In the name of God

Pre-feasibility study form

Plan Name: Production of Various Herbal Remedies

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Introduction

Feasibility studies are expert studies that are carried out prior to the implementation of economic investment plans. In these studies, from the market, technical, financial and economic point of view, the plan is analyzed and its results used as a basis for investor decision making.

The present report is a feasibility study of various herbal remedies. These studies have been prepared in the framework of feasibility studies methodology and according to the above methodology, the economic capacities and volume of investments required to execute the project will be estimated and presented so that investors and interested stakeholders can obtain all the information needed. Earn money and start investing in open-ended, open-minded economic investment. It is hoped that these auxiliary studies, however small, will contribute to the development of our country.

1 -Product Introduction

The Iranian people are familiar with medicinal herbs, and when beginning treatment for a disease before they resort to chemical drugs, they first begin treatment and prevention with medicines and herbs, an old thread that has reached the vast expanse of laboratories. The policies of the Supreme Leader for the health system have clearly stated the course of duties in medicinal herbs and traditional medicine. All this shows that in the past few years senior officials of the system have imported medicinal plants and traditional medicine at the highest level into the layers of important planning documents of the country.

The use of medicinal herbs for the treatment of human history has been concurrent. Humans had no choice but to resort to plants throughout history. However, over the last half century, the use of chemical and synthetic drugs has become increasingly popular, but with the rapid effects of their deterioration, there has been a re-emergence of medicinal plants, and the fact that the use of medicinal plants has long been one and the same. It is an effective treatment, it is well clear. The history of medicine in our country dates back to the Aryan period, and Oseta is the first scroll to speak of medicinal plants.

Iran is one of the most prestigious areas for the cultivation and production of medicinal plants. In the past, this natural capacity, which had a health-care function, was not exploited much, but during the past 5 years the cultivation, cultivation and production of pharmaceuticals, hygiene and cosmetics, pharmaceutical and oral supplements have grown dramatically, and pharmaceutical companies have tended to the side. On the other hand, the production and trade of medicinal plants in recent years, with many benefits, has been remarkably high. According to IRNA and the World Bank, the world market for the production and consumption of medicinal plants in less than 2 decades Billion dollars to more than 2 billion dollars. That figure will reach $ 2 billion by year 5. These statistics illustrate the bright horizon of medicinal plants in the world pharmaceutical industry.

Variety of medicinal species with valuable compounds, plants of high economic value such as saffron and roses, climatic varieties for production of medicinal species, manpower and cheap energy resources are important potentials of the country for development of cultivation and herbs related industries. Attention to natural products has led to the development of various food, pharmaceutical, cosmetic, and herbal industries in their products. Today there is a large market worldwide for planting, harvesting, harvesting and processing these plants. Apart from the medicinal benefits of these herbs, employment and entrepreneurship are the most important aspects to consider in this discussion. From cultivating these plants to processing and converting them into herbal remedies, there is a good opportunity for job creation. Herbal medicine is seen today as an industry that needs to be further developed because it is believed that alongside chemical drugs, it can be effective in the health economy.

By planting these herbs we will have a large share in the production of medicinal herbs and many people's diseases will be eliminated by eating chemicals because the use of herbs unlike chemicals has no side effects and can be easily used.

The natural and climatic features of Chaharmahal and Bakhtiari, such as soil type, significant rainfall and air temperature, have made the province one of the most popular herbs habitats in the country and can be a good alternative to non-oil exports.

1-1-Product Name and Code (ISIC 3)

According to information obtained from the Ministry of Industry, Mining and Commerce, the ISIC code is 24231910 (ten digit code 0111412373).

1-2-Customs Tariff Number

According to the Export and Import Regulations Book of 2019 and the Chamber of Commerce, Industries, Mines and Agriculture website, this plan contains the Customs Tariff Code 12119099 .

1-3- IMPORT AND EXPORT CONDITIONS

Medicinal herbs are classified in No. 12/11, Customs Tariff Schedule, whose input rights (12119099 - for the plant concerned) are 8% VAT exempt. Exports are also exempt from fees and charges, but require the permission of the plant protection agency or authority designated by the buyer. The difference between medicinal plants and medicines is that the medication is usually given as a " DOSE" or a certain number for a period of illness, prescribed by a physician and listed in each country's pharmacopoeia, but medicinal plants do not qualify for such a list. They are mainly cited in Explanatory Notes 1211. The entry of medicinal plants also requires the permission of the Ministry of Health and Standards.

1-4- REVIEW AND PRESENTATION OF STANDARDS (NATIONAL OR INTERNATIONAL)

The national standards associated with the title of this plan are as follows:

Standard Name	Standard Number	Description
National standard	16412	Radiation of spices, herbs, herbs and dried herbs to control pathogenic micr organisms and other micro-organisms
National standard	19625	Iran Good Agricultural Practices (IRAN GAP) - Control Points and Acceptance Criteria for Crop Production of Aromatic and Medicinal Plants - General Requirements

International standards related to the title of this project are as follows:

Standard Name	Standard Type	Description
International	GACP	A Set of tips on harvesting and collecting medicinal plants
International	GMP	Good production operations of herbal medicine producing plants

1-5- REVIEWING AND PROVIDING NECESSARY INFORMATION ON DOMESTIC AND GLOBAL PRODUCTION PRICES AS WELL AS GLOBAL PRODUCT PRICES

Medicinal plants are very diverse. And every herbal medicine has its own price. According to studies, the average selling price of herbal medicines in the country is 170,000 Rials per kg and in the international markets $ 10 per kilogram.

1-6- EXPLAIN THE USES OF THE PRODUCT

Herbal chemicals determine their therapeutic effect in the human body, so medicinal plants are classified according to their radius in certain groups. Not always a medicinal plant has a definite effect, and the spectrum of effects may increase or decrease. This means that one plant may be effective in treating several diseases; conversely, to enhance their healing effect, a mixture of several herbs is often made to multiply their effect.

Bitter herbs

There are herbal remedies that affect gastric function, especially during anesthesia, and use a variety of foods before meals, such as: Pure bitter herbs, Minor constipation, Gentiana (Cucumber), Blue clover, Bitter herbs (Bitter substances associated with aromatic substances): Artemisia, hyacinth hyacinth

Bitter astringent herbs: These herbs are also slightly astringent and are used for light zakams and gastritis (Kondorango skin).

Bitter Glazed Plants: Donkey's leg, cannabis, astringent (shrinking drugs). These substances affect the human or mucus by forming hard sediments with protein texture. They absorb the water in the tissues and have an anti-swelling effect by drying them more or less. They are often made of tannin.

This group includes case, flower, hofarigon, sage, onion, donkey, enamel (cutaneous diseases, swollen and infectious eczema), leeks, sunflower, oak and willow bark, baba root, walnut tree, fox mulberry , Seven straps, thyme, lion's tail and hyssop.

Reduce fat and cholesterol

Saffron has been mentioned in pharmaceutical books. Results show that saffron reduces blood lipids and cholesterol levels and increases oxygen penetration into the plasma.

Anti-inflammatory

They are used to treat wounds and ulcers. They reduce swelling and accelerate regeneration of damaged tissues (affecting the mucous membrane and granular surface).

So chamomile and acacia heal wounds, moss has anti-swelling effect on the urinary tract and nargis flower heals skin wounds. Rosemaryinus is useful in external applications of rheumatism and strawberry for facial pimples.

Anti-bloating herbs

Here are the substances that have a good effect on gastric excretion and painful contractions and even seizures of the abdominal muscles. These sensitive substances reduce the pain of stopping the growth of the bacteria that cause fermentation. This group includes drugs that have spasmolytic substances (called seizures and contractions). Plants such as: chamomile, anise, fennel, cedar, mint, sage, acacia, cumin and hyssop.

The sweet fruit of fennel is used in many mixed ants. It is also used as a very effective anti-bloating, while being fragrant and pleasant to the taste of the decoction.

Mosaic plants

Plants that make transpiration easier are: mulberry, black acacia, chamomile, ziziphon, king leek, gooseberry leaf, goat beard, leek, baba root, willow,

Transpiration reducing plants

Plants that prevent excessive transpiration include: Sage, Valerian, Shabizak (Belladonna) and for external use, walnut leaves and oak bark.

Mahur flower has yellow flowers that are used after drying in combination with decoctions that are prescribed as an antiperspirant because it has a high amount of glaze or glaze.

Diuretic Plants

These herbs increase urinary secretion and are used for gastrointestinal disorders. While they are diuretic, they are slightly disinfected. They can be used in cases of light kidney, small stone or urinary tract disorders. These medications are not appropriate if you have serious kidney failure, heart disease, heart disease, or liver cirrhosis and should be referred to a physician.

Medicinal herbs such as: black acacia flower, fox grape, cedar, case, percussion, hofarigon, devil's bean (Ononis), parsley root.

Sputum glaze plants

Medicinal herbs facilitate the formation of sputum. They contain herbs that absorb moisture by absorbing moisture, and this is due to their water-absorbing properties. They also relieve the swelling of the area surrounding the inlet of the trachea by relieving cough.

Dried Ziziphon Flower is a great remedy for the common cold. The boiled is preferably sweetened and boiled with honey and is a good medicine for sweating. In most cases, they use the fragrant ziziphon flower, which is a heart-shaped leaf.

Some of these herbs contain oils and saponins in addition to glaze. These include cheeses, mahogany, almonds and herbs.

Sputum-producing plants

These substances increase the secretion of the respiratory tracts and bronchi and make them large and only slightly nauseous, which is medically useful at times. The alkaloid called amethin and saponins belong to this group.

According to the decoction of medicine, the root of Ipacquana can be made and the herb can be used for herbaceous, thistle, licorice, primrose and mahogany.

Spurious stimulus

These herbs contain volatiles that are excreted through the respiratory tract, irritate the mucosa and make it easier to sputter and excrete. In addition, these substances also relax the respiratory tract muscles that are in contraction mode, while also having a slightly disinfectant effect. This group includes herbs that contain essential oils.

Medicinal herbs used in the field of decoction include: fennel, mint leaf and mint and other herbs used in the field include alfalfa, donkey's foot (flowers and leaves), and flaxseed containing glaze.

Anti-cough herbs

These are actually cough relieving sputum herbs. In most cases, they are used in combination (boiled for chest pain).

Among the simple plants can be termed ginger, cheese, donkey's foot, herb, seed and licorice.

The flowers of the donkey's foot bloom in early spring, and its leaves are used for decoction along with other cough herbs.

Bile Laxative Plants

These materials facilitate the production of bile in the liver cells as well as the elimination of it through the bile ducts. In the treatment of edema and bile ducts, and even against small gallstones, along with the potent effective drug, herbal remedies are also used that contain natural anti-convulsant bile ducts and light and anti-swelling disinfectants.

Herbal remedies include: Baldu leaf, ginger almond, mountain gandana and rhubarb.

And among the non-medicinal herbs are: myrrh, herbs, barberry shrub, common thyme and yarrow.

Laxative and laxative plants

Laxatives accelerate the process of bowel emptying. The senna leaves are demoniac, seeds and leaves of the senate of Alexandria, licorice root, rhubarb root. Herbs such as yarrow, whitefish and flax are among the non-medical group.

Heart Tonic Plants

This group contains plant glucosides that have an approximate effect on heart function. These ingredients accelerate the heart rate. Water repellency is known to be a side effect of these substances. This group includes finger flowers, adonis, gratiol and black hawthorn.

Anti-asthma

Herbs that are useful for people with pulmonary seizures with asthma include: Shabizak (Belladonna), Tatura. Purple flower leaves and motifs are among the most important and best known for strengthening the heart, and only the physician can prescribe it and determine its dosage after careful examination of the patient.

Calming substances

These sedatives are used in cases of nervousness, neurasthenia, and behavioral changes in the central nervous system (neurasthenia). Compared to chemical drugs, they have a much calmer and softer effect. Calming plants can include valerian, edible flowers, hops and walnuts.

Anti-atheism

This group has a positive impact on the affected parts of the circulatory system, especially during aging or inadequate nutrition, such as excessive fat intake, lack of activity, and critical conditions.

Cholesterol, which precipitates on the walls of the veins, makes them calcareous and hard, and has an adverse effect on the affected areas, which can also cause thrombosis and hypertension. In this case, herbal remedies that are rich in routine and vitamin C can be beneficial. The group also includes garlic, red wool (their flowers and leaves), rose perspiration, bitter Japanese expression (sofura) and mistletoe.

Red wool is often used as an antihypertensive drug. Flowers and even leafy branches, or the leaves themselves, are collected alone or with the fruit of this plant.

Antihypertensive

These herbs affect high blood pressure (regulatory system disorders). Treatment of this disease includes diet and appropriate medications. At the onset of hypertension, blood pressure relievers such as valerian, oats, garlic, acryl al-molk, red velik and hops can be used.

Aromatic herbs

They are herbs that are used to improve the taste and aroma of medicines and also have disinfectant effects, such as sage, chamomile, lavender and acacia (indoor or outdoor).

Anti parasite

Plants used against intestinal parasites include: male fern, gooseberry, carrot, onion, king leek, pomegranate, tongue on stand, pumpkin.

Anti Diabetes

These herbs are used as treatments in the treatment of diabetes (which means low insulin production in the pancreas). Plant insulins (glucokinins), the most effective of which are in the form of acidic extracts, are found in plants such as Aleppo, beans, red field, and Baba Adam. Bitter herbs such as juniper, juniper and artemisia are also useful.

Women's diseases

These herbs reduce the inflammation of the smooth muscles in the small hips (uterus, urinary tract) and menstrual cramps. Some of these substances have beneficial effects on the uterus, especially during pregnancy (postpartum uterine bleeding, miscarriage or swelling) as a stimulating general therapy under the careful supervision of a physician.

These include: rust alkaloids, priest sacs, black seeds, blue pepper, potentials, swabs, hofarigon. Feeding agents that stimulate milk secretion are found in plants such as halibut, fennel, green anise, and fenugreek.

Vomiting

Plants that relieve intense and excessive stomach movements are in this group. Plants rich in tannin (due to the tannic acid in them) and herbal charcoal, oak bark, as well as glaze-containing compounds such as oats, barley decoction and rice water are effective. For children, they use carrots, grated apples (pectin) after browning, onions, oak, rosemary, sage, case, and strawberries.

Anti-tumor

These herbs contain antitumor agents. Plants such as mistletoe and especially lotus trout and alkaloids contain these substances.

1-7-EXAMINE ALTERNATIVE PRODUCTS AND ANALYZE THEIR EFFECTS ON PRODUCT CONSUMPTION

However, herbal remedies can be formulated and packaged in various medicinal forms with the help of herbal extracts and herbal remedies and in combination with chemical raw materials. These

herbal remedies are even used as complementary medicines along with the patient's main medication and can have a significant impact on the treatment of the patient and relieve the complications. The only alternative to herbal remedies is chemical drugs. But chemical drugs usually have far more side effects than herbal remedies.

1-8-STRATEGIC IMPORTANCE OF GOODS IN IRAN AND COUNTRIES OF THE REGION

Iran is one of the most prestigious areas for the cultivation and production of medicinal plants. In the past, this natural capacity for health has not been exploited much, but over the past 10 years the cultivation, cultivation and production of pharmaceuticals, hygiene and cosmetics, pharmaceutical and oral supplements has grown dramatically, and pharmaceutical companies have They have tended to the side.

Medicinal value, market demand and processing level are the most important indicators of economic evaluation of a medicinal plant. According to the World Food Organization, the world trade value of medicinal plants, which is currently around $ 100 billion a year, will reach $ 5,000 billion in 2050.

Iran, with its climate and plant diversity far better than Europe, currently has only $ 60 to 90 million of world trade in medicinal plants. At the same time, herbal medicines are not as important in Iran as the per capita consumption of medicinal herbs in Iran is 25 grams, but in Europe it is 900 grams and in the US 2500 grams.

According to officials and statistics released on the amount of production and export of herbal medicinal products, more than 8,000 herbal species have been identified so far in the country, of which 2300 have medicinal, aromatic, spice and cosmetic properties. There are 1700 species that are endemic to the country and have various medicinal and edible properties.

The area under cultivation of these plants in the country is about 80,000 hectares, which in the comprehensive plan for this purpose is expected to reach 200,000 hectares. These figures show the country's high capacity and capacity, which has been neglected so far, but with good action taken over the past few years.

According to the Ministry of Health, about 3 percent of Iranians use herbal remedies and 97 percent use chemicals. About 150 herbal and 4200 chemical medicines are available in Iranian market. Worldwide consumption of medicinal herbs shows that 80% of the world's 6 billion people use herbal remedies.

Exports of medicinal plants are now gradually becoming one of the most profitable branches of the agricultural economy. According to the FAO (World Food and Agriculture Organization) forecast, the volume of medicinal herbs will grow to 100 billion by 2050, reaching $ 5,000 billion.

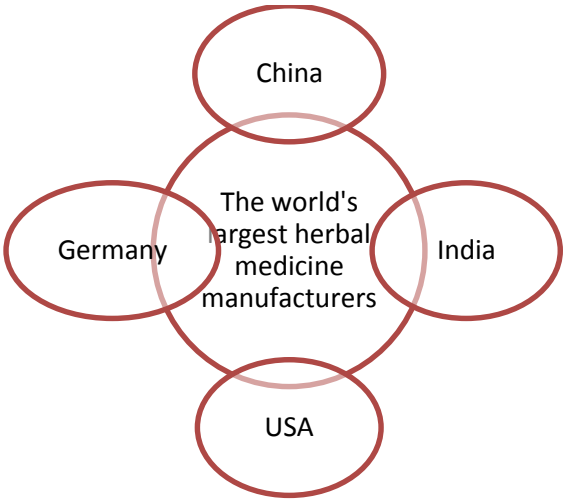
This is happening when the issue of treatment without chemical side effects in the industrialized world is being pursued seriously.

1-9-MAJOR MANUFACTURING AND CONSUMER COUNTRIES

European countries have seen significant growth in the production and consumption of herbal medicines and are ahead of each other in this regard. For example, according to the World Health Organization (WHO) official prescription rates for herbal remedies in Germany are now 2%, in Belgium and France 2% and in England 5%.

Among the countries mentioned, Germany is in an interesting position. The country has not only had a history of producing and consuming medicinal plants, but even because of its cold climate, it has no advantage in producing such herbs. But with careful planning, the country has established itself as a hub for the production of medicinal plants worldwide. At present, Germany's foreign exchange earnings are more than twice the foreign exchange earnings of Iran through the processing and production of medicinal plants through the sale of crude oil and about € 5 billion!

The volume of medicinal herbs in 2019 was $ 5 billion, which is expected to grow by the end of the year 2025 to the 450 Billion dollars and a year 2050 also 5000 Billion dollars. China, India, the US and Germany are major players in the production of herbal remedies worldwide.

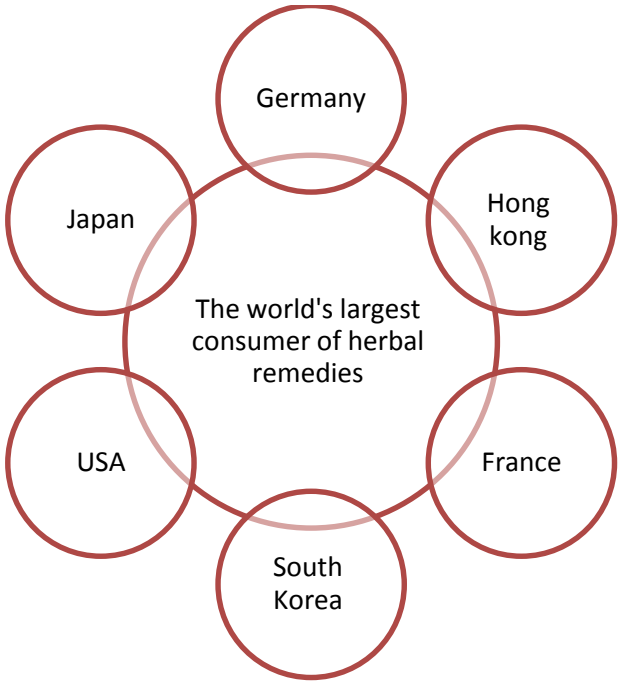


Main importing countries

The retail value of medicinal plants and its products in the United States is at least $ 5 billion. It is also Poland's largest Eastern European market at $ 129 Billion. About 72% of people in Germany use herbal medicines and supplements.

About $ 700 million in vitamins, dietary supplements and dietary supplements are also in the UK, and at least 40% of French people rely on herbal-based health products. In addition, 32% of Hispanics use traditional herbs for prevention, with 27% regular use.

In general, the world's leading drug users are Germany, Hong Kong, the United States, France, South Korea and Japan**.**



The following are some of the leading global manufacturing companies operating in this industry:

Herbi Pharmed Co

Organic Herb Trading Company

Dorwest Herbs

Changsha

Aurya

Dronania

The names of the domestic companies active in this industry are given in the next section.

2- SUPPLY AND DEMAND SITUATION IN IRAN AND COUNTRIES IN THE REGION

2-1-AN EXAMINATION OF EXPLOITATION CAPACITY AND PRODUCTION PROCESS FROM THE BEGINNING OF THE THIRD DEVELPOMENT PLAN TO NOW

According to the latest statistics released by the Information and Services Portal of the Ministry of Industry, Mining and Trade, the active herbal medicine production units in the country are as follows:

Row	Name	State	Capacity (Ton)
1	Gol Darou	Isfahan	200
2	Sabz Darou Spadana	Isfahan	150
3	Golnaz	Tehran	70
4	Aria Basirat	Alborz	636
5	Zardehband	Kohgilouyeh	500
6	Ghaem Darou	Qom	680
7	Dineh Iran	Qazvin	185
8	Ebne Masouyeh	Markazi	100
9	Islami Roushti	Qazvin	90
10	Sabz Zendegi	Alborz	100
11	Shimiaei Delban	Tehran	1170

Source: Ministry of Industry, Mining and Commerce - Statistics and Information Center

2-2-CHECK THE STATUS OF NEW PROJECTS AND ONGOING DEVELOPMENT PLANS

Row	Name	Location (province)	Capacity
1	Mostafa Azad Bakht	Lorestan	50
2	Sam Shimi Exir	Mazandran	4000
3	Norouz Ali Rahimi	Golestan	1500
4	Chamestan	Mazandran	120
5	Exir Razi Sina	Alborz	500
6	Giah Esanse	Golestan	900
7	Gol Darou	Isfahan	200

Source: Ministry of Industry, Mining and Commerce - Statistics and Information Center

2-3-REVIEWING THE PROCESS OF PRODUCT IMPORTATION

According to the information in the book "Export and Import Regulations of the Islamic Republic of Iran, the title of this plan is Customs Tariff Schedule 12119099 ". Is as follows:

Year	Dollar value	Rial value	Weight (kg)
2015	4,875,023	143,965,249,979	5,507,386
2016	9,835,369	308,749,290,680	8,580,557
2017	13,945,090	472,170,747,822	10,090,281
2018	13,730,718	573,964,457,394	9,462,104
2019	0	0	0

Explanation: No statistics have been provided for 2019.
Source: Tehran Chamber of Commerce, Industries, Mines and Agriculture

2-4-MONTORING CONSUMPTION TRENDS

The land of Iran is a country of high rank in terms of plant richness and biodiversity and has 11 climates out of 13 globally recognized climates. According to botanists and researchers, the number of plant species in Iran is about 8,000 species, which is at least twice that of the European continent. Research has shown that more than 2,300 species of plants in the country have medicinal, aromatic, spice and cosmetic properties. In addition, 1728 species of these plants are native to Iran and are considered as a monopoly capacity in the country. The origins of many important species such as rose, saffron, barley, anise and licorice are the origin of most of the world production of these species in Iran. Also, the diversity of plant species and some unique species of Iran has made important pharmaceutical companies in developed countries highly dependent on raw materials of some medicinal plants of the country including saffron, cumin, thyme and savory. There are about 80 species of medicinal plants in the country with a cultivated area of about 180,000 hectares and a production of over 200,000 tons and exports amounted to over $ 400 million last year, accounting for 10% of total agricultural exports. It has shown itself to have a high potential in this sector.

Among the provinces of Khorasan Razavi, South Khorasan, Fars, Kerman, Hamedan and Isfahan, respectively, had the highest cultivation and diversity of medicinal plants, respectively, and in total about 89% of the cultivated area in the province. Are located.

There is an overwhelming import of medicinal herbs in the country and for the purpose of preventing the overwhelming import of medicinal herbs into the country, last year in the Export and Import Regulations Book, 120 tariff products were imported, the lowest of which being 5%.

The turnover of saffron in the world is $ 8 billion and in Iran about 180 thousand hectares of different types of medicinal plants are cultivated. The saffron with 6 thousand hectares and

Mohammad with 107 thousand hectares have the highest level of cultivation of medicinal plants. Of course, in the Sixth Development Plan, 6,000 hectares of saffron will be added to the current level.

The cultivated area of Mohamadi in Bulgaria is 3,000 hectares and produces 65% of the essential oil of Mohamadi in the world, while despite the cultivated area of 17.5 hectares in Iran, it has a small share in the export of essential oils.

Of course, Iran has targeted $ 2.5 billion in exports of medicinal plants over the next five years.

2-5-INVESTIGATE THE EXPORT PROCESS OF THE PRODUCT AND THE POSSIBILITY OF ITS DEVELOPMENT

The amount of exports in the last 5 years plus the value of the rial and the dollar according to the announcement of the Chamber of Commerce, Industries, Mines and Agriculture as follows:

Year	Dollar value	Rial value	Weight (kg)
2015	3,768,449	111,037,026,857	4,150,958
2016	9,835,369	308,749,623,079	8,580,557
2017	13,945,090	472,170,747,822	10,090,281
2018	13,177,569	550,237,564,776	9,251,504
2019	0	0	0

Explanation: No statistics have been provided for 2019.

Source: Tehran Chamber of Commerce, Industries, Mines and Agriculture

2-6- PRODUCT REQUIREMENT CHECK WITH EXPORT PRIORITY

The dependence of the Iranian economy on oil revenues and the impact of revenues on political and economic issues have made the country's economy vulnerable. One way to meet this challenge is to develop products that improve non-oil exports while improving the domestic economy. Drug value, market demand, and technological innovation are among the most important indicators of economic evaluation of a medicinal plant. According to the Food and Drug Administration, the value of the herbal business, which is currently around $ 100 billion a year,

By the year 2050, it will reach $ 5 trillion.

In general, more than 8,000 plant species have been identified in Iran, with about 3,000 species of medicinal properties. According to the president of the Association of Medicinal Plants, about 170 to 200 species are produced, with other species found in nature in cars.

With over $ 100 billion marketed in the world for herbal products, Iran accounts for less than $ 100 million. Fortunately, with the emergence of especially developed countries, the use of vegetable products and its increasing use worldwide, whether in the pharmaceutical industry or in the food and cosmetics industries, given the country's climate diversity and the possibility of

growing most plants In it, we have a golden opportunity to make the most of our country and to increase our presence in global markets more and more.

The dependence of the Iranian economy on oil revenues and the impact of incomes on political and economic issues have made the country's economy vulnerable. One way to meet this challenge is to develop products that improve non-oil exports while improving the domestic economy.

3-OVERVIEW OF TECHNOLOGY AND METHODS OF PRODUCTION AND SUPPLY IN THE COUNTRY AND COMPARISON WITH OTHER COUNTRIES

In the discussion of medicinal herbs processing, the range and variety is very high, from herbs that are dry and healthy with good texture to herbs that need to be milled and packaged in powder. Distillers and liquid fillers are also added to the product line. Of course, here are the medicinal plants that need to be dried and then packaged. At the beginning of the processing and packaging line of medicinal plants, it is advisable to inspect the conveyor and stain conveyor so that the plant waste does not enter the washing tub and tunnel dryer. The inspection and stain bar is all steel and has side tables with an evacuation chamber attached to the garbage bag. After removing the waste, at the end of the visit, the plants enter a single-tub or three-tub washing machine. It is worth noting that in all of these washing machines, the process is mechanized and fully automatic. The final tub output transfers the washed plant to the pond, which, based on efficiency, can be used with pond conveyors or automatic rotary ponds, and finally a semi-automatic pond with centrifugal system. At this stage the plant can be packed in vacuum bags with a vacuum machine (cabinet or vertical) or packed in plastic using a sewing machine. If you need to crush the plant, depending on the crop product, we select the crop to suit. After the plants have become small enough to dry, depending on the efficiency, two cabinets can be used to dry the plants in a tray and transfer them to a dryer by cart. After 8-10 hours dry the plant and remove the cart inside the dryer and pack the dry medicinal plant with a vertical filling and packing machine in cellophane, with drying capacity depending on the size of the cabin, in some cases dry cabins. Can be created where there is a lot of workload and drying efficiency is increased but there are two major drawbacks: one requires a lot of space and the other requires It consumes high energy and insulation cost, so it is recommended to use Continius tunnel dryers for high efficiency. In the tunnel dryer, the herbs with the hopper device are poured open onto the dryer strip and from the outlet, the dried herbs enter the elevator of the filling and packing machine, if necessary packing in disposable containers instead of Cellphone, weighing system will be installed on the tricycle machine. A hammer mill is also used when the mill is needed. The final step is the final cartoning and packaging with the Shrink Pack machine.

Flowchart of Medicinal Plants Lineup:

Inspection Bar; Medicinal Plant Washing Machine; Basin Machine; Crushing Machine; Vacuum Machine; Hopper Vibrator Conveyor; Tunnel Dryer; Z Lift; Packing Machine;

4-DETERMINING THE STRENGTHS AND WEAKNESSES OF CONVENTIONAL TECHNOLOGIES IN THE PRODUCT MANUFACTURING PROCESS

Iran's herbal medicine industry is one of the most important and important Iranian industries, which has enjoyed a privileged position in the regional countries for many years. It is a destructive factor for the quality and competitiveness of the country's pharmaceutical industry.

Burnout of herbal drug industry infrastructure, shortage of skilled manpower, lack of proper pricing mechanism for herbal medicines production, lack of competitiveness of Iranian herbal pharmaceutical industry with worldwide herbal pharmaceutical industry and etc. The challenges of the Iranian herbal medicine industry are that it is emphasized that the herbal drug industry should not be confined to government oversight, restriction and development paths. Unfortunately, the herbal medicine industry in Iran has not been able to regenerate for many years and its competitiveness with the herbal medicine industry in the world and region is very low. On the other hand, there has been a lack of good planning in the training of skilled manpower required by industry, resulting in a severe shortage of skilled manpower in the industry and a severe and worrisome weakening of the equipment and building infrastructure.

Despite all the shortcomings of the country's herbal medicine industry, it has also achieved remarkable success in recent years. The introduction of modern herbal remedies first introduced and produced by Iranian scientists worldwide, on the one hand, enhances the self-confidence of the scientific community of the country and on the other hand, the high potential of Iranian herbal medicine knowledge and industry in society. The world is posing.

Considering the provided description of production technology and considering the similarity of technology used at home and abroad, specific strengths and weaknesses of technology cannot be identified and thus what causes the qualitative difference between the products produced by companies and countries. These are the factors mentioned in the previous page, so if you follow them, the products are readily available on the world market. The best reason to prove this is the existence of high quality products manufactured locally by some. Domestic companies are produced, can be titled.

5- INVESTIGATE AND DETERMINE THE MINIMUM ECONOMIC CAPACITY, INCLUDING ESTIMATING THE VOLUME OF FIXED INVESTMENT IN RIAL AND FOREIGN CURRENCY

Project Investment Schedule:

Description	Cost (Million Rials)	Cost (Euro)
Land	16000	61303
Landscaping	1240	4751
Construction	14565	55805
laboratory equipment	41300	158238
Utilities	1400	5364
transportation	2020	7739
equipment and machinery	4440	17011
Office equipment	837	3207
Miscellaneous and unforeseen	8180	31341
Total	89982	344759

The ground specification of the project implementation is as follows:

Description	Area (m 2)	Unit Price (Rials)	Total (Million Rials)	Total (Euro)
Land	16000	1/000/000	16000	61303

The cost of landscaping is as follows:

Description	Area	Unit Price (Rials)	Total (Million Rials)	Total (Euro)
Digging and leveling	4000	150/000	600	2299
Fencing	300	1/500/000	450	1724
Asphalt and pavement paving	400	450/000	180	690
Green space and lighting	1000	100/000	100	383
Total			1240	4751

Building Information:

Description	Building type	Area	Unit Price (Rials)	Total (Million Rials)	Total (Euro)
Production	Niches	900	5/700/000	5130	19655
Raw materials and supplies	Niches	1000	5/700/000	5700	21839
Office building and services	Official	150	20/000/000	3000	11494
Utilities	Niches	60	6/000/000	360	1379
Guard		25	15/000/000	375	1437
Total		2135		14565	55805

Utilities:

Description	Cost (Million Rials)	Total (Euro)
Power Supply	650	2490
Fuel	100	383
Heating and cooling equipment	550	2107
Protective equipment and security system	320	1226
Compressed air supply	400	1533
Total	2020	7739

Transportation:

Description	Technical Specifications	Cost (Million Rials)	Cost (Euro)
Forklifts	3 ton	2800	10728
Pickup	Nissan	790	3027
Riding	Samand	850	3257
Total		4440	17011

Equipment and Machinery:

Manufacturing machinery is the most important part of industrial investment. The machinery of each manufacturing complex determines the quality and variety of products, production technology, raw materials, and many of the methods, costs of production, and even the finished product price. Machinery selection is a critical and influential factor in the macroeconomic indicators of the plan. The cost of producing the machinery and equipment of the production line is estimated on the basis of inquiries from major manufacturing companies or reputable agencies. It also calculates the cost of procuring machinery, including shipping, installation, customs duties, and so on.

The world's leading companies producing the main equipment for the production of herbal medicines can be listed as follows:

SWANWICK, MAURER GÉP KFT., SPEKTRUM, LTD, KRONEN GMBH, HENAN KYORICHI INDUSTRIAL CO.LTD

The price range for all of these companies is about 10 percent. The price of machines for this process is given in the table below.

Number	Name	Required amount	Currency (Euro)	cost (million rials)	Rial sum (million rials)
1	Inspection bar	2	13027	3400	6800
2	Washing machine for medicinal plants	1	11111	2900	2900
3	Pond Device	2	6513	1700	3400
4	Crushing machine	2	6130	1600	3200
5	Vacuum machine	2	4598	1200	2400
6	Hopper vibrator conveyor	2	10345	2700	5400

7	Tunnel dryer	1	13410	3500	3500
8	Z lift	2	4598	1200	2400
9	Filling & Packing Machine	2	8429	2200	4400
10	Shrink Pack Machine	2	5747	1500	3000
11	Tanks	3	4981	1300	3900
Total(Million Rials)				41300	
Total (Euro)				158238	

laboratory equipment:

Number	Name	Currency (Euro)	Rial Cost (Million Rials)	Rial sum million) (rials
1	laboratory equipment	5364	1400	1400
Total		1400		

Office equipment:

Number	Name	The required amount	Currency (Euro)	Rial cost per unit	Rial Cost (Million Rials
1	Management table with chair	1	57	15/000/000	15
2	Conference table and conference chair	1	172	45/000/000	45
3	Computer desk and chair	3	34	9/000/000	27
4	Office desk and chair	3	31	8/000/000	24
5	Secretary's desk and chair	1	27	7/000/000	7
6	Showcase	1	31	8/000/000	8
7	Library	1	31	8/000/000	8
8	Quad slider file	2	15	4/000/000	8
9	Waiting chair comfort	5	11	3/000/000	15
10	Dining table and chair	1 Series	34	9/000/000	9
11	Computer	6	172	45/000/000	270
12	Printer and Scanner	4	57	15/000/000	48
13	Fax	3	23	6/000/000	18
14	Telephone	6	8	2/000/000	12
15	kitchen appliances	1 Series	575	160/000/000	150
16	Fingerprint Attendance Device	1	33	85/000/000	85

17	Wireless and Internet equipment	1	23	6/000/000	6
18	Office stationery	4 Series	11	3/000/000	12
19	Central central system	1	268	70/000/000	70
Total (Million Rials)		837			
Total (Euro)		3207			

Working Capital Costs:

Name	Description	Cost (Million Rials)	Total (Euro)
Raw materials and packaging	60 Days	34142	130812
salary	30 Days	11104	42544
Energy costs	30 Days	171	655
revolving fund	15 Days	1450	5556
Total		37717	144510

Production costs:

Description	Cost (Million Rials)	Cost (Euro)
Cost of raw materials and packaging	77400	296552
Salary Cost	11104	42544
Energy costs	2050	7854
Cost of maintenance	5689	21797
Unforeseen cost of production	1420	5441
Administrative and sales costs	977	3743
Costs of financial facilities	986	3778
Insurance costs	1150	4406
Depreciation cost	500	1916
Depreciation expense before operation	167	640
Total	101443	388670

6-THE AMOUNT OF RAW MATERIAL NEEDED ANNUALLY AND WHERE IT IS SUPPLIED

Number	Description	Consumption per unit product	Unit of consumption	Amount of Consumption Required for Total Capacity	Rial equivalent (per unit)	Place of supply	Cost (Million Rials)
1	Seed and transplant varieties	0/57	Ton	500	150/000	Internal	75000
2	Packaging materials and ...	23	Ton	400	6/000/000	Internal	2400
Total (Million Rials)							77400
Total (Euro)							296552

7-RISK ANALYSIS OF PROJECT IMPLEMENTATION

Studies show that in the next year the market will be in short supply and there will be a greater need for imports. So it can be said that the implementation of new projects in this field is not very risky because in addition to the domestic market there is very good potential for exporting this product to neighboring countries and if for any reason the applicant intends to do so. It should act cautiously and with the highest advantages of other industrial units in this regard and minimize project risk by examining further the strengths and weaknesses as internal factors as well as opportunities and threats as external factors.

Crude sales should be blamed on the country's capital as this approach has limited the oil and mining market and damaged the herb industry.

Iran is one of the richest plant species in the world as more than 8,000 plant species are identified in the country and experts believe that 2,300 species have medicinal properties, but only about 100 plant species in the bulk and the rest. Inappropriate packaging is exported abroad. Traditional cultivation is another challenge that threatens this sector and causes it to lack sufficient quality raw materials.

The disadvantages of this market are the lack of up-to-date technology and equipment. Another lack of culture is the use of these items for treatment and even replacement for oral chemical supplements that have not received much attention from physicians and consumers.

The herb industry is a huge source of economic value and high value added in Iran. Understanding the fields and programs of employment can provide a valuable opportunity to this industry within Iran's export and successful presence. Forgive in world markets. In this regard, the movement of production and consumption of medicinal herbs and herbal remedies and the inclusion of traditional medicine has been at the center of support for the socio-economic and health planning of Iran, as well as for society.

The establishment of the Iranian Herbal Medicine and Traditional Medicine Headquarters and its design and implementation of a strategic document for the development of the Iranian medicinal herbs industry and the general acceptance of the use of these herbs and related medicines support this claim. The capacity and rate of employment of this industry in the dimensions of production, processing, warehousing, packaging, distribution and sales is greatly expanded with regard to its global capacities.

8- HUMAN RESOURCES AND NUMBER OF JOBS

One important aspect of any industrial unit is its job creation, which is thoroughly examined in the market segment. Due to the nature of the industry and the need for 3 shifts to work, it has been attempted to select the number of personnel in a manner that addresses the production needs of the two shifts. It has also been tried to use related specialties in different parts of production.
To calculate the amount of annual salaries and benefits, three shifts and other benefits have been added to the annual salary. For this purpose, the annual salary is set at 16.4 months per year

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Description	Gender	Number	Monthly salary per person (Million Rials)	Monthly salary (Million Rials)	Annual salaries (Million rials)	Annual salaries (Euro)
Managing Director	Man	1	41	41	672	2575
financial manager	Man	1	34	34	558	2138
Marketing Manager	Man	1	34	34	558	2138
Financial, sales and administrative personnel	Female	2	29	58	951	3644
warehouse keeper	Man	3	24	72	1181	4525

Herbal Remedies Specialist	Man	2	24	60	984	3770
worker	Man	10	21	210	3444	13195
Service	Female	2	21	42	689	2640
Guard	Man	2	21	42	689	2640
Driver	Man	1	21	42	689	2640
Secretary	Female	2	21	42	689	2640
Total		27			11104	42544

9- CHECK AND DETERMINE THE AMOUNT OF WATER, ELECTRICITY, FUEL AND ...

Description	Unit	annual consumption	Cost per unit in Rials	Total Cost (Million Rials)	Total Cost (Euro)
Power Consumption	KWh	650/000	648	421	1613
Water Consumption	Cubic meters	420/000	1973	829	3176
Gas	Cubic meters	800/000	1000	800	3065
Total			2050		7854

10- CONDITIONS OF ECONOMIC AND COMMERCIAL SUPPORT

10-1- CUSTOMS TARIFF SUPPORT (PRODUCTS AND MACHINES) WITH GLOBAL TARIFFS

Exports of herbal remedies are exempt from fees and charges, but require the authorization of the Plant Protection Agency or the authority designated by the buyer. The difference between medicinal herbs and medicines is that the medication is usually "DOSE" or a prescribed number for a period of illness, prescribed by a physician and listed in each country's pharmacopoeia, but medicinal plants do not qualify for such a list. They are mainly cited in 1211 explanatory notes. Medicinal plants also require the approval of the Ministry of Health and Standards.

10-2- FINANCIAL SUPPORT (EXISTING UNITS AND PLANS) OF BANKS - INVESTOR COMPANIES

Long-term facilities to finance part of the investment costs for the creation or development of industrial, mining and tourism units or to provide the necessary conditions for the optimal utilization of these units, the facility bank in foreign currency and rial in the form of an Islamic contract Grants.

Terms:

1. Only financial facility projects that have the necessary technical, financial and economic justification are granted.

2 .The granting of facilities to natural persons up to one billion rials shall be permitted and the payment of such facilities shall be exclusively permitted to legal persons.

3 .The Bank typically finances up to 70% of the project's fixed capital investment as a facility, while 30% of the total project investment (including fixed capital and working capital) must be provided by the applicant as paid-in company capital. .

4 .The repayment period of the facility is typically a maximum of 5 years. It was the Bank's authority to change this period to suit the status of the plans.

5 .When applying for a facility, the applicant shall open a loan account.

6 -In general, 30% of the total project investment must be financed by the investor and the bank can invest up to the remaining 70%.

Steps:

1.pre- Acceptance: At this stage the applicant can apply to any bank branch and submit his / her application. If the plan is not on the priority list, the Bank agrees to provide the justification.

2. Compilation of project justification report: Applicant prepares justification report through Bank Consulting Engineer companies.

3 .Acceptance: At this stage, the project justification report will be delivered to the branch with the required documentation.

4 .Evaluation and approval: The Bank's justification report will be reviewed and if approved, the facility payment will be approved by the competent authority.

5 .Contract: After providing the required documents and guarantees, the contract for granting the facility will be concluded.

6 .Payment: The project progress report will be prepared at the time specified by the consulting engineer and submitted to the bank. Once the progress report has been approved by the bank, payment is made as appropriate to the progress of the plan.

11-ANALYZING AND PRESENTING FINAL CONCLUSIONS AND PROPOSALS FOR THE CONSTRUCTION OF NEW UNITS

- The herbal medicine industry in Iran has grown significantly in recent years and the number of herbal medicines produced in Iran has exceeded 1600 and the number of traditional medicines has exceeded

650 of note is the need to pay attention to the production of herbs as raw materials in the traditional herbal and pharmaceutical industries. In the near future, the country will become an importer of medicinal plants or herbal extracts for use in the herbal medicine industry in the near future, if the herbal pharmacy industry grows and the crop development fails.

- Creating a centralized and secure market for the supply and supply of medicinal plants is one of the ways that can persuade farmers to produce medicinal plants, companies for the production of medicinal raw materials, essential oils, extracts and herbal medicines for domestic production. And prevent the outflow of currency and imports of pharmaceutical raw materials.
- Another important point to keep in mind is the careful selection of plants that need to be cultivated. Perhaps one of the reasons for the lack of a reliable and guaranteed market for medicinal herbs was the lack of choice of herbs in the herbal pharmaceutical industry by farmers. It has been widely observed that farmers have started to produce plants that they do not need in the market, while other herbs that are easy to cultivate and produce are scarce in the market for the herbal pharmaceutical industry and inevitably imported from abroad.
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- The plan is to start operating at 60 percent capacity in the first year and increase below capacity in the following years, respectively.

Year	First Year	Second Year	third year	forth year	Fifth year
Capacity(%)	60 %	75 %	90 %	100 %	100 %
Production capacity (ton)	600	750	900	1000	1000

prime cost	101 million rials/Per ton- 387 Euro
Selling prices of products	170 million rials/Per ton- 651 Euro
Total Sales	170/000 Million Rials- 651341 Euro
Percentage of sales at the point head to head	73
Profit	69/000 Million Rials- 264368 Euro
Gross Value Added	89130 Million Rials - 341494 Euro
Net Value Added	83274 Million Rials- 319057 Euro
Ratio of gross value added to total sales	0/52
Ratio of net added value to total sales	0/49
Ratio of gross value added to investment	0/65
Return of capital	4

12-SUMMARY OF THE FEASIBILITY STUDY

General Specification
Name of The Project: Feasibility studies of herbal remedies
Project Capacity: 1000 ton per year
Personnel Number: 27 people
Working Days: 288 Days
Product Usage: Traditional medicine
Marketing
Product Global Price: 10000 $ per ton
Domestic Demand: 13043 ton
Domestic Production: 3581 ton
Import: 9,462,104 Kg
Export: 9,251,504 Kg
Technical Study
Land Area: 16000
Building Area: 2135
Main Raw Materials: Seeds and transplants of various herbal remedies
Supplying Place of Raw Materials: Local
Power Requirement: 650,000 (kwh)
Water Requirement: 420000(m^3)
Fuel Requirement: 800,000 (m^3)
Economical & Financial Study
Fixed Investment Cost (Rail's& other Currencies): 89982 Million Rials- 344759 Euro
Working Capital: 46867 Million Rials- 179567 Euro
Total Investment Cost: 136849 Million Rials- 524326 Euro
Annual Sale: 170000 Million Rials- 651341 Euro
Net Present Value(NPV): 114041 Million Rials- 436939 Euro
Break Even Point(BEP): 73077 Million Rials- 279989 Euro
Internal Rate of Return(IRR): 24%
Investment Return Period: 4 Years
Investment Sources Ratio Equity: 30 % Finance: 70%