Investment Cost	421,676.16 million Rail's ≅ 1.539 million Euro
Annual Sale	809,815.00 million Rail's≅ 2.96 million Euro
Net Present Value(NPV)	416,136.66 million Rail's≅ 1.519 million Euro
Break Even Point(BEP)	20.86 %
Internal Rate of Return(IRR)	57.75%
Investment Return Period	3 years
Investment Sources Ratio: Equity:37% Bank facilities:2% Finance: 61%	 155,312.16 million Rails ≅ 0.567 million Euro 10,000.0 million Rails ≅ 0.036 million Euro 256,346.0 million Rails ≅ 0.936 million Euro