



## Financial Structure

### 11. Financial Table

Description	Local Currency Required			Foreign Currency Required Million Euro	Total Million Euro
	Million Rials	Rate	Equivalent in Million Euro		
Fix Capital	158156	1/120000	1.32	--	1.32
Working Capital	46666		0.39	--	0.39
Total Investment	204822		1.71	--	1.71

- Value of foreign equipment/machinery.....--..... million euro
- Value of local equipment/machinery.....0.4.....million euro
- Value of foreign technical know- how ..... -- ..... million euro
- Value of local technical knows- how .....-- ..... million euro
- Net Present Value (NPV): 0.0008 million Euro
- Internal Rate of Return (IRR): %281
- Payback Period (PP): 6.5 Year

## General Information

12. Project Type : Establishment  Expansion and completion

### 13. Company Profile:

- Name (legal /natural persons) : Mr. Yazdi
- Company Name : Yazd chamber of Commerce, Industries, Mines and Agriculture-Investment Services Center of Yazd Province
- Address : Yazd, Imam Khomeini Street(RA)-After Jami Mosque street- infront of Shahid Ebrahimi Street - Finance Building
- Tel: +983536209432-4 Fax: +983536209432-4
- E-mail: [info@investinyazd.ir](mailto:info@investinyazd.ir) Web site: [www.investinyazd.ir](http://www.investinyazd.ir)
- Local entrepreneur : private sector  public sector  other

## Please attach follow documents if available

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

**Ministry of Economic Affairs and Finance**  
**Organization for Investment Economic and Technical Assistance of Iran (OIETAI)**  
**Foreign Investment Center**  
Tel: 33967749-33967766-33967762-39902485-39902488-39902486  
Fax: 33967774  
Website: [www.investiniran.ir](http://www.investiniran.ir)



Organization of Investment and Economic  
and Technical Assistance of Iran  
Investment Services Center of  
Yazd Province

## **Introduction of Investment Opportunities in Yazd Province**

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# Processing of saffron products

SUMMARY OF TECHNICAL ECONOMIC FEASIBILITY

SUB-SECTION: AGRICULTURE

ISIC CODE: 1549312384



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- *General Indicators of Yazd Province*
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## *Introduction*

Saffron consumption in Iran has long been one of the pillars of our traditional medicine. Saffron has been used in Iranian cuisine, and has been used in traditional medicine because of its antidepressant, anti-inflammatory and therapeutic properties in regulating menstruation and relieving pain. The anti-inflammatory properties of saffron are due to its pigment crocin, which is a potent antioxidant and has the ability to neutralize reactive oxygen.

Saffron is a plant that grows through saffron onions. The onion of this plant has a brown coating that protects it. After the plant's onion is planted, it begins to grow and forms a stem at the end of which a bud is formed. After flowering, you will encounter a purple flower with 6 beautiful petals protecting the 3 red stigmas. These three red stigmas are the same delicious material that is made with great effort.

Saffron has a composition that distinguishes this valuable herb from other plants. The quality of saffron is measured by these compounds in laboratories and laboratories, the higher the percentage of saffron, the higher the quality of the saffron and thus the greater the effect on saffron properties.

These include:

Crocin dye power factor

Picrocin taste power factor

Safranal operates the scent power

Saffron has been shown to lower blood lipids and cholesterol levels and to increase oxygen permeability in plasma in mice. In various parts of the world, saffron is used as a sedative, antispasmodic, appetizer and stomach tonic. In Germany, saffron is used as a sedative, to treat stomach and abdominal pain and asthma.



## *General Indicators of Yazd Province*

### **Economic Indicators**

1. GDP : 4.680 million Euro
2. GDP per capita : 4440 Euro

### **Social indicators**

1. The population : 1,138,533 people
2. Population growth rate : 2.5%
3. Population density : 2.5 people per square kilometer
4. The percentage of young population 24.29%
5. Urbanization rate : 85.3%

### **The contribution of various economic sectors**

1. Agriculture 8/3%
2. Industry and Mine 46.3%
3. Services 45/4%

### **Geographical Indicators**

1. Area: 74,781 square kilometers (The eighth city of the country)
2. Neighboring Provinces: Fars, Isfahan, South Khorasan, Kerman
3. Number of Counties: 10 and number of cities: 21

The statistics of social and geographical indicators related to 2014 and the statistics of economic indicators related to 2016.

## *The Infrastructure Of The Agricultural Sector Of Yazd Province*

Agriculture in desert areas such as Yazd province, in addition to the livelihood and economic role of society, is also a major factor in the survival of life. In such a way that, with less agriculture in the villages, the resistance bases will disappear and the entire life of the community will be compromised. Therefore agriculture in Yazd province is very important.

The climate of Yazd province, due to its location on the margin of the desert, is warm and dry desert, and this climate is evident in three mountainous, semi-mountainous and glacial regions. The average rainfall is less than 100 mm. In high altitudes, rainfall is much higher, and the closer to the desert plains is minimized.

Yazd province with 1320 hectares under cultivation and production of 382 thousand and 45 tons, is one of the largest and most important suppliers of vegetable in the country. The restrictions on water resources in Yazd province have led farmers to grow greenhouse crops. Currently, more than 3500 farmers are operating in the field of production of greenhouse products in Yazd province, which provides direct employment for more than 14 thousand people.



- The seventh producer of saffron in the country with 1.54 tons

**saffron**



- The second greenhouse producer in the country (360,000 tons of vegetables and 174,000 flowers)

**Greenhouse**



- The third pistachio producer in the country is 45,000 tons

**pistachio**



- The fourth pomegranate producer in the country (90,000 tons)

**pomegranate**



- The first producer of madder in the country

**madder**





## Project's Location

Yazd province with about 74781 square kilometers (4.6 percent of the country) is the eighth largest province of the country. It is located in the central part of Iran's plateau on the margin of the Kavir Lut plain. It is located in the northwest of Semnan, Isfahan, west, Fars from the south and Southwest, southern Khorasan is east of Kerman and neighboring east and south east. In terms of political-administrative divisions, this province has 10 cities, 21 districts, 45 villages and 21 urban centers.

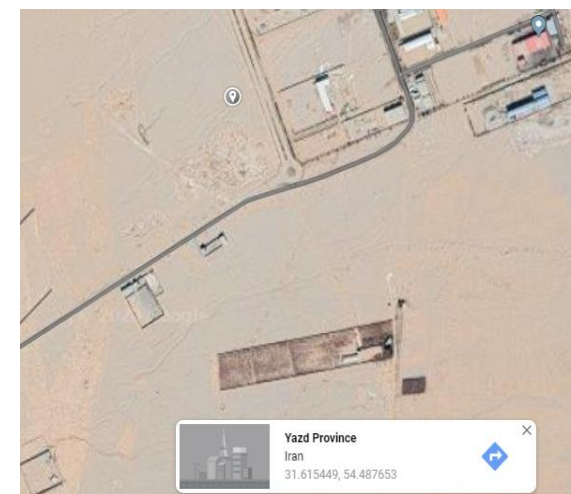
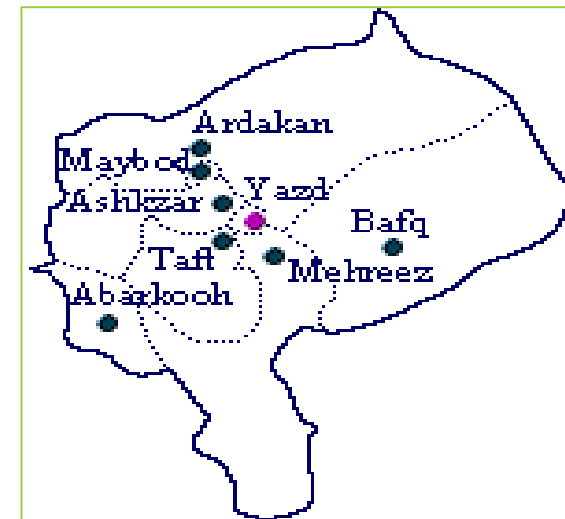
Mehriz is located 30 kilometers south of Yazd province with a total area of 6723 square kilometers and a population of 44391 inhabitants, consisting of a central section and five rural districts. The city of Mehriz is known as "Garden of Yazd" due to its natural gifts. The presence of diverse climates, susceptible water and soil, having suitable infrastructures for industrial development, including industrial town, stone town, various industrial zones, transportation in transit North-South and the proximity to the provincial capital are among the other capabilities and potentials of this city.

longitude of the project : 31.615449

Latitude of the project : 54.487653

All facilities are provided for the project, their distance to the project location is shown in the table below:

No.	Needed infrastructures	distance to the project (km)	The supply infrastructures
1	Water	0	Provided
2	Electricity	0	Provided
3	Gas	0	Provided
4	Telecommunications	0	Provided
5	High way	0	Provided
6	Sub way	0	Provided
7	Airport	50	Provided
8	Port	622	Provided
9	Rail way	54	Provided



## *Access to the Infrastructure*

- Having numerous power plants with a nominal capacity of 2500 MW
- Having three gas pipelines with a capacity of 50 million cubic meters per day
- Supply of petroleum products required through national pipelines

### Energy



- Provincial Geographic Position (Crossing of North-South and East-West Transportation Corridor)
- The first rank of rail transit in the country (more than 876 kilometers of railroad tracks) and the railroad crossroads
- Having an international airport for cargo and passenger transportation with easy access

### Transportation



- 121827 hectares under cultivation of agricultural products from a total of 169115 hectares of cultivated land
- The share of crops and greenhouses, 47812 hectares with production of 811,367 tons
- The share of garden products, 74004 hectares, produced 238071 tons
- Total livestock and aquaculture products in Yazd province 290077 tons

### Agriculture



The water supply sources in Yazd province include 2630 aqueducts with a discharge of 160 million cubic meters per year, 3873 wells with a discharge of 940 million cubic meters, and 387 fountains with a discharge of 30 million cubic meters, Which includes 82% of the province's water resources. Of this amount, 80% is provided through wells and 20% through aqueducts and springs. In terms of quality, its average EC is 5300  $\mu$  mho/cm. This indicates the inadequate water quality in this section. . However, Yazd province is currently one of the active agricultural poles in the country and is one of the pioneers of drip irrigation in the country.

## *product introduction*

Saffron, the queen of spices, is the dried stigma of the *Crocus Sativus* plant, from the Iris family, the most expensive farming plant in the world, is an exceptional product with various advantages in production, trade, and consumption. Saffron is a native Asian plant and has been exported from Asia to other parts of the world and now the best saffron can be found in Iran. But in places like Spain, France, Turkey, and the US, it is principally cultivated and produced

The products from saffron processing vary widely. In addition to its unique color and aroma, it is used in the production of food products as a magical ingredient in therapeutic applications that are used in soothing applications, cosmetics, creams and powders.

The whole production of saffron in Iran is about 336 ton that 236 tons are exported, which means that Iran provides about 90% of the world's saffron consumption. About 105000 hectares of agricultural land are cultivated in saffron each year, located in the provinces of Khorasan Razavi and South Khorasan, with yields estimated at 3.3kg per hectare and projected to reach 8 kg / ha in the future. Of saffron production volume in the country about 20% to 25% in domestic and 75% to 80% exported abroad.

Although more than 90% of the saffron consumed in the world is produced in Iran, unfortunately due to its special processing in Spain, this product is known with Spanish brands and there is no valid Iranian brand in this field. Inadequate processing, farmers' need for money and bulk sales, and the presence of domestic and foreign speculators are challenges in the industry. Another challenge is the negative competitiveness of Iranian exporters overseas to determine the price of saffron, forcing foreign applicants to buy saffron in Iran, which will lead to an imbalance in the Iranian saffron market and further price volatility.

## *product introduction*

Various droughts in the last decade have led farmers in Yazd province to switch to low-water plants. Appropriate climate and high growth of production of this crop across the province along with academic research on promoting greenhouse cultivation and soilless cultivation of this crop has provided good potential for Yazd to become one of the saffron production hubs in the country.

Currently Yazd province with 734 hectares of land cover and annual production of 2.8 tons of saffron is the seventh producer of saffron in the country and is the neighbor of Khorasan provinces as the production pole of this product.

It is possible to create a saffron processing unit with products such as saffron pills, saffron sprouts, saffron tigs, saffron desserts with a variety of saffron and non-gas drinks, saffron ice cream and oil with saffron scents, saffron cakes and cookies, health products such as Lipstick and herbal oils are available to strengthen hair and skin.

Creating this processing unit can also create a reputable Iranian brand for exporting the product and prevent waste of this valuable product. In addition, creating a powerful internal unit can reduce the pricing and brokerage of foreign brokers.

Setting up a processing unit can also create a reputable Iranian brand for exporting That could have special support from Industrial & Mine ministry



## *Major Exporting Countries*

In 2017, Iran ranked first among the countries with 317 million\$ of saffron exports and a 72% share of the world's exports.

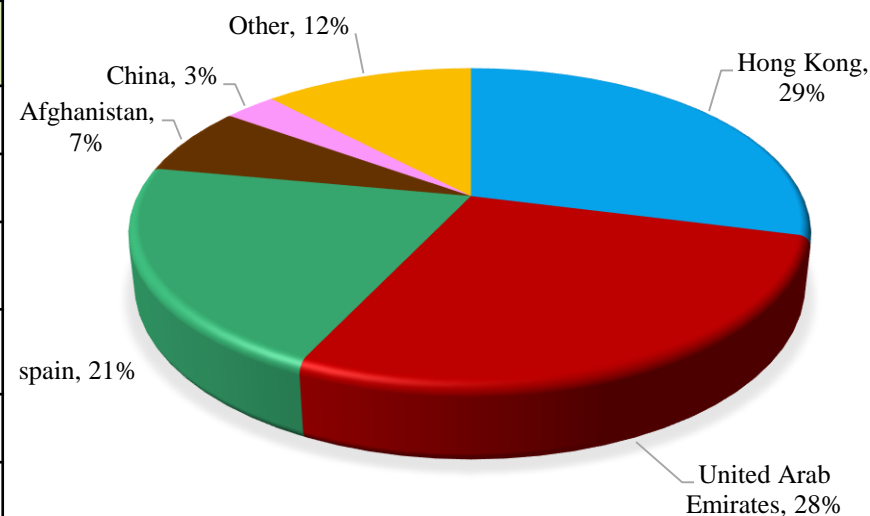
Rank	Country	2017		2016	
		Value (M\$)	Percentage	Value (M\$)	Percentage
1	Iran	317	72	286	70.8
2	Spain	60	19	65.8	16.3
3	Afghanistan	17.7	4	4	1
4	Portugal	7.4	2.8	11.2	2.8
5	France	7.3	2	6.5	1.6
6	Hong Kong	5.5	2	5.2	1.3

## *Iran Exports*

Hong Kong, UAE and Spain have been the main export markets for saffron in 2017.

Export value of saffron in Iran

Row	Year	Value (M\$)	Growth
1	2012/13	418	-14
2	2013/14	200	-52
3	2014/15	227	13.5
4	2015/16	165.3	-27
5	2016/17	286	73
6	2017/18	317	10.8



The main markets of Saffron Product Exports in 2017

## *Major Importing Countries*

In 2017, The major importers of saffron in the world were Spain, Hong Kong and Italy

Rank	Country	2017		2016	
		Value (M\$)	Percentage	Value (M\$)	Percentage
1	Spain	54.6	23.5	53	23.4
2	Hong Kong	20.5	8.8	8.4	3.7
3	Italy	16.7	7	17	7.5
4	The US	16.4	7	14.4	6.3
5	Saudi Arabia	14.6	6.3	16.6	7.3
6	China	14.5	6.2	3.5	1.5

# *Physical Progress And Project Phases*

## **Project status:**

### **Studies for the Project:**

Economic feasibility studies are being carried out and the land needed for the project is provided by the government

## **Project Phase:**

First year: - To conduct studies and create the basis of production activity

- General specification of machinery, selection of machinery and equipment, main and side
- Procurement of materials and equipment for the operation of contractors selection and start of construction operations

Second year: Completion of construction and monitoring operations

- Installation of equipment and facilities
- Purchase of required raw materials and experimental launch





## *Project Financial Plan*

### Estimated fixed investment (capital costs)

Description At the price of 2018 (with the rate of EUR 120,000 Rials)	done (million Rials)	needed (million Rials)	total sum (million Rials)
Land	0	12500	12500
landscaping	0	3125	3125
Greenhouse buildings and structures	0	31250	31250
General facilities and greenhouses	0	6250	6250
Equipment, machinery	0	93750	93750
Costs before operation	0	3750	3750
Miscellaneous and unpredictable	0	7531	7531
Total fixed investment costs	0	158156	158156
capital in circulation	0	46666	46666
Total investment costs	0	204822	204822

The total area of the project is 12500 square meters

## *Fixed And Variable Costs*

line	Description	Fixed cost percentage	Fixed cost (million Rials)	Variable cost percentage	Variable cost (million Rials)	Total cost (million Rials)
1	Raw material	0%	0	100%	620000	62000
2	salary	70%	7000	30%	3000	3000
3	Energy and fuel	20%	500	80%	2000	2000
4	Repair and Maintenance	20%	474	80%	1898	1898
5	Depreciation	100%	3163	0%	-	-
6	Marketing and Advertisement	0%	0	100%	3100	3100
7	Other unforeseen expenses	0%	0	100%	10196	10196
total		-	11138		82194	82194

## *Revenue Estimation*

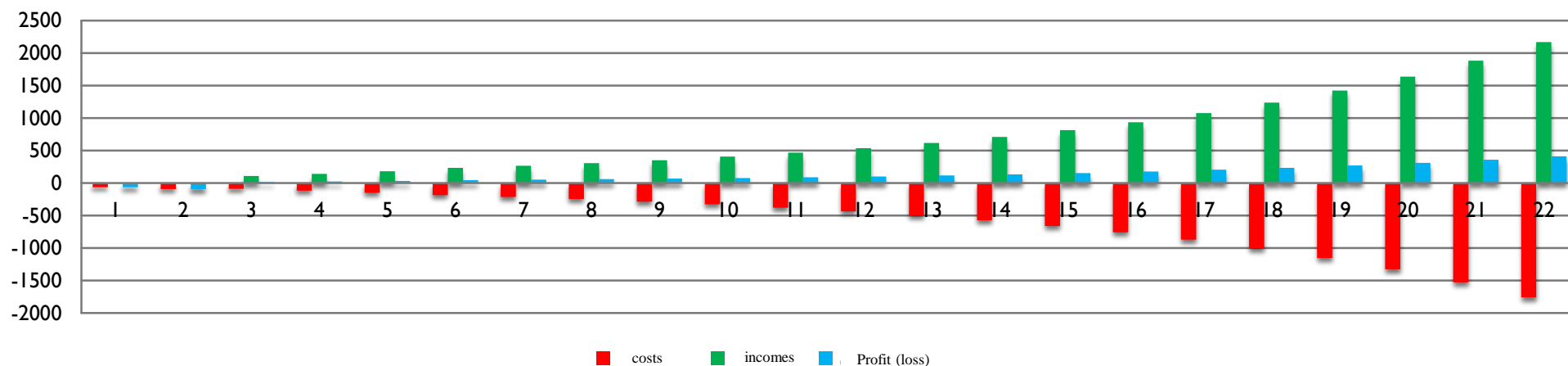
Description of income items	Number	unit	Average income	Annual Revenue (Million Rials)
			(Thousand Rials)	
Saffron spray	8	Ton	4500000	36000
Saffron essential oil	1	Ton	9500000	9500
Saffron powder	3	Ton	6700000	20100
Saffron liquid	9	Ton	5500000	49500



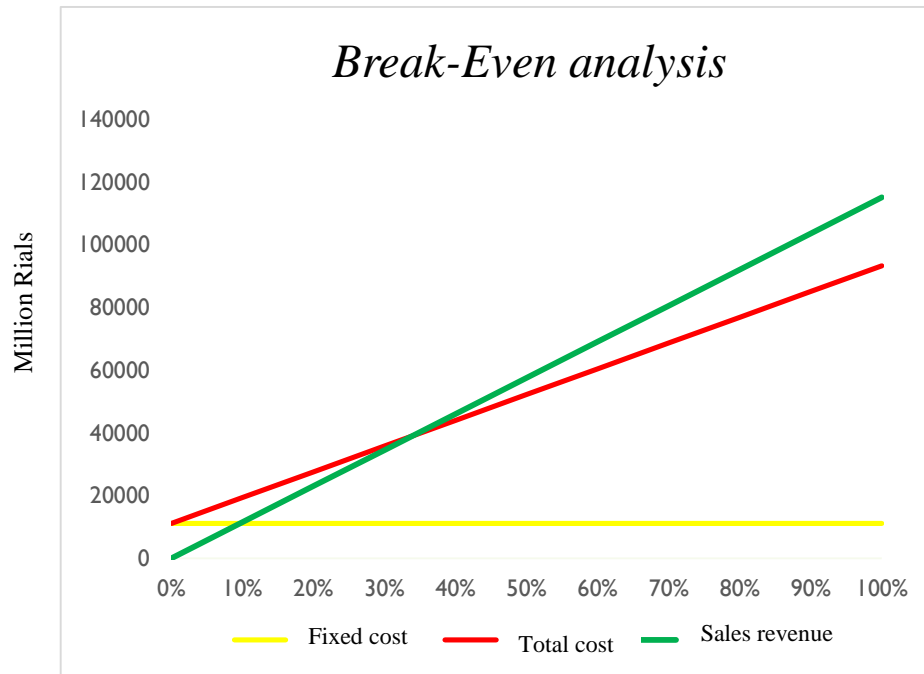
# Project Cash Flow

year	Construction Phase		Operation phase																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
capacity	0%	0%	70%	80%	90%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
incomes	0	0	107	140	181	232	266	306	352	405	466	535	616	708	814	937	1077	1239	1424	1638	1884	2166	2466
costs	-63	-95	-91	-117	-149	-188	-216	-248	-286	-328	-378	-434	-499	-574	-660	-759	-873	-1004	-1155	-1328	-1528	-1757	-2057
profit (loss)	-63	-95	16	23	32	44	50	58	67	77	88	101	116	134	154	177	204	234	269	310	356	410	470
cumulative cash flow	-63	-158	-142	-119	-87	-43	7	65	132	208	296	398	514	648	802	979	1183	1417	1686	1996	2353	2763	3233

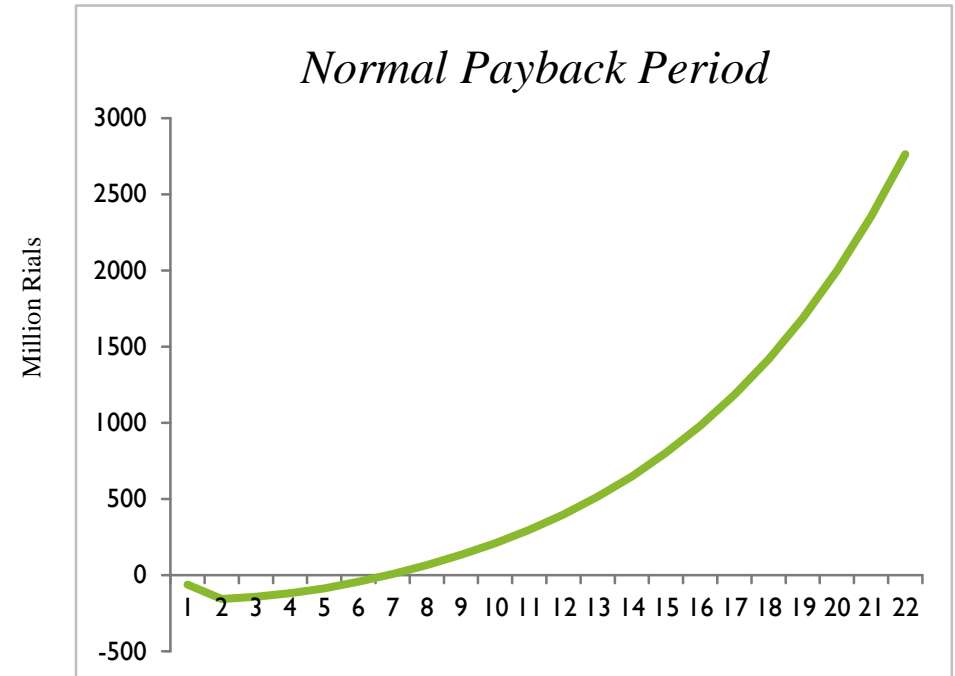
Project cash flow (20 years of operation)



## Economic Indicators



At the full capacity of the project, a break-even point will be realized at 34% of production or revenue.



After 6.5 years, the total capital is reversible.

## Summary Of Economics Issues

Activity type	The exact title of activity by mentioning the code ( ISIC)	Production product name	Nominal capacity and unit
Agriculture	Processing of saffron products (1549312384)	Processing of saffron products	21ton
Runtime period	Total fixed investment (million Rials)	Investment in annual circulation ( million Rials)	The manpower needed
2 years	204822	93331	40persons
internal rate of return (IRR )	Net current value of NPV (million Rials) at a discount rate of 20%	Following the applicant ( million rials)	Percentage of benefits to cost B/C*
% 28	96	40964	1.4

- 6.5years



Payback

- 96 million Rials
- discount rate : 20%



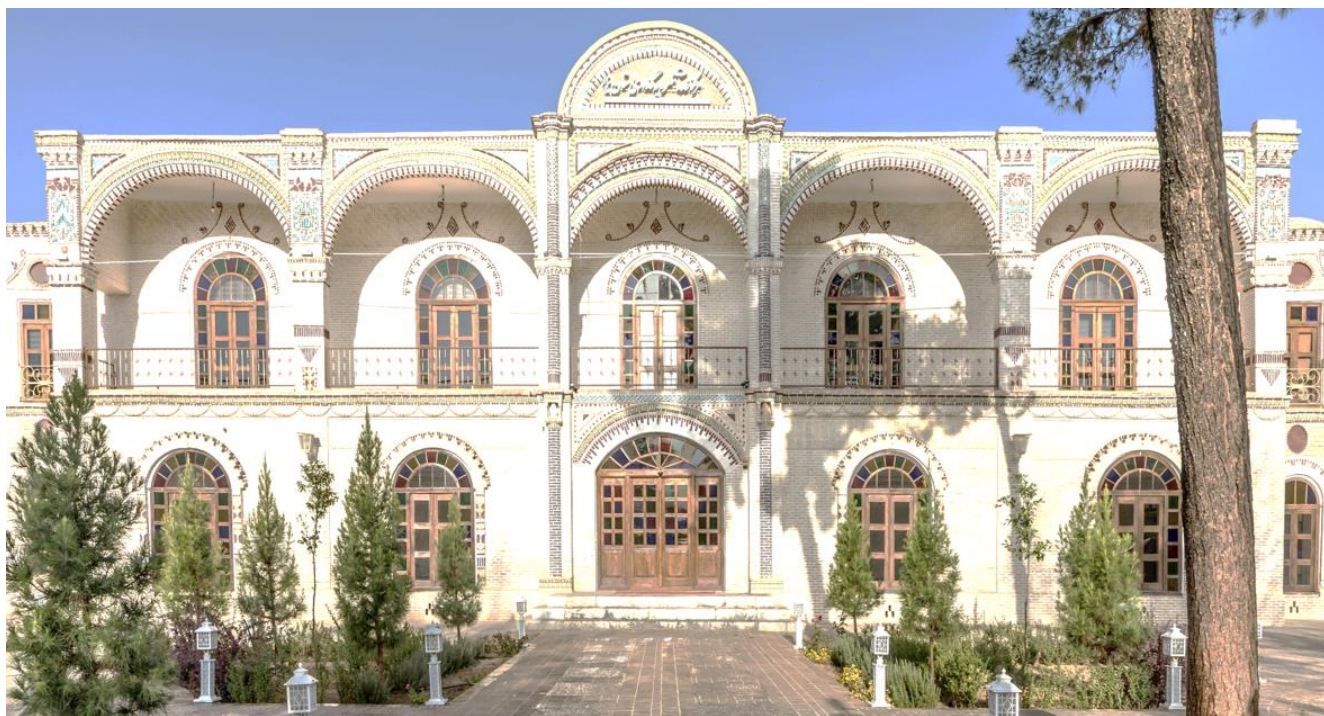
NPV

- 28%



IRR

# Take Advantage Turn to Yazd



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and expedite your investment process.**

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