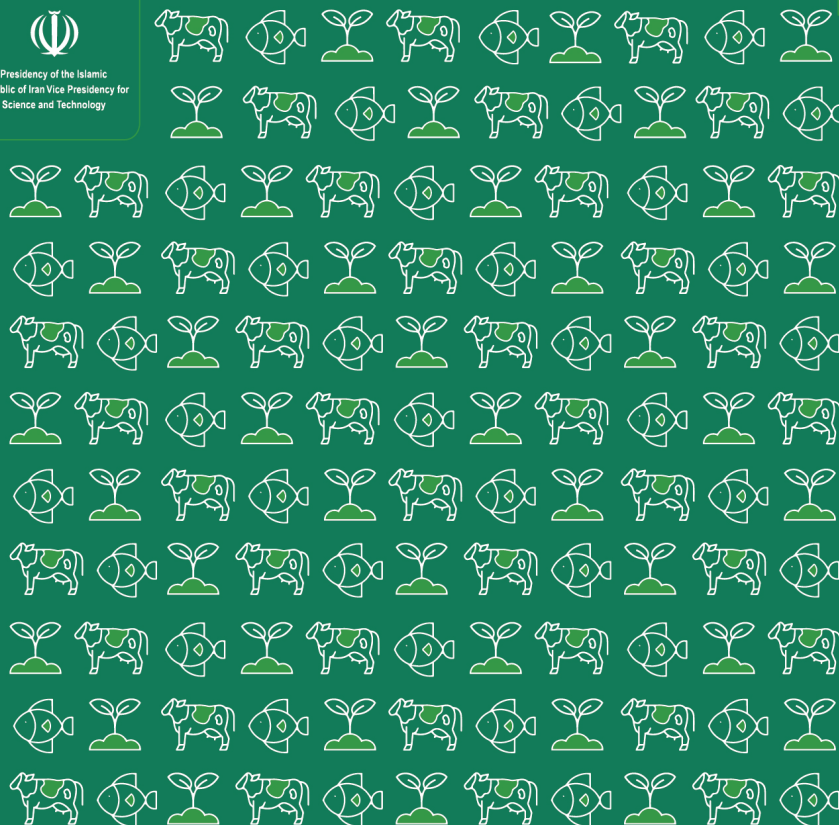




Presidency of the Islamic  
Republic of Iran Vice Presidency for  
Science and Technology



First Volume

# AGRICULTURE, LIVESTOCK, POULTRY AND AQUATICS

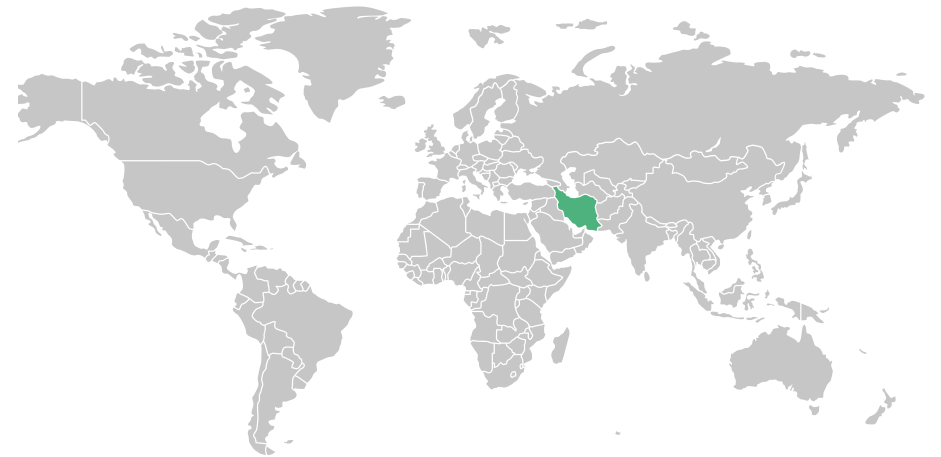
*Knowledge-Based Products and Equipment*

# مجلس المدینة العلمیة



FIRST VOLUME

**Knowledge-Based Products and Equipment**  
**Agriculture, Livestock, Poultry and Aquatics**





# Preface

One of the key factors in a nation's industrialization and economic complexity is technology. Complex economies can connect vast networks of individuals with relevant information to produce a variety of knowledge-based goods. Indeed, the types of goods or products that are ultimately supplied to international markets are taken into account when determining the complexity of an economy.

A knowledge-based economy is one in which the application of knowledge and information plays a significant role in shaping production and distribution, and where investments in knowledge-based businesses have drawn particular attention. Along with enhancing nations' competitiveness, the transformation of economies into knowledge-based economies has the potential to have a significant impact on international trade.

7000 knowledge-based businesses in Iran provide knowledge-based goods that are the result of the expertise and experience of professionals and university graduates. These businesses, which occasionally resemble enormous technology factories, sold more than 10\$ billion worth of goods last year and exported 1\$ billion or so to various nations. The Presidential Deputy for Science and Technology is recognized as the most significant authority for direction, leadership, and development of the technology area in Iran. It serves as a support organization for startups and knowledge-based businesses by finding and selecting these enterprises. This book, along with 29 other books, is a carefully curated selection of goods with a track record or export potential that was put together using data provided by chosen businesses for presentation to foreign clients, business people, and government and academic officials interested in using these goods. To review the company's manufacturing and distribution records, access to technical knowledge and specialized human resources, production and export capacities, and after-sales services, two specialized and commercial committees were formed separately, and each committee reviewed the products in detail with the participation of technical and commercial experts.

## Knowledge-Based Products and Equipment First Volume: **Agriculture, Livestock, Poultry and Aquatics**

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In this procedure, specialized committees were held with the collaboration of the experts of the center of companies and knowledge-based institutions of the Deputy for Science and Technology, headed by *Dr Reza Asadi Fard* and Coordinated by *Engineer Mojtaba Houshmandzadeh*. In addition, *Engineer Mehdi Ghaleh Noei* and *Engineer Ruhollah Estiri* presided over commercial committee meetings, which also included businessmen from the private sector, and I want to express my gratitude to these two groups for their work and assistance.

I also want to appreciate the project manager, *Zahra Afzali*, who has taken on a lot of responsibility and given close attention to the project's design and development from the beginning with innovative ideas.

I also think it's important to recognize and express my gratitude to my other colleagues for their efforts in gathering, reviewing, contacting firms, selecting, and rewriting texts, and finally editing and creating this book:

Project monitoring and editing team: *Mohammad Torabi, Fereshte Elahi*

Evaluation team: *Peyman Einizadeh, Mohammad Reza Gheybi*

Editorial team: *Samaneh Goudarzi, Zahra Farahani, Mohammad Matin Shirzad*

Design team: *Mohammad Hossein Pourdabbaq, Masoud Khalili*

I want to underline that the aforementioned goods may be offered in a variety of ways in the country of destination, including export of end products, export of semi-finished and assembled products at the destination, joint production in the destination country and other economic cooperation. In each of the aforementioned scenarios, the Export Development and Technology Exchange Fund is prepared to co-invest in the target countries and guarantee the purchases as a financial sponsor of knowledge-based export enterprises.

The book's conclusion also includes a list of export management firms authorized by the Deputy for Science and Technology for communication, Iran House of Innovation & Technology (iHiT), located in several countries, and commercialization and technology transfer agencies. Finally, I am hoping that this book will be beneficial to the readers and provide them with a thorough grasp of Iranian technological advancements.

**Regards,**  
**Mehrdad Amani Aghdam**  
**CEO of Export Development and Technology Transfer Fund**

## Agriculture, Livestock, Poultry and Aquatics





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Agriculture, Livestock, Poultry and Aquatics



Knowledge-Based Products and Equipment

# Introduction

## The Origin of Industry and Export in The Eyes of Iranians

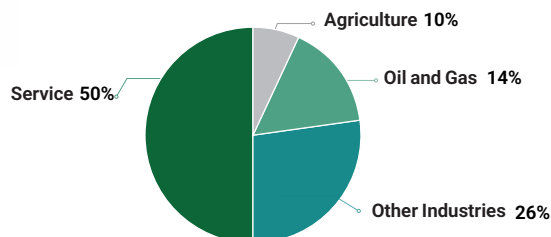
The ancient land of Iran has long been the source of knowledge and industry, and Iranians have played a significant role in the development, evolution and promotion of science and human awareness. Most historians of the world believe that most of the advances in science and human civilization are owed to Iranian civilization and the most brilliant works of art and the highest industrial levels has come from the minds of Iranians. Metalworking industries, agricultural industry, pharmacy and alchemy with themes including tile glazing, carpet dyeing, fabrics and glass were some of the industries that were considered by ancient Iranians. In parallel with the special attention to the development of industry, the history of mutual trade relations between Iranians and other civilizations in East and Central Asia, Europe and Africa has a long history, and Iranians have played a significant role in the expansion of global altruism since long ago by being on the route of the Silk Road and maritime trade.

We Iranians today, like our ancestors, consider industry, art and production in our ancient land to be a transformative and constructive place, and we consider the development of technological interactions and the trade of knowledge-based industrial products with other countries as an opportunity for friendship and the expansion of ties.

### Industry and Export in Today's Iran

Industrial development has a very important place in the plans and policies of the Islamic Republic of Iran due to the creation of value added, job creation, increase in exports and reduction in imports, and the transition from an economy dependent on oil and mineral raw materials to an industrial and manufacturing economy, especially an economy dependent on new technologies, is a grand plan that has been adopted for this purpose. Currently, %50 of Iran's gross domestic product is allocated to services and another %50 to industry and manufacturing, which includes %10 agriculture and food industry, %14 oil and gas industry, and %26 other manufacturing industries.

The Share of Various Activities in Iran's GDP

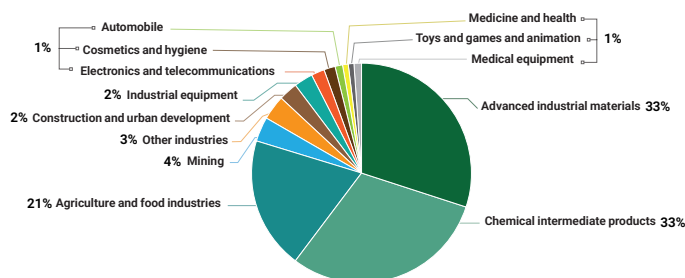


In the meantime, various industries such as pharmaceuticals, medical equipment, construction, communications and telecommunications, energy, mining, chemicals, etc. have a special share of Iran's gross domestic product, and their production, in addition to covering a considerable amount of country's domestic needs, are exported to various destinations.

According to World Customs Organization data, in 2021, the Islamic Republic of Iran had exports equal to 75 billion dollars, almost half of which is allocated to non-oil industries and processed industrial products. Advanced industrial materials, chemical intermediate products, agricultural products and food industry are all among the biggest exporting industries with more exports.

### Iran's Exports in 2021

Ref: Trade Statistics for International Business Development <sup>1</sup>



<sup>1</sup> www.trademap.org

Regarding the main export destinations of Iran, it should be noted that China, India, Indonesia, Russia, Uzbekistan, Ghana, Germany and South Africa, as well as among the regional neighbours, Iraq, Turkey, UAE, Afghanistan, Pakistan, Oman, Turkmenistan, and Azerbaijan account for the largest dollar value of imports from Iran.

### Where the New Technologies Stand in Iran's Industry

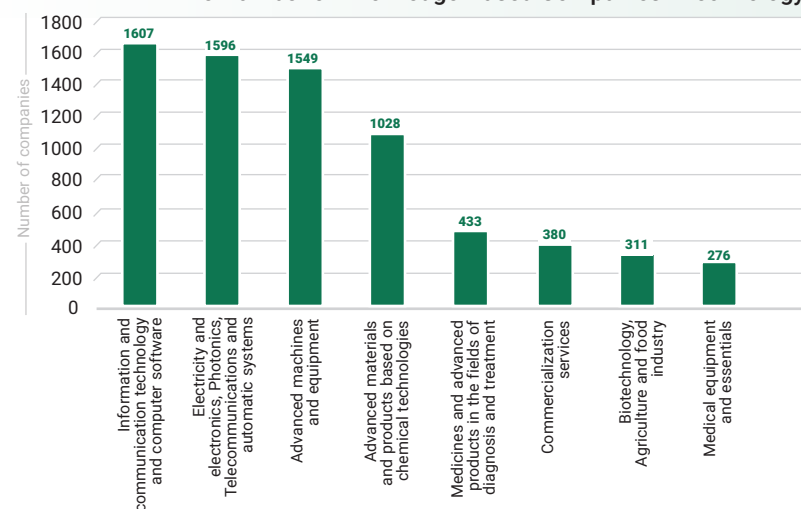
Paying attention to the development of new technologies, commercialization and its influence on manufacturing industries has caused the Islamic Republic of Iran to experience a growing progress in this field in the last decade; An issue that has taken place in Iran in the form of the development of knowledge-based enterprises. Based on this, the meaning behind knowledge-based enterprise is as follows:

A private company that produces products or provides services that have the following three features:

1. The product or service provided by the company has a high or medium to high technology level and its technical knowledge has a significant technical complexity (technology level condition).
2. The product or service design in the company is based on internal research and development or technology transfer (Research and development-based design condition).
3. The company is able to produce and provide the mentioned goods or services to the market (production condition).

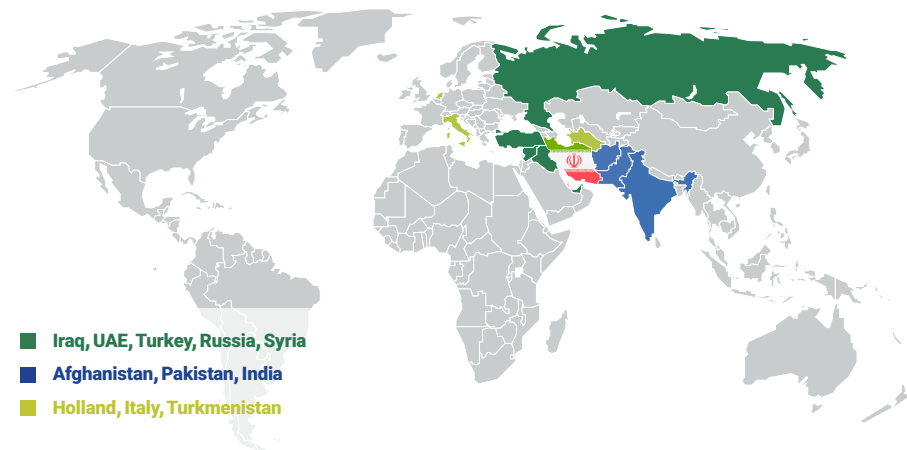
Currently, more than 7 thousand knowledge-based enterprises in Iran are producing products and providing services in the field of various technologies. These companies produce more than 15,000 products or services in total, and their direct employees, which generally include people with a high level of education, are around 250,000 people.

The Number of Knowledge-Based Companies - Technology Fields



The export of Iran's knowledge-based enterprises has been growing in the last 5 years, and these companies currently account for about %2 of Iran's non-oil exports.

**The Largest Export Destinations of Iranian Knowledge-Based Enterprises in The Last 5 Years**



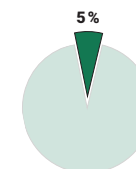
**The status of Knowledge-Based Agriculture and Animal Husbandry**

The agriculture and animal husbandry industry in Iran is a prominent part of the economy. This industry, together with the food industry, which are somehow located along a value chain, covering %10 of GDP, are considered strategic industries, and with more than 7.5 billion dollars worth of exports, after advanced industrial materials and chemical intermediate products are in the third place.

Considering the age and importance of this industry among the various industries active in Iran, as well as paying special attention to mechanization of this industry, extensive technologies with the aim of increasing productivity, improving the quality and health, as well as reducing the total price have been developed within it and are offered in the form of more than 600 products by 400 knowledge-based enterprises. In the last few years, despite the fact that knowledge-based companies in the field of agriculture and livestock industry account for only about %2 of the employment and annual income of knowledge-based enterprises, they have had a much greater effect on the increase of GDP, considering that they have products and technologies that are used in the production of final consumer products of the agriculture and livestock industry and underlie the improvement of their quality and health.

Finally, concerning the export of knowledge-based products in this field, it is noteworthy to mention that in the last 5 years, a total of 55 million dollars worth of products of knowledge-based companies active in the agriculture and livestock industry have been exported outside Iran.

**The Percentage of Agricultural and Animal Husbandry Companies from All The Knowledge-Based Enterprises**



**The Main Export Destinations of Iranian Knowledge-Based Enterprises in the Fields of Agricultural and Animal Husbandry**



**The Technological Vision for Agriculture and Animal Husbandry**

Technology can prevent the loss, and increase productivity, diversity, and value in the production process. Electronic and online education can help a farmer learn about what seeds to plant, when and how to do it, and to know the accurate times of irrigation, fertilization, and harvest; if a farmer uses this information, they can enhance the quality, diversity, and value of their products. If the information technology is presented and used adequately it can cause an increase in production, a decrease in loss, authentic management of plantation, and harvest, and improves their lives.

Robots, sensors, irrigation, and fertilization systems are being experimented with around the world. If these tools enter the modern world and are used professionally, the future of agriculture would change drastically.

We can estimate that the agriculture industry would develop greatly in the next two decades due to the progress of technology in this industry and the development of modern tools and machinery. These modern tools present accurate data about soil, plants, and climate so that all the products are harvested completely and ripe. Creating the early versions of these tools is not the end of the job, and their progress must be evaluated.

Today's agriculture has developed significantly and technologies like robots, temperature and humidity sensors, aerial photographs, and GPS are used. These advanced machines and technologies, fine agriculture, and robotic systems lead to profit, efficiency, safety, and adaptation for businesses.



The latest techniques and technologies used in agriculture are:

- GIS software and farming using GPS
- Satellite imaging
- Drone (unmanned aerial vehicle)
- Aerial photograph
- Agriculture software and online data
- Data integration

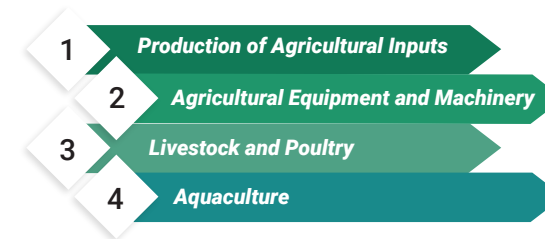
The advantages of using technology in agriculture are:

- Modern machinery is used to control farmer's challenges
- Technology reduces time spent on various activities
- Machines are used for the plantation of seeds
- Irrigation is much faster and easier
- Control of chemical blight is done more efficiently
- The fertility of the soil is enhanced
- Usage of water and chemical fertilizer decreases, thus, the overall cost decreases
- Usage of chemical materials decreases and less wasted materials are dumped into free waters

In recent years, good progress has been made in Iran in the development of technical knowledge of some high-tech inputs such as seeds, biofertilizers, light livestock breeds, livestock and poultry vaccines, equipment for planting, growing, harvesting, and plant tissue culture propagation, and considering the mass of technical and educated workforce in agricultural, biological and chemical fields, the relatively large arable land of the country and the development of complex technical knowledge of some inputs, it is possible that Iran will be among the major countries producing and exporting agricultural technological inputs in the near future.

## The Division of Knowledge-Based Products in Agricultural and Animal Husbandry

As mentioned, although the agriculture and animal husbandry industry is one of the old industries active in Iran, in recent years, special attention to mechanization in this industry has led to the development of technical knowledge of many technological products within it. In this book, products have been collected that can be divided into the following categories:



The following explains each of the cases and their subsets, in order to provide a general understanding of these areas.

## 1 Production of Agricultural Inputs

Agricultural inputs are the most significant causes of efficiency and producing healthy and efficient seeds and seedlings, especially summer vegetable hybrid seeds, and tissue culture seedlings are among the most important ones. Chemical, microbial, and organic toxins and fertilizers are the inputs produced within the country by many breeders. It is worth mentioning that the most advanced high-tech equipment of agriculture is found in this domain, and most biological domains are involved with these inputs. The products of this area are divided into these groups according to the book:

- **First section | Seeds and Seedlings:**

The products of this group include tissue culture seedlings and hybrid seeds. The seeds produced by the hybridization method are mainly used in greenhouses, and tissue culture seedlings are also used in ornamental plants and fruit gardens. One of the outstanding features of these seeds and seedlings is their remarkable resistance to biotic and abiotic stresses and diseases.

- **Second section | Fertilizers and Soil Amendments:**

The knowledge-based fertilizers introduced in this book are divided into three categories: biological, chelate and chemical fertilizers. Biofertilizers mainly contain strains that stabilize macro elements in the soil, and chelated fertilizers are mainly related to micro elements such as iron, magnesium, selenium, copper, etc. Chemical fertilizers usually contain elements of nitrogen, phosphorus, potassium and calcium.

- **Third section | Chemicals and Pesticides:**

The agrochemicals introduced in this book are used for fungal diseases, insects and pests in garden and agricultural plants.

*Start chapter at page 24 »*

## 2 Agricultural Equipment and Machinery

This category consists of any machine used in the process of planting, growing and harvesting in agriculture, or the equipment used in irrigation. It is necessary to explain that the use of different machinery and smartification of these machines are one of the growing technologies in this sector, and are being used in the agricultural industry in the form of machines related to the smartification of agriculture, sensors, robots, etc. This group of products includes goods that are divided into the following subdivisions in this book:

- **First Section | Planting, Growing and Harvesting Machinery:**

The machines introduced in this category include all the equipment of the agriculture as follows:



- **Second Section | Irrigation Equipment:**

The irrigation equipment in this book includes all the supply chain related to the field of agricultural irrigation. All types of valves and centrifugal pumps have been introduced in this category.

*Start chapter at page 72 »*

### 3 Livestock and Poultry

In general, livestock and poultry farming follows some protocols, and the most important part of it is providing feed and nutritional balance of livestock. The knowledge of ration formulation has been developed for this purpose since ancient times and is used by producers. From a technological point of view, protection against diseases and biological stresses are among the high-tech activities in this sector, and some inputs, including vaccines, equipment and materials related to disinfection, etc., are used in this field. In this book, the technological products of this sector are divided into the following subdivisions:

- **First section | Vaccination for Livestock and Poultry:**

The products of this group include tissue culture seedlings and hybrid seeds. The seeds produced by the hybridization method are mainly used in greenhouses, and tissue culture seedlings are also used in ornamental plants and fruit gardens. One of the outstanding features of these seeds and seedlings is their remarkable resistance to biotic and abiotic stresses and diseases.

- **Second section | Drugs Supplements and Nutraceuticals for Livestock and Poultry:**

These supplements include food items such as probiotics, prebiotics, synbiotics, mineral chelates, toxin binders and buffers and increase the quality and livestock performance and tolerance to biotic and abiotic stresses in livestock and poultry.

- **Third section | Livestock Breeding:**

Livestock bred by knowledge-based companies include sheep modified for different traits and have distinctive features such as twinning and increased growth speed.

- **Forth section | Feeding Equipment for Livestock and Poultry:**

The equipment related to animal feeding in this book includes pellet production and processing equipment, and these machines can be produced in different capacities according to the customer's needs.

*Start chapter at page 124 »*

### 4 Aquaculture

Aquatics are classified as livestock in the categorization of scientific books, and all the points related to livestock also apply to these creatures. However, the feeding and aeration equipment and in general the equipment related to aquaculture are different from other livestock. Even some consumable inputs such as vaccines are very different in this area from other areas. For example, any medicine that is used for aquatic animals must be soluble in water and have oral formulation. This issue makes the production of inputs for this field a little more difficult and complicated. Therefore, the knowledge-based products in the field of aquaculture are divided into the following subsets:

- **First section | Aquaculture Equipment:**

This equipment includes fish breeding cages in the sea (fish farms) and the minimum capacity of these cages is 500 tons of fish per breeding period.

- **Second section | Feeders for Fish:**

Equipment related to feeding aquatic animals are automatic feeding barges and monitoring and feeding vessels.

*Start chapter at page 186 »*

# AGRICULTURE, LIVESTOCK, POULTRY AND AQUATICS

## First Chapter

### Production of Agricultural Inputs



- Seeds and Seedlings
- Fertilizers and Soil Amendments
- Agrochemicals and Pesticides

## Second Chapter

### Agricultural Equipment and Machinery

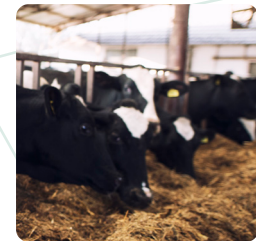


- Planting, Growing, and Harvesting Machinery
- Irrigation Equipment

## Third Chapter

### Livestock and Poultry

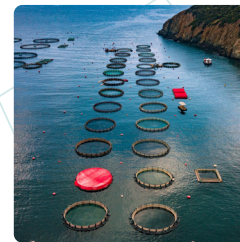
- Vaccination for Livestock and Poultry
- Drugs, Supplements and Nutraceuticals for Livestock and Poultry
- Livestock Breeding
- Feeding Equipment for Livestock and Poultry



## Forth Chapter

### Aquaculture

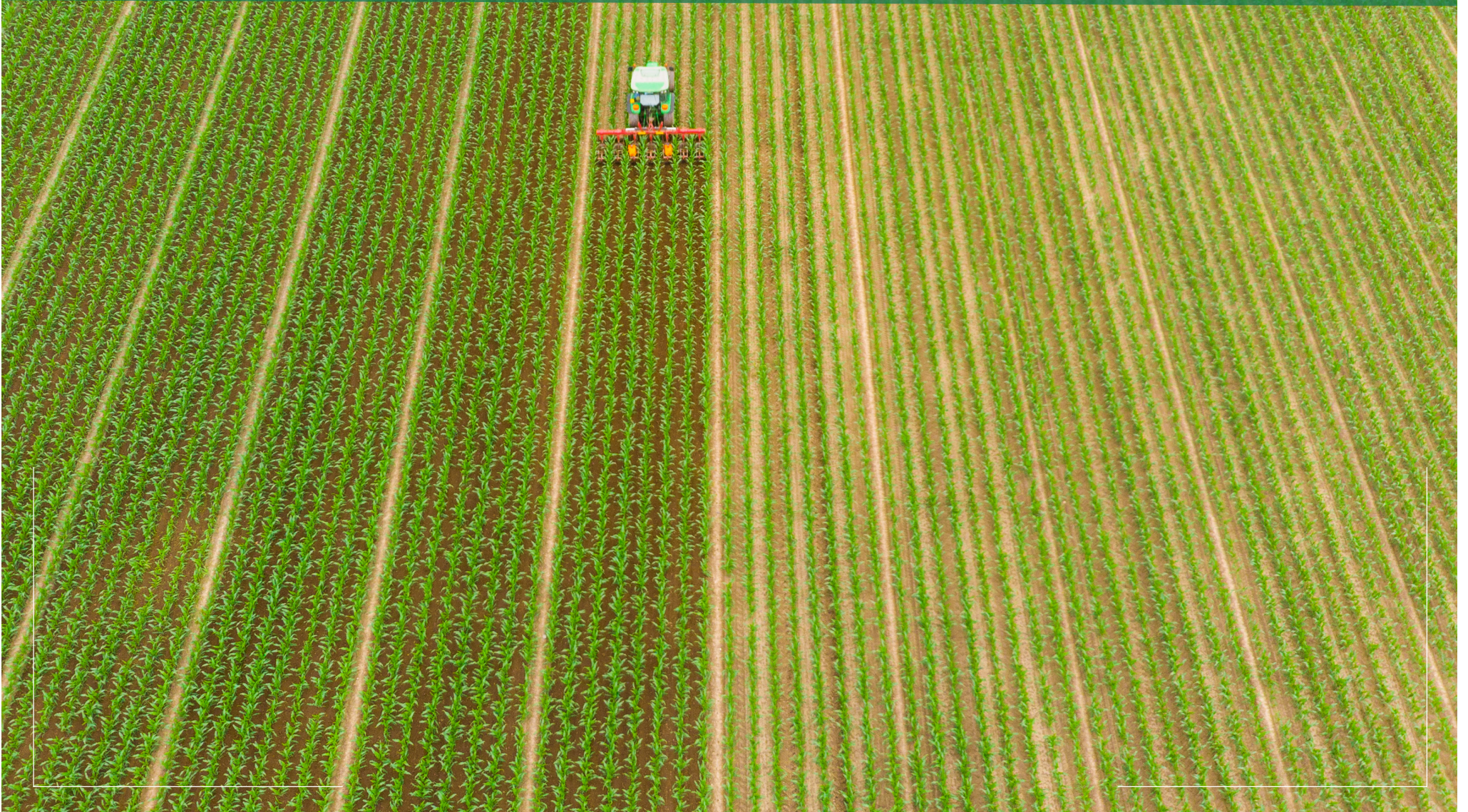
- Aquaculture Equipment
- Feeders for Fish





First Chapter

# Production of Agricultural Inputs





# 1<sup>ST</sup> CHAPTER

First Chapter

Second Chapter

Third Chapter

Fourth Chapter

## Production of Agricultural Inputs

- Tissue Culture Seedlings | Olive Seedling, Paulownia | 24
- Tissue Culture Seedlings of Olive and Paulownia Seed | 26
- Tissue Culture Seedlings | Fruit Trees and Ornamental and Medicinal Plants | 28
- Tissue Culture Seedlings | Damask Rose | 30
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- Biological Control Agents | 68

*Seeds and Seedlings* ○

*Fertilizers and Soil Amendments* ○

*Agrochemicals and Pesticides* ○

Sections



➤ **Tissue Culture Seedlings** | Walnut and Date Palm

🏠 **RANA Agro-Industry Corp.**

[www.ranagroup.com](http://www.ranagroup.com)



**Product Introduction:**

The company produces tissue culture date seedlings and tissue culture walnut seedlings. In the propagation of date and walnut cultivars by tissue culture method, all propagation steps-except for the plant adaptation- are performed in vitro in the laboratory. The products are disease-free and morphologically desirable and uniform.

**Main Export Destination:**

Emirates, Indonesia, Thailand, Iraq, India

**Exports History:**

Up to 3,000,000 \$

**Founded:**

1991

**Application:**

- \* Walnut groves and palm groves for exploitation by farmers
- \* Use in orchards as genetic resources to produce disease-free crops

*This product is a final B2B & B2C consumer product.*

**Technical Specifications:**

**Date palm seedling:**

- \* The least amount of variation
- \* Fast growth
- \* Fast yield

**Walnut seedling:**

- \* Chandler walnut seedling
- \* No need for rooting and transplanting due to extensive and strong root system
- \* Cold resistant
- \* Paper walnut with white kernel and the highest amount of fat

**Advantages:**

- \* High Quality
- \* High yield



## ➤ Tissue Culture Seedlings of Olive and Paulownia Seed

### 🏠 Sustainable Bioproduct and Bioprocess Co.

[www.sbbproduct.ir](http://www.sbbproduct.ir)



#### Product Introduction:

The Paulownia plant is the second fastest growing plant after the balsa tree and is widely cultivated in all continents of Asia, Europe, Africa, America and Oceania, except for Antarctica. Paulownia has nine species, three of which are Fortunei, Tomentosa, and Elongata, and their hybrids are used for wood cultivation.

Olive includes approximately 20 species of small trees from the olive family and have small, single leaves that are opposite each other.

In the case of produced olive seedlings and colony propagation, in addition to propagation by micropropagation method, olive seedlings can also be propagated by stem cuttings, but since it is possible to produce disease-free seedlings in the traditional method, usually tissue culture method is also used to propagate this plant. On the other hand, due to the use of zatin hormone, olive tissue cultivation is costly and expensive. In addition, due to the bulkiness of the root cuttings, it is difficult to produce this plant in high circulation by propagation method with root cuttings.

**Founded:**

2014

#### Application:

- \* Paulownia plant is used to produce light and strong wood.
- \* Paulownia wood is the best option for furniture industry because it is light, strong and flexible. Paulownia wood is an excellent insulator and does not ignite up to 450 degrees Celsius.
- \* By planting 10,000 Paulownia plants in one hectare of land with a distance of 1x1 meter, 32 tons of fresh fodder and 16 tons of dry fodder can be produced annually. Moreover, Paulownia flowers are full of nectar and ideal for beekeeping. 625 Paulownia trees in one hectare can provide the necessary nectar for honey production in the amount of 800 to 1000 tons.
- \* The olive seedlings produced by this company are also used in olive farms for edible and food production.

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

- \* Paulonia has exhibited a high adaptability for cultivation in climates with a minimum temperature of -15 and a maximum of +45 and saline lands containing a maximum of 6 grams of salt per kilogram of soil. Each Paulownia tree needs only 20 liters of water per week.
- \* 625 Paulownia trees with a spacing of 4 x 4 meters can reach a diameter of 35 cm and a height of 18 meters in a period of 8 years and produce a total of 450 cubic meters of wood.

#### Advantages:

- \* Using the tissue culture method for reproduction in order to fight the CMV virus and vascular contamination with diseases such as phytoplasma and bacterial gomosis
- \* The possibility of producing large quantities of this plant by tissue culture method compared to the method of propagation with root cuttings (due to the limitation of the volume of Paulownia and olive root cuttings)
- \* Production of high-quality seeds and seedlings, resistant to harsh conditions and high production of wood, olives and wheat
- \* High productivity and production rate for farmers and gardeners





## ➤ Tissue Culture Seedlings

Fruit Trees and Ornamental and Medicinal Plants

### 🏠 Nahal Gostar Royan Co.

[www.nahalgostar.net](http://www.nahalgostar.net)



#### Product Introduction:

Propagation and production of the plant by tissue culture (micropropagation in vitro), leads to earlier fruiting, higher yield, reduction of disease contamination, providing the possibility of mechanization, production uniformity, less waste, longer economic life, and providing the possibility of using modern irrigation methods. Plants grown in this way are also resistant to lime, drought, heavy soil, clay soil, and soil-borne diseases.

#### Main Export Destination:

Neighboring countries of Iran and Uzbekistan

#### Exports History:

Up to 500,000 \$

#### Founded:

2009

### Application:

Tissue culture products include Gisela 6 rootstock (rootstock for cherry and sour cherry grafting), Blackberry, Pirouette, Paulownia with a low number of breaks, ornamental and medicinal plant of argan, four different grape cultivars, and GN rootstock with a low number of breaks.

*This product is a final B2B & B2C consumer product.*

#### Advantages:

- \* Disease-free seedlings
- \* Higher efficiency
- \* Higher plant yield



## ➤ Tissue Culture | Damask Rose

### 🏠 Royan Pajhooresh Azarbayjan Co.

[www.royanpa.com](http://www.royanpa.com)



#### Product Introduction:

Damask rose from the "Rosaceae" family is one of the most important rose species. In addition to its ornamental aspect, this plant is also valuable in the food, pharmaceutical, and health industries due to its abundant essential oil. Also because of its resistance to water shortage, the Damask rose is a good option for cultivation in dry areas and water-scarce regions.

The tissue culture method, in addition to accelerating propagation, also allows for multiplying plants in smaller spaces and is free from common contaminants.

This company produces 9 damask rose genotypes in Iran.

**Founded:**

2007

#### Application:

Ornamental Plants, food, pharmaceutical and health industries

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

All explants have a certificate of authenticity, health and identity card from a reputable research center in Iran.

#### Advantages:

- \* High production capacity of the product and the essential oil
- \* High salinity and lime resistance
- \* Ability to cultivate on sloping lands
- \* Cold-resistant

**International Standards or Permission:**

- \* ISO 9001





### ➤ Tissue Culture Seedlings | Potato Mini Tuber

🏠 Anbooh Kesht Esfahan Co.

[www.anbouhkesht.com](http://www.anbouhkesht.com)



#### **Product Introduction:**

The products include more than 50 cultivars of potato that are free of all plant pathogens and reduce the use of pesticides on the farm.

The productivity of seeds that are produced in this way is up to %70 higher than the seeds produced traditionally.

Healthy seedlings are propagated in vitro conditions and under an optimized light spectrum for potatoes.

#### **Application:**

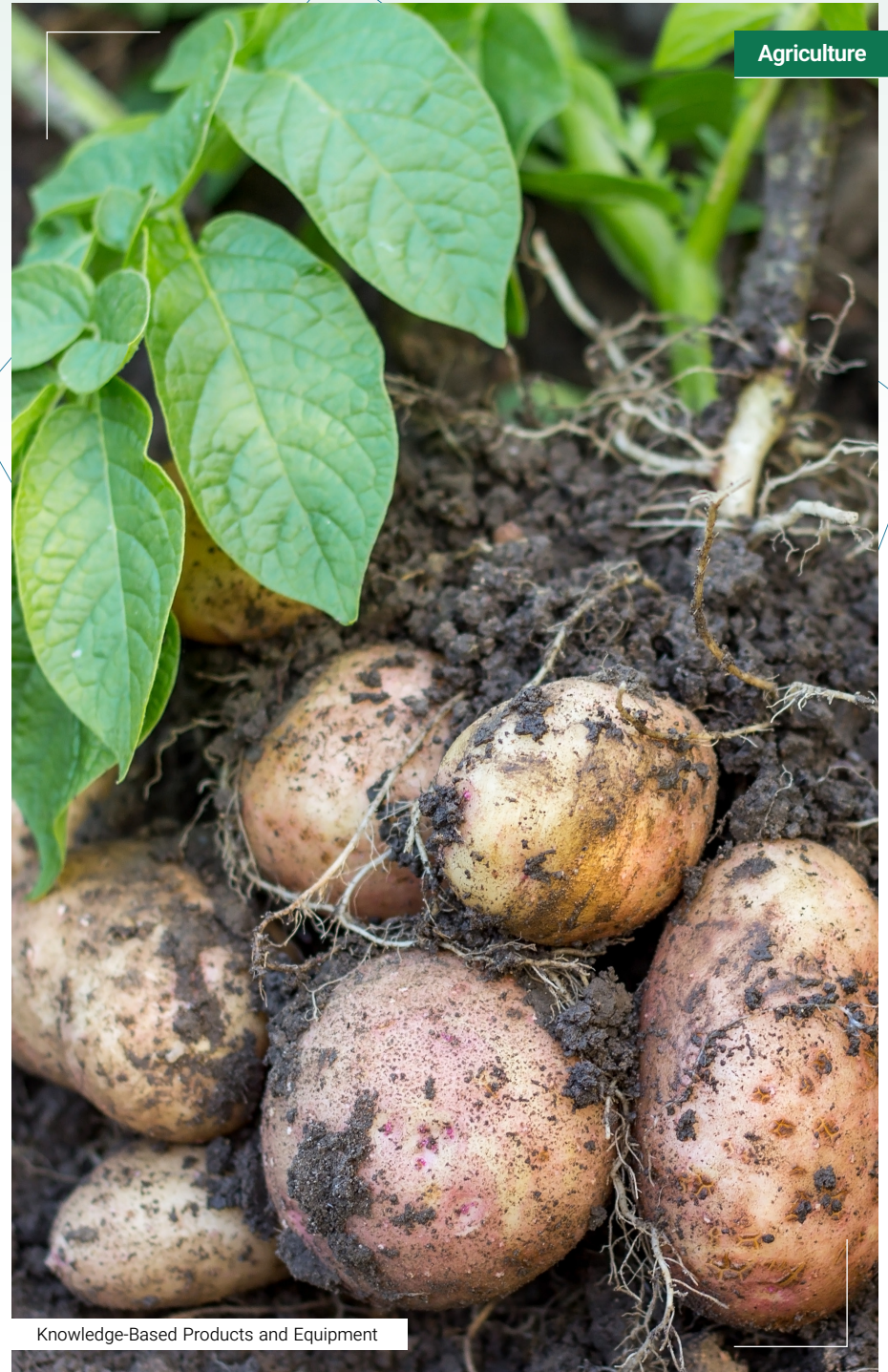
Potato seed tuber production in S, pb3, pb2, pb1 and SE classes

*This product is a final B2B & B2C consumer product.*

**Founded:**

2006

Agriculture



Knowledge-Based Products and Equipment



### ➤ Tissue Culture Seedling | Pineapple, Pyroderma and Black Zamophilia

#### 🏠 Zist Fanavaran Novin Giti Gene Co.

[www.ngiti.ir](http://www.ngiti.ir)



#### Product Introduction:

Tissue culture is one of the important pillars of biotechnology and is considered as one of the world advanced sciences, and compared to traditional plant breeding methods, it significantly accelerates the duration of breeding programs.

The production of tissue culture product for the production of tissue culture seedlings requires optimization of the protocol of other stages of in vitro propagation, including the selection of explants, appropriate establishment methods, processing and rooting treatments, and finally adaptation.

**Founded:**

2013

#### Application:

Production of completely uniform seedlings of pineapple, pyroderma and zamophilia black.

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

- \* Achieving a propagation protocol with minimal use of growth regulators, to avoid any genetic changes
- \* Production of completely uniform seedlings of pineapple, pyroderma and zamophilia black at the commercial level





## ➤ Tissue Culture Seedlings

Blueberry, Raspberry, Blackberry, Boysenberry, Loganberry, Norris Raspberry, Goji berry, Red currant

### 🏠 Cellule Fanavar Darou Co.

[www.cfdc.ir](http://www.cfdc.ir)



#### Product Introduction:

Various produced seedlings include blueberry seedlings (11 varieties), raspberry seedlings (11 varieties), blackberry seedlings (3 varieties), boysenberry seedlings, Loganberry seedlings, Norris raspberry seedlings, Goji berry seedlings, red currant seedlings, tissue culture explants free of GN virus and tissue culture explants free of GF virus.

Loganberry is a very desirable fruit with medicinal properties that is used in the treatment or prevention of diseases such as cancer, cardiovascular diseases.

Blueberry is a perennial shrub with many species. It has white, pink and red flowers. This plant has received worldwide attention in recent years due to its very interesting food and medicinal properties.

Blackberry is a garden-medicinal plant that more and more gardeners want to plant every day. Planting it through cuttings is also possible, but the quality is not good.

Despite the difficulty of production and the higher price, tissue culture seedlings have good quality.

#### Annual Production Capacity:

1,000,000 seedlings

#### Founded:

2013

## Application:

Medicinal properties of tissue culture seedlings produced in:

- \* Weight loss and useful for digestion
- \* Improvement of cracks
- \* Boosting immunity system
- \* Brain and heart health
- \* Dealing with asthma
- \* Women's health
- \* Prevention of cancer
- \* Antimicrobial properties

*This product is a final B2B & B2C consumer product.*

#### Advantages:

- \* Limited number of producers
- \* Higher quality
- \* Lower price



## ➤ Hybrid Seeds of Summer Crops

Greenhouse Cucumber, Tomato, Pepper and Open Field Cucumber, Tomato, Pepper, Melon and Watermelon

### 🏠 Negin Bazr Danesh Co.

[www.nbdseeds.com](http://www.nbdseeds.com)



#### Product Introduction:

Hybrid seed is obtained through crossing between two parents, which is a very popular method in the whole world and due to the natural nature of this method, it is more popular than other seeds. Hybrid seeds not only have a higher yield and product quality than other seeds, but also have a higher economic value. This company has produced 9 varieties of commercial greenhouse cucumber hybrids, 7 F1 greenhouse tomato hybrids, 2 outdoor tomato hybrids, 3 block pepper hybrids in three colors of red, orange, and yellow, and a spicy hot pepper hybrid variety.

#### Main Export Destination:

Afghanistan, Iraq

#### Exports History:

Up to 500,000 \$

#### Annual Production Capacity:

200 million hybrid seeds

#### Founded:

2009

#### Application:

- \* **Greenhouse seeds:** cucumber, tomato and pepper varieties
- \* **Outdoor seeds:** Melon, watermelon and outdoor tomato varieties

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

##### Cucumber cultivars:

- \* The shape of the product is elongated and short cucumbers
- \* Considerable variety of fruit shape and color in free cultivars
- \* Different number of flowers per node

##### Tomato cultivars:

- \* There is a significant variety in terms of shape (round to flat), size and color (red to tiger)
- \* High yield
- \* Rareripe

##### Pepper varieties:

- \* Types and colors produced (red, yellow, orange, green)
- \* Blocky and elongated shapes
- \* Relative tolerance to common greenhouse pests and diseases and drought and salt stress in most varieties

#### Advantages:

- \* Wide range of qualities
- \* High performance and product quality
- \* Adaptable to different climates
- \* Can compete with popular foreign varieties



## ➤ Hybrid Seeds of Coriander and Supersweet Corn

### 🏠 Ganjineh Bazr Sabz Fannavar Asia Co.

#### Product Introduction:

Many industrial and edible seed species are genetically modified for resistance to herbicides and pests. In addition, some species are genetically engineered to be more drought tolerant and to increase their nutritional value. These cultivars are obtained from the genetic combination (hybridization) of two paternal and maternal lines in the seed production stages.

In the past, due to the complexities in the production of hybrid seeds, especially the hybrid production of supersweet corn and coriander, seed production was mostly done by farmers traditionally.

**Founded:**

2018

#### Application:

- \* Supplying farmer's seeds
- \* Ability to cultivate as a second crop in crop rotation due to early maturity
- \* Ability to cultivate coriander seeds in low water areas

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

##### Supersweet corn:

- \* Resistant to tillering
- \* Strong plant
- \* The length of the growing period to reach the stage of harvesting maize and forage is equal to  $80 \pm 5$  days.
- \* The length of the main maize is 23 cm, the number of rows of corn grain on the main maize is 20 and the number of seeds on the row of the main maize is 48.

##### Coriander:

- \* Drought tolerance
- \* The cultivar is rareripe and can be harvested 20 days earlier than the conventional commercial variety.
- \* The product is coarse-grained and has a ball shape after harvest due to the very low percentage of fruit splitting.
- \* Estimated yield is 2-3 tons per hectare.
- \* Fertilizability

#### Advantages:

The product can replace traditionally produced seeds



## ➤ Hybrid Seeds of Ornamental Plants

Petunia (Petunia Hybrida) and Marigold (Tagetes Erecta)

### 🏠 Ham Ara Gene Royan Co.

#### Product Introduction:

These products are F1 hybrid cultivars of ornamental plants. Flower color, flower size, number of flowers, and growth rate of these plants are favorable, and also uniformity in their morphological features is desirable. Petunia and Marigold cultivars have a significant advantage over other cultivars. Seeds collected from F1 hybrid plants are completely sterile and are not able to germinate.

#### Exports History:

Up to 500,000 \$

#### Annual Production Capacity:

50 Kg

#### Founded:

2017

## Application:

Green spaces and gardening

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

- \* **Interspecies parsley hybrid cultivar:** two colors, dwarf and early flowering
- \* **African parsley hybrid cultivar:** big flowers, yellow and dwarf
- \* **Satin hybrid cultivar:** bright pink, relatively big flowers

#### Advantages:

Produced seeds have uniformity in plant height, color, flowering time and other important characteristics





## ➤ Camellina Oil Seed | Camellina Plant Oil

### 🏠 Bistoon Shafa Co.

[www.camelina.info](http://www.camelina.info)

کاملینا

#### Product Introduction:

Camelina is a genus within the flowering plant family Brassicaceae. The Camelina species, commonly known as false flax, are native to the Mediterranean regions of Europe and Asia. Camelina requires very little water and is more resistant to spring frosts than other oilseed crops. Camelina oil contains omega 6, 3, and 9 and vitamins. Camelina oil is a rich source of omega - 3 and therefore is used in non-food applications such as cosmetics, biofuels, etc. This oil also does not need any additives to increase shelf life due to its strong antioxidants  $\alpha$ -Tocopherol and vitamin E.

#### Main Export Destination:

Oman, UAE, Turkey

#### Annual Production Capacity:

1,000,000 tons

#### Founded:

2013

#### Application:

Cooking, cosmetics, biofuels

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

Pure and Ultra-Pure oil in bulk and retail packaging

#### Advantages:

Like Iranian saffron and pistachio, Iranian Camlina has a distinct taste and aroma.

#### International Standards or Permission:

- \* GMP
- \* ISO
- \* Halal certificate
- \* IR FDO



## ➤ Types of Biological Fertilizers

### 🏠 Nature Biotechnology Co.

www.biorun.ir



#### Product Introduction:

Biorun biofertilizers are used for producing healthy agricultural crops as well as increasing their growth and yield for a wide variety of plant species (crops, greenhouses, vegetables, and fruit and ornamental trees).

#### Exports History:

Up to 500,000 \$

#### Annual Production Capacity:

50000 tons

#### International Standards or Permission:

- \* Bioflash certification from the World Health Organization and registration of this product in Turkey and Thailand
- \* Biosan Gawah license to use the company's products in the field of organic plant products
- \* Permission to use the organic logo in products produced by the Iran Organic Association
- \* Microorganism registration in DSMZ international collection
- \* ISO 14001:2004
- \* ISO 9001:2008

#### Founded:

2000

### Application:

- \* Provides a rich source of phosphorus, organic matter, and sulfur
- \* nitrogen fixation, phosphorus and potassium solubilization, and micronutrient uptake enhancer
- \* Improves soil fertility, develops root system, and protects plants against a wide range of biotic and abiotic stresses
- \* Enhances crops tolerance toward environmental stresses and improves agricultural crops quality and yield

*These products are final B2B & B2C consumer products.*

### Technical Specifications:

1. **Biorun Biophosphate:** *Pediococcus acidilactici* (104 × 5 CFU/g), organic matter (%8), and mineral phosphorus (%20 based on P2O5)
2. **Phosphorun:** *Pediococcus acidilactici* (104 × 5 CFU/g), *Bacillus velezensis* (104 × 5 CFU/g), organic matter (%12), and mineral phosphorus (%10 based on P2O5)
3. **Phosphorun Plus:** *Pediococcus acidilactici* (104 × 5 CFU/g), *Bacillus velezensis* (104 × 5 CFU/g), organic matter (%6), mineral phosphorus (%15 based on P2O5), and sulfur (%12)
4. **Biofarm (for farming):** *Pseudomonas* sp. (>107×2 CFU/ml), *Azotobacter* sp. (>107×2 CFU/ml) and *Azospirillum* sp. (>107×2 CFU/ml)
5. **Biofarm (for gardening):** *Pseudomonas* sp. (>107×2 CFU/ml), *Azotobacter* sp. (>107×2 CFU/ml) and *Azospirillum* sp. (>107×2 CFU/ml)
6. **Probio 96:** *Bacillus subtilis* (>108 CFU/ml)
7. **Phosphate Behroshd:** *Pseudomonas* sp. (>107×2 CFU/ml)
8. **Trichorun P:** *Trichoderma harzianum* (>107 propagule/g)
9. **Trichorun G (for houseplants):** *Trichoderma harzianum* (>107 propagule/g)
10. **Bioguard:** *Trichoderma harzianum* (>106 propagule/g), *Bacillus velezensis* (>107×2 CFU/g), and humic acid (%5)
11. **Potasse Behroshd:** *Pseudomonas putida* (>107×2 CFU/ml)
12. **Roshdafza:** *Pseudomonas* sp. (>107×2 CFU/ml), *Azotobacter* sp. (>107×2 CFU/ml) and *Azospirillum* sp. (>107×2 CFU/ml)
13. **Aminobiorun:** *Bacillus velezensis* (105 CFU/ml), total aminoacid (%11), organic matter (%20), nitrogen (%2.5), phosphorus (%2) and potassium (%1)
14. **Biohumic acid SC:** *Bacillus velezensis* (>106×2 CFU/ml), humic acid (%12), fulvic acid (%2) and potassium (%1)
15. **Biohumic acid WP:** *Bacillus velezensis* (>106×2 CFU/g), humic acid (%60), fulvic acid (%1) and potassium (%8)
16. **Biosoy:** *Bradyrhizobium japonicum* (>107×2 CFU/ml)



## ➤ Stimulants and Biofertilizers

Nitrogen, Phosphate, Potassium, Sulfur, Zinc and Iron

### 🏠 Green Biotech Co.

[www.greenbiotech-co.com](http://www.greenbiotech-co.com)



#### Product Introduction:

This category of products includes 6 biofertilizers, which are converted from insoluble and inaccessible sources in the soil into a form that can be absorbed by plants using the power of bacteria and elements needed for plant growth. These products include:

**Azeto Barvar:** This product contains *Pantoea agglomerans* O4 strain bacteria that actively fix air nitrogen in the form of ammonium ions that can be absorbed by plants.

**Fertilizer phosphate-2:** This product contains phosphate-dissolving bacteria, which by using two mechanisms of organic acid secretion and phosphatase enzyme, causes the breakdown of insoluble phosphorus compounds in the soil, and as a result, allows plants to absorb this element.

**Peta Barvar-2 (potassium biofertilizer):** It contains two types of potassium-dissolving bacteria that, by secreting organic acids around the root, break down the insoluble potassium compounds in the soil around the root and by releasing potassium ion, cause optimal absorption.

**Sulfobarvar-1 (sulfur oxidizing bacteria):** This product contains two types of sulfur-oxidizing, terricolous and very active *Thiobacillus* bacteria, which by microbial oxidation of sulfur in the soil and production of sulfuric acid, reduces the acidity of the soil and causes the dissolution and absorbability of nutrients such as phosphorus, iron, zinc, copper, manganese.

**Ferozinc Barvar (zinc and iron biofertilizer):** iron and zinc are essential ele-

**Founded:**  
2003

ments for the growth of all plants. Siderophores are organic compounds with low molecular weight and strong and specific affinity to bind with iron III and play an important role in iron nutrition of plants. On the other hand, the zinc element is mostly present in the molecular network structures of the soil and is unavailable to the plant. Fertile iron and zinc biofertilizer contains two strains of zinc-dissolving and siderophore-producing *Pseudomonas japonica* bacteria that can withstand temperatures up to 45 degrees, acidity 5-9 and salinity up to 7%.

**Soybean special fertilizer (biological inoculant):** Soybean special biological inoculant contains bacteria of the genus *Bradirhizobium japonicum*, which specifically stimulates nodulation on the roots of the soybean plant and fixes the molecular nitrogen in the air and provides it to the soybean plant.

#### Application:

Supplying nutrients needed by plants from insoluble sources in soil and air

*These products are final B2B & B2C consumer products.*

#### Technical Specifications:

Product name	Bacteria used	Bacteria count (CFU/gr)
Azeto Barvar	<i>Pantoea agglomerans</i> O4 strain	10 <sup>7</sup> to 10 <sup>8</sup>
Fertilizer phosphate-2	<i>Pseudomonas putida</i> strain P13 and <i>Pantoea agglomerans</i> strain P5	
Peta Barvar-2 (potassium biofertilizer)	<i>Pseudomonas koreensis</i> strain S14 and <i>Pseudomonas vancouverensis</i> strain S19	
Sulfobarvar-1 (sulfur oxidizing bacteria)	<i>Thiobacillus</i> strain T40, T95	
Ferozinc Barvar (zinc and iron biofertilizer)	<i>Pseudomonas japonica</i> FZ.29-1 FZ.21-1 strains	
Soybean special fertilizer (biological inoculant)	<i>Bradirhizobium japonicum</i>	

#### Advantages:

- \* Reducing the cost of preparing chemical fertilizers
- \* Alternative to chemical fertilizers
- \* Production of healthy and organic products
- \* Reducing the environmental risks of using chemical fertilizers
- \* Improving soil fertility

#### Exports History:

Up to 500,000 \$



## ➤ Types of Chelated Fertilizers

### 🏠 Sodour Ahrar Shargh Co.

www.khazra.ir

**KHAZRA**  
خضراء

#### Product Introduction:

Advanced chelate technology is a great evolution in chemistry, the output of which is the synthesis of structures in various branches of science, such as agriculture. In the technology of advanced chelates, using the self-assembly method, chelates are produced that have much higher absorption and efficiency compared to previous structures.

In the field of agriculture, based on this technology, green chelated fertilizers (Khazra) have been produced as a new generation of fertilizers. Due to the advanced chelate structure in Khazra chelated fertilizers, plant roots and leaves can absorb them much better and easier than common chemical fertilizers as well as chelated fertilizers available in the market such as EDDHA and EDTA. This category of products includes the following products with Khazra trade name:

- Iron chelate 9%
- Iron chelate 7%
- Microcomplete chelate
- Zinc chelate
- Manganese chelate
- Copper chelate
- Boron chelate
- Molybdenum chelate
- Calcium chelate
- Magnesium chelate
- NPK chelate
- Potassium chelate
- Phosphorus chelate
- Nitrogen chelate
- Silicon
- Super chelate

#### Application:

- \* Preventing chelation with other elements in the soil

*These products are final B2B & B2C consumer products.*

#### Technical Specifications:

- \* Ability to be absorbed and consumed through the soil
- \* Control Release feature
- \* Stability in a wide pH range

#### Advantages:

- \* No hormones
- \* High stability of the structure against the physicochemical changes of the environment
- \* Has the maximum amount of absorbable element due to the advanced technology in the production method
- \* Has a controlled release feature
- \* No environmental pollution
- \* Can be used both through the soil and through foliar spraying





## ➤ Micronutrient Chelated Fertilisers

Chelate Fertilisers medicinal Plants

### 🏠 Shimi Karan Sabz Touba Co.

[www.toubafert.ir](http://www.toubafert.ir)



#### Product Introduction:

Single element iron micronutrient fertilizers are provided in solid form with three chelating agents. These products are recommended for farmers who suffer from yellow leaf disease and iron deficiency in their fields or crops. As mentioned, these products can be provided in various packages according to customers' requests.

**Annual Production Capacity:**

1000 tons

**Founded:**

2014

#### Application:

Iron deficiencies are mainly manifested by yellow leaves due to low levels of chlorophyll.

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

- \* Iron 6%
- \* soluble Iron 6%
- \* chelated Iron with EDDHSA or EDDHA 6%

#### Advantages:

Similar quality to world famous brands and lower prices than them



## ➤ Microbial Insecticides

Biolep (SC), Biolep (WP), Bioflash, Protein Hydrolysate, PredaS

## 🏠 Nature Biotechnology Co.

www.biorun.ir



### Product Introduction:

Biorun bioinsecticides consisting of *Bacillus thuringiensis* subsp. *kurstaki* and *B. thuringiensis* subsp. *israelensis* control Lepidopteran and Dipteran larvae, respectively.

Protein hydrolysate is an attractant which can control fruit flies.

PredaS is a predator which can control key pests in greenhouses such as thrips.

#### Main Export Destination:

Turkey

#### Exports History:

Up to 100,000 \$

#### Annual Production Capacity:

100 tons

#### Founded:

2000

### Application:

- \* Biolep: Controls Lepidopteran larvae
- \* Bioflash: Controls Dipteran larvae especially vector and nuisance mosquitoes
- \* Protein hydrolysate: Controls fruit flies
- \* PredaS: Controls sucking pests such as thrips, whiteflies, aphids, etc.

*These products are final B2B & B2C consumer products.*

### Technical Specifications:

- \* **Biolep WP:** *Bacillus thuringiensis* subsp. *kurstaki* (>109 CFU/g)
- \* **Biolep SC:** *Bacillus thuringiensis* subsp. *kurstaki* (>108 cells/ml)
- \* **Bioflash:** *Bacillus thuringiensis* subsp. *israelensis* (108×5 cells/ml)
- \* **Protein hydrolysate:** hydrolyzed protein
- \* **PredaS:** 1000 nymphs and adults of *Orius laevigatus*

### Advantages:

Biorun bioinsecticides are narrow-spectrum insecticides with no detrimental effects on non-target organisms (including human, aquatic animals, livestock, and beneficial insects such as honey bees).

Biorun Bioinsecticides are economically proper alternatives for a wide range of chemical and imported biological pesticides currently used for the control of Lepidopteran and Dipteran pests.

Biorun bioinsecticides has no pre-harvest interval.

Biorun bioinsecticides can help the protection of natural resources.

### International Standards or Permission:

- \* Bioflash certification from the World Health Organization and registration of this product in Turkey and Thailand
- \* Biosan Gawah license to use the company's products in the field of organic plant products
- \* Permission to use the organic logo in products produced by the Iran Organic Association
- \* Microorganism registration in DSMZ international collection
- \* ISO 14001:2004
- \* ISO 9001:2008



## ➤ Technical and Formulation of Agrochemicals

Chloridazon Technical

### 🏠 Bisetoon Kermanshah Co.

[www.moshabak.co](http://www.moshabak.co)



#### Product Introduction:

Chloridazone with systematic effect on photosynthesis of broadleaf weeds leads to disruption of their photosynthesis system and leads to the elimination of broadleaf weeds, hence the problem of controlling broadleaf weeds in fields with broad crops. The leaves, especially the sugar beet crop, are completely solved and this product is designed and manufactured to be used exclusively on the beet crop to control broadleaf weeds.

#### Main Export Destination:

Turkey

#### Exports History:

Up to 300,000 \$

#### Annual Production Capacity:

1200 tons

#### Founded:

1991

#### Application:

This herbicide is used to control broad-leaved weeds of sugar beet-forage-root.

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

- \* **Percent of active ingredient:** 92%
- \* **PH:** 7-8
- \* **Percent humidity:** 1%
- \* **Melting point:** 19-200 °C
- \* **Appearance:** in the form of a light brown solid powder

#### Advantages:

- \* High quality
- \* Reasonable finish price
- \* Being exclusive

#### International Standards or Permission:

This Pesticides is produced according to the FAO international standard



## ➤ Technical and Formulation of Agrochemicals

Pyriproxyfen Technical

### 🏠 Bisetoon Kermanshah Co.

[www.moshabak.co](http://www.moshabak.co)



#### Product Introduction:

pyriproxyfen is a group of juvenile hormone analogues that have a structure more or less similar to juvenile hormone and disrupt the function of insect growth regulators. These compounds are able to produce the effects that youth hormones have on insects. The main function of the youth hormone is to regulate the time required for each of the immature ages of insects, in addition to which it is effective in the formation of pheromone glands, attachment glands and the development of the ovaries of adult insects.

#### Main Export Destination:

Turkey

#### Exports History:

Up to 300,000 \$

#### Annual Production Capacity:

1200 tons

#### Founded:

1991

#### Application:

Pyriproxyfen is used to control many pests such as thrips, bedbugs, aphids, whiteflies, mosquitoes and termites in crops such as rice, corn, potatoes, vegetables, sugar beets, fruit trees and cotton. Pyriproxyphen is used in the form of a water-emulsifiable liquid to inhibit citrus weevils, cotton honey and pistachio psyllids.

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

Molecular formula: C<sub>20</sub>H<sub>19</sub>N<sub>3</sub>O<sub>3</sub>

#### Advantages:

- \* High quality
- \* Reasonable finish price
- \* Being exclusive

#### International Standards or Permission:

This Pesticides is produced according to the FAO international standard





## ➤ Technical and Formulation of Agrochemicals

Acetamine Prides Technical Insecticide

### 🏠 Bisetoon Kermanshah Co.

[www.moshabak.co](http://www.moshabak.co)



#### Product Introduction:

Acetamipride is available under the brand name Mospilan SP 20%. This insecticide is one of the nicotinoid-like insecticides (neonicotinoid) that has a gastrointestinal contact effect with very strong systemic properties and high local penetration. This compound is formulated as a water-soluble powder (SP %20) to fight against all sucking pests and larvae. Due to high vapor pressure (V.P.: 1x3-10), it has a good smoking state and has a good effect on soil pests. It has an insecticidal effect with high action rate but low toxicity for mammals.

#### Main Export Destination:

Turkey

#### Exports History:

Up to 300,000 \$

#### Annual Production Capacity:

1200 tons

#### Founded:

1991

#### Application:

Acetamipride is a systemic insecticide with smoking, contact, digestive and local penetration effects from the group of neonicotinoid insecticides that is used to control citrus cushions, pistachio psyllids, worms and spotted minnows of apple trees.

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

- \* The resulting product is white crystal with high purity that can be used for formulation
- \* **Molecular mass:** 24 g
- \* **Color:** White
- \* **Melting point:** 89-93 °C

#### Advantages:

- \* High quality
- \* Reasonable finish price
- \* Being exclusive

#### International Standards or Permission:

This Pesticides is produced according to the FAO international standard



## ➤ Technical and Formulation of Agrochemicals

2,4D Technical Herbicide

### 🏠 Bisetoon Kermanshah Co.

[www.moshabak.co](http://www.moshabak.co)



#### Product Introduction:

2,4D is a herbicide, systemic, selected from the phenoxyacetic acid group. The effect of this herbicide is to inactivate the enzyme indole acetoxidase and subsequently increase the concentration of auxin in plant tissues.

How the herbicide is absorbed and transferred in the plant: The salt type of this herbicide is absorbed by the roots and its ester type is absorbed by the aerial parts. Tofordi accumulates in the transfer plant (via the simplast) and at meristematic sites.

#### Main Export Destination:

Turkey

#### Exports History:

Up to 300,000 \$

#### Annual Production Capacity:

1200 tons

#### Founded:

1991

### Application:

This herbicide is used to control broadleaf weeds in wheat, barley, corn, sorghum and sugarcane fields in the amount of 1 to 2 liters.

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

- \* **2,4D melting temperature:** 117-119 °C
- \* **Water solubility:** 46 mg/L

#### Advantages:

- \* High quality
- \* Reasonable finish price
- \* Being exclusive

#### International Standards or Permission:

This Pesticides is produced according to the FAO international standard



## ➤ Technical and Formulation of Agrochemicals

Carbendazim Technical Fungicide

### 🏠 Bisetoon Kermanshah Co.

[www.moshabak.co](http://www.moshabak.co)



#### Product Introduction:

Carbendazim is a systemic fungicide that is absorbed through roots and leaves. It is used to fight many ascomycetes and basidiomycetes. It is also used to disinfect seeds before sowing.

#### Main Export Destination:

Turkey

#### Exports History:

Up to 300,000 \$

#### Annual Production Capacity:

1200 tons

#### Founded:

1991

#### Application:

The fungicide carbendazim is also used to disinfect the planting bed of cacti. For disinfection should be used with a higher dose than the standard. It is also used to treat and prevent cactus seedlings.

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

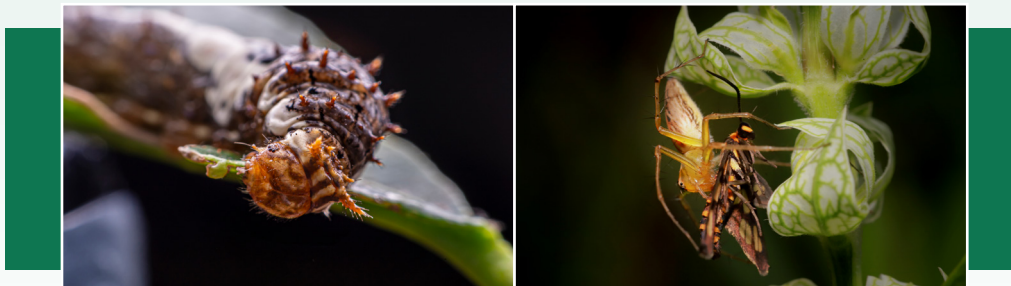
- \* **Molar mass:** 191.19 g mol<sup>-1</sup>
- \* **Appearance:** Light gray powder
- \* **Melting point:** 302-307 °C
- \* **Water solubility:** 8 mg/L

#### Advantages:

- \* High quality
- \* Reasonable finish price
- \* Being exclusive

#### International Standards or Permission:

This Pesticides is produced according to the FAO international standard



## ➤ Chemical Pesticides and Pheromones

### 🏠 Tabiatdoost Nikan products Co.



#### Product Introduction:

These insect-attracting pheromones are a secreted or excreted chemical agent that triggers a social response in members of a species and ultimately attracts insects.

The company's synthesized pheromones consist of one or more chemicals that have been identified from the natural substance secreted by the female species of the insect.

These pheromones are injected in very small amounts (usually 2 mg) into special rubber capsules and packaged, labeled, and supplied in special aluminum foils.

The pheromone attracting *Kermania pistaciella* Amsels, houseflies and various plant pheromones that are used to eliminate pests of fruit trees such as apples, peaches, etc., have been produced using a new and optimal formulation.

**Founded:**

2013

#### Application:

- \* Attracting and repelling various insects and pests from agricultural fields and orchards such as apples, plums, etc., as well as eliminating worm pests from pistachio trees.
- \* Housefly pheromone to eliminate houseflies and insects

*This product is a final B2B & B2C consumer product.*

#### Technical Specifications:

- \* Housefly pheromone that works through the alcohol functional group reaction
- \* *Kermania pistaciella* Amsels pheromone through several stages of synthesis from Diol compounds

#### Advantages:

- \* Highly efficient formulation in attracting and destroying insects and pests
- \* Safe for human and environment
- \* Manufacturing the product on an industrial scale for the first time
- \* Competitive price in proportion to high quality products





## ➤ Biological Control Agents

### 🏠 Hekmataneh Biological Systems Co.

#### Product Introduction:

Biological control or biocontrol is a method of controlling pests such as insects, mites, weeds, and plant diseases using other organisms. It relies on predation, parasitism, herbivory, or other natural mechanisms, but typically also involves an active human management role.

Natural enemies of insect pests, also known as biological control agents, include predators, parasitoids, pathogens, and competitors. Biological control agents of plant diseases are most often referred to as antagonists. Biological control agents of weeds include seed predators, herbivores, and plant pathogens.

This method is especially suitable for areas such as greenhouses and large artificial environments. The purpose of biological control is not to eradicate pests that damage plants, but to reduce their population to the point where they cause the least damage to the crops or the environment.

The biological control agents produced by this company include the predatory mites "*Typhlodromus baghdasarjan*", "*Amblyseius swirskii*", "*Blattisocius mali*", and "*Orius laevigatus*".

#### Annual Production Capacity:

600 biological agents

#### Founded:

2016

#### Application:

- \* "*Typhlodromus baghdasarjan*" predatory mite is effective in eliminating "*Tetranychus urticae*" (common names include "red spider mite" and "two-spotted spider mite"), "*Diaspididae*" and weevils on fruit trees. In greenhouses, it also feeds on "two-spotted spider mite", thrips and eggs from different biological stages of "Greenhouse whitefly" and inhibits the increase in the population of them.
- \* The predatory mite "*Amblyseius swirskii*" inhibits "two-spotted spider mite", various stages of thrips and eggs, and different biological stages of "Greenhouse whitefly" in greenhouses.
- \* The predatory mite "*Blattisocius mali*" can be used to control edible mushroom pests, including *Sciaridae* and *Phoridae*, as well as greenhouse insects that spend the pupal stage in the soil, such as the vegetable "*liriomyza Sativa*".
- \* *Orius laevigatus* feeds on different stages of thrips life, including larvae, nymphs, and imago (especially inside peppers), eggs, and nymphs of the greenhouse whitefly, and controls their populations.

***This product is a final B2B & B2C consumer product.***



Second Chapter

# Agricultural Equipment and Machinery





# 2<sup>ND</sup> CHAPTER

First Chapter

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## Agricultural Equipment and Machinery

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Sections

- Planting, Growing, and Harvesting Machinery* ○
- Irrigation Equipment* ○



## ➤ Mechanical Seed Drill Series

### 🏠 Hamedan machine Barzegar Co.

[www.machinebarzegar.ir](http://www.machinebarzegar.ir)



#### Product Introduction:

These insect-attracting pheromones are a secreted or excreted chemical agent that triggers a social response in members of a species and ultimately attracts insects.

The company's synthesized pheromones consist of one or more chemicals that have been identified from the natural substance secreted by the female species of the insect.

These pheromones are injected in very small amounts (usually 2 mg) into special rubber capsules and packaged, labeled, and supplied in special aluminum foils.

The pheromone attracting *Kermania pistaciella* Amsels, houseflies and various plant pheromones that are used to eliminate pests of fruit trees such as apples, peaches, etc., have been produced using a new and optimal formulation.

#### Annual Production Capacity:

1000 machines

#### Founded:

2014

#### Application:

Agricultural machinery industry

*This product is a final B2B & B2C equipment.*

#### Technical Specifications:

- \* Total width: 270 cm
- \* Number of rows: 21-17 rows
- \* Total weight: 660 kg
- \* Seed tank volume: 297 liters
- \* Fertilizer tank volume: 297 liters

#### Advantages:

- \* Saving on chemical fertilizers
- \* Reducing the use of tractors in agricultural land
- \* High yield of the crop in comparison with the conventional method
- \* The presence of plant nutrients in the soil
- \* Putting seeds and fertilizer separately in the soil
- \* Equipped with all kinds of sower and fine grain tank and diagonal distributor
- \* High quality in planting cereals, legumes and oil seeds in the form of flat planting, stack planting and furrow planting according to the irrigation method or soil conditions in three designed models of this type of seed planting

#### International Standards or Permission:

- \* ISO 9001
- \* ISO 9002
- \* 7256 isiri Iran





## ➤ Seedling Tray Production Line (Model: FM)

### 🏠 Fannavarán Kasht Zagros Co.

[www.fakaz.ir](http://www.fakaz.ir)



#### Product Introduction:

This line consists of several parts:

1. **Mixer:** Used to uniform fertilizer, soil, and other required materials.
2. **Soil filler:** Used to uniformly fill seedling tray cells.
3. **Automatic seeding line:** The plate press machine creates holes with a definite and adjustable depth inside the seedling tray and then under the seed drum, the seeds are absorbed in the tiny holes embedded in the seed drum by creating suction by a pneumatic system.
4. **Cocopeat and vermiculate coverer:** At this stage, the appropriate amount of soil subgrade is automatically dumped on the seeds and then the surface is smoothed well.
5. **Seedling tray irrigation:** The seedling tray is irrigated and prepared to be placed inside the greenhouse.

#### Main Export Destinations:

Iraq, Uzbekistan

#### Exports History:

Up to 500,000 \$

#### Annual Production Capacity:

40 lines per year

#### Founded:

2011

### Application:

Planting machines

*This equipment is the product production line.*

#### Technical Specifications:

- \* **Maximum power consumption:** 12 kw/h
- \* **Working capacity:** 850 trays per hour
- \* **Planting accuracy:** %98
- \* **Vacuum pump:** 1.5 kw
- \* **Compressed air consumption:** 300 liters per minute
- \* **Water consumption:** 50 liters per minute
- \* **Movement system:** Conveyor with speed control capability
- \* **Cavity system:** intelligent and programmable
- \* **General dimensions:** length 9 m, width 2.7 m, height 2 m
- \* **Weight:** 2500 kg

#### Advantages:

- \* High performance speed
- \* All sections can be controlled separately, automatically or manually

#### International Standards or Permission:

- \* ISO 9001
- \* CE
- \* 7256-1 isiri Iran



## ➤ Intelligent Agriculture Spraying Drone

### 🏠 SimorghSoha Flight Technology Co.

[www.simorghsoha.ir](http://www.simorghsoha.ir)



#### Product Introduction:

The intelligent agricultural sprayer drone produced by Simorgh Soha company, with the ability to fly for 10 to 15 minutes, can spray all kinds of solutions and poisons on fields and gardens. This product has automatic pilot technology and the possibility of flying without the intervention of the pilot; So that by specifying the area of the agricultural land and adjusting the speed and amount of spraying, the drone will automatically turn on and perform the spraying and return to its initial location and turn off. If the drone's battery or poison tank runs out, or if there is any disturbance in the drone's performance, the drone will automatically land at the designated location by changing the flight mode. This drone uses a set of sensors to detect surrounding obstacles in the form of microwave radar and has the ability to detect surrounding obstacles as well as obstacles on the ground below it, so it does not hit or crash into any obstacles while flying and adjusts its height based on the obstacles and elevations of the ground. It always maintains a certain height from the cultivated area.

#### Annual Production Capacity:

500 Drones

#### Founded:

2019

#### Application:

- \* Spraying fields and gardens
- \* Fertilizing fields and gardens
- \* Spraying solutions and foliar spraying on fields and gardens

*This product is a final B2B & B2C equipment.*

#### Technical Specifications:

- \* **Tank weight:** 10 to 70 liters according to customer's order
- \* **Flight duration:** 10 to 17 minutes
- \* **Spraying efficiency:** 1 to 4.5 hectares per flight
- \* **Radio range:** 1.5 km
- \* **Number of nozzles:** 4 to 8 nozzles according to the customer's order
- \* It has an obstacle detection radar and a height adjustment radar with the product
- \* Capability to be programmed for all types of crops

#### Advantages:

- \* Lower price compared to foreign counterparts
- \* Support and after-sales service
- \* Possibility of customization based on customer needs
- \* Possibility of customization based on environmental conditions and type of task



## ➤ Combine

### 🏠 Hamedan Machine Barzegar Co.

[www.machinebarzegar.ir](http://www.machinebarzegar.ir)



#### Product Introduction:

In agricultural machines, a combine is a device that performs several tasks in combination and at the same time (alternating between them or one after another). Combine machines are seen in two groups of planting machines and harvesting machines, and basically by adding a name to it, the subject of the activity of that combination set is determined. Among these combines, we can mention combine (planting machine) and harvester combine (harvesting machine).

The application of conservative technology in the cultivation of cereals and legumes has always been a challenge for experts and farmers. The HMB 240 combine is a machine that is used in different crop and field conditions to harvest, thresh, separate and clean whole grains. This device gives the best results in stony fields due to being equipped with metal covers. The mentioned combine is of conservative type and collects the straw in the tank in the form of pounded and crushed.

#### Annual Production Capacity:

30 machines per year

#### Founded:

2001

#### Application:

Conservation Agriculture

*This product is a final B2B & B2C equipment.*

#### Technical Specifications:

- \* Length: 780 cm
- \* Width: 270 cm
- \* Height: 375 cm
- \* Weight: 7100 kg
- \* Straw tank capacity: 10 cubic meters
- \* Grain tank capacity: 2000 kg
- \* Engine power: Benz 240 hp

#### Advantages:

- \* Saving energy, time and cost
- \* Fewer parts, more efficiency, easy repair and less failure
- \* An innovative high-accuracy separator system
- \* Equipped with an advanced dust collection system for the cooling and ventilation system of the engine
- \* According to the report of the test group, the total amount of seed fall and breakage is less than 1%
- \* Two separate storage tanks for straw and seeds and the ability to harvest mother seeds
- \* Multiplying the income for the farmer and the user
- \* Cleaning the ground from stubble and weed seeds and protecting soil microorganisms

#### International Standards or Permission:

- \* ISO 9001
- \* ISO 9002
- \* 7256 isiri Iran



## ➤ Grain and Straw Combine Harvester

### 🏠 Derogar Kordestan Co.

[www.dkco.ir](http://www.dkco.ir)



#### Product Introduction:

This combine harvester is used for simultaneous harvesting of grains and straw, with the ability to clear the soil of straw and weed seeds and protect the soil microorganisms, and it has separate tanks for straw and seeds.

By shrinking the threshing unit, a unit for collecting, crushing, and transferring straw is installed in this machine.

This machine is simpler compared to other combines, with lower maintenance costs, easier repair, and fewer parts.

**Annual Production Capacity:**

30 machines per year

**Founded:**

1992

#### Application:

Agricultural harvesting machines

*This product is a final B2B & B2C equipment.*

#### Technical Specifications:

- \* **Length:** 780 cm
- \* **Width:** 270 cm
- \* **Height:** 375 cm
- \* **Weight:** 7500 kg
- \* **Straw tank capacity:** 10 m<sup>3</sup>
- \* **Grain tank capacity:** 2700 kg
- \* **Engine power:** Benz 240 hp - Man 320 hp
- \* **Threshing drum:** Hammer with dry blade
- \* **Winnowing:** Sieve with vacuum fan
- \* **Grain unloading:** Moving helix
- \* **Straw unloading:** Hydraulic

#### Advantages:

- \* Equipped with straw chopper
- \* Sturdy body
- \* High operating speed due to hydrostatic system

**International Standards or Permission:**

7256 isiri Iran





## ➤ Disc Type Sugar Beet Digger

🏠 **Aria Sarv Sepehr Alvand Co.**

[www.iranaryasa.ir](http://www.iranaryasa.ir)



### Product Introduction:

After defoliating the beet leaves, the beets could be digged by beet digger. Then, they were directed from rotary discs to Archimedes screws, which clean and transfer beets to the central part behind the implement and windrow them in one row on the earth.

The disc digging component of the digging device reduces the excavated soil volume, as well as the working resistance, and improves the ability of breaking soil. This digger exhibits better performances and adaptation on the dry land than conventional plough type diggers with producing the smallest possible number of clods. This machine should be operated with six-spline 540 RPM PTO shaft.

### Main Export Destinations:

Azerbaijan, Armenia, Afghanistan, Iraq

### Exports History:

500,000\$ - 1,000,000\$

### Annual Production Capacity:

50 machines per year

### Founded:

2012

### Application:

Agriculture industry

*This product is a final B2B & B2C equipment.*

### Technical Specifications:

- \* **No of digging rows:** 3, 4 and 6
- \* **Power required:** 90 to 110 hp
- \* **Width:** 3.3 m
- \* **Length:** 1.8 m
- \* **Weight:** 1750 kg
- \* **Hitching type:** Mounted
- \* **PTO Speed:** 540 rpm

### Advantages:

- \* Beet lifting without loss of any portion of it, even to the tails.
- \* Better performance & adaptation on the dry and wet lands than conventional plough type diggers.
- \* Reducing the excavated soil volume, as well as the working resistance.
- \* Mounted implement with excellent manoeuvrability.
- \* Proper separation of crop residue from the beets.
- \* Adjusting the space between digging discs depending on the size of beets.
- \* Using wear resistant alloy steel in the manufacturing process of discs.
- \* Soil instead of being broken into clods is left in a finely pulverized condition



## ➤ Laser Land Leveling System

🏠 **Dez Novin Sanaat Co.**

[www.deznovin.com](http://www.deznovin.com)



### Product Introduction:

Laser land leveling is one of the most important technologies available to farmers and part of modern agriculture irrigation systems. It is a way of creating flat fields for planting that is more detailed and reliable than visual judgment or land surveyance. The smart laser control system uses the receiver and transmitter and the control box in the tractor cab to do the leveling work. System components include transmitter, power board, digital board, control box, socket board, display, and receiver. A laser leveling system is installed on the scraper and trench for easier leveling and to increase the drilling accuracy.

### Main Export Destinations:

Turkey, Azerbaijan, Iraq, Pakistan, India

### Exports History:

Up to 500,000 \$

### Founded:

2001

### Application:

Agricultural lands and road construction

*This product is the final B2B equipment.*

### Technical Specifications:

- \* **Transmitter accuracy:** 3 mm per 100 meters
- \* Receive laser beam up to a radius of 1500 mm
- \* Control box available in the cabin with high usability

### Advantages:

Programming, design and production of control boxes and receivers

### International Standards or Permission:

- \* ISO 9001
- \* ISO 4406



## ➤ Level Meters for Solid Materials Stored in Silos

### 🏠 Ajhman Sanaat Pajhoohan Namdar Espadana Co.



#### Product Introduction:

This product is installed on the wall or roof of the tanks and uses a 77 GHz radar to calculate the volume of materials inside the tanks by the surface integrals method. This product calculates the two-dimensional surface coordinates based on the time phase difference of the 12 signals received by its transmitters and the application of processing algorithms. Then these coordinates are sent to the processor to perform the necessary calculations and integration operations.

Product components:

- \* Electronic board includes power supply board and main board
- \* IWR1642 chip
- \* STM 32 F133RCT6 microcontroller for integration and processing

**Annual Production Capacity:**

100 pcs per year

**Founded:**

2017

#### Application:

Measuring the level of solid materials stored in silos (such as wheat, cement, gypsum, plastics, etc.)

*This product is the final B2B equipment.*

#### Technical Specifications:

Product details:

- \* **Type:** 77 GHz radar
- \* **Measurement range:** 70 meters
- \* **Measurement accuracy:** 0.01 meters
- \* **Energy consumption:** 1000 MW
- \* **Number of viewing angles:** 2
- \* **Operating temperature:** -40 °C to +90 °C

#### Advantages:

- \* Ability to measure height up to 70 meters
- \* The accuracy of distance perception (up to one centimeter) in the worst environmental conditions
- \* Using IEEE bandwidth, frequency and signal strength
- \* Ability to connect to industrial networks by CANBUS and TCP/IP protocols
- \* DATA recorder



## ➤ Trencher

### 🏠 Dez Novin Sanaat Co.

[www.deznovin.com](http://www.deznovin.com)



#### Product Introduction:

The trencher is a piece of construction equipment used to dig trenches, especially for laying pipes or electrical cables, installing drainage, or in preparation for trench warfare.

The trencher is one of the construction machines in the group of continuous drilling machines. The advantage of this machine over an excavator is that it spends much less time digging a canal. This machine is used for drilling and drainage of agricultural lands as well as replacing pipes with artificial and natural filters.

#### Exports History:

Up to 500,000 \$

#### Main Export Destinations:

Turkey, Azerbaijan, Iraq, Pakistan, India

#### Founded:

2001

#### Application:

- \* Drilling in agricultural fields and salt marshes
- \* Water transfer and irrigation under pressure

*This product is the final B2B equipment.*

#### Technical Specifications:

Drilling the ground to a depth of 2 m and a width of 40 cm with a drilling accuracy of  $\pm 7$  mm

#### Advantages:

Equipped with chain manufacturing technology, trencher gearbox, hydraulic system

#### International Standards or Permission:

- \* ISO 9001
- \* ISO 4406





## ➤ Trencher & Drum Cutter

### ◆ Talashgaran Sepehr Shahrood Co.

[www.talashgaranco.com](http://www.talashgaranco.com)



#### Product Introduction:

The trencher is a heavy road construction machine and is used for excavation and drilling. This machine can be used in fully mechanized fiber optic installation projects. It can also implement the design slope of the construction project with a laser level detector.

Drum cutter can be used in urban, interurban drilling projects and agricultural water transfer. Other features of this machine include the installation of a tube or fiber optic cable at the same time as drilling.

#### Main Export Destinations:

Turkey, Syria, Iraq, Tajikistan, Uzbekistan

#### Annual Production Capacity:

**Trencher:** 50 machines  
**drum Cutter:** 50 machines

#### Founded:

2001

#### Application:

##### Trencher:

- \* Channel drilling
- \* lateralizing in drainage of agricultural fields
- \* Pipe installation
- \* Leveling
- \* Installing the cable and preparing the sieving soil and placing it on the cable

##### Drum cutter:

- \* Drilling small width channels
- \* Installing cables and pipes

*This product is the final B2B equipment.*

#### Technical Specifications:

##### Trencher:

- \* Engine power (hp): 330
- \* Speed (km/h): 2.2
- \* Drilling efficiency (m/h): 180-700
- \* Drilling depth (cm): 150-280
- \* Channel width (cm): 31-55
- \* Weight (kg): 23,500
- \* Machine dimensions: (350 × 300 × 1200 cm)

##### Drum Cutter:

- \* Engine power (hp): 185
- \* Speed (km /h): 1.8
- \* Efficiency in asphalt (m/h): 78
- \* Drilling depth (cm): 10-60
- \* Drilling width (cm): 8-15
- \* Weight (kg): 5400
- \* Machine dimensions (243 × 174 × 595 cm)

#### Advantages:

##### Trencher:

- \* Trencher's speed is up to four times faster than tractor shovels
- \* High accuracy
- \* Simultaneous drilling and piping

##### Drum cutter:

- \* Industrial automation



## ➤ Backhoe Loader

🏠 Snow Pars Co.

[www.snowpars.com](http://www.snowpars.com)



### Product Introduction:

A backhoe loader is a heavy equipment vehicle that consists of a tractor like unit fitted with a loader-style shovel/bucket on the front and a backhoe on the back. Due to its (relatively) small size and versatility, backhoe loaders are very common in urban engineering and small construction projects (such as building a small house, fixing urban roads, etc.) as well as in developing countries. This type of machine is similar to and derived from what is now known as a TLB (Tractor-Loader-Backhoe), which is to say, an agricultural tractor fitted with a front loader and rear backhoe attachment. By installing different plugins, different uses of this vehicle can be made.

**Annual Production Capacity:**

1500 machines per year

**Founded:**

1977

### Application:

Excavation, road clearing and demolition

*This product is the final B2B equipment.*

### Technical Specifications:

- \* **Vehicle dimensions:** 3.6×2.3×6.2
- \* **Motor power:** 74 kW
- \* **Engine torque:** 410 Nm
- \* **Gearbox type:** Full power shift
- \* **Gear shifting:** Electric
- \* **Number of gears:** 3R - 4F
- \* **Axis number:** differential pair
- \* **Loader loading capacity:** 2400 kg
- \* **Loader splitting power:** 9700 kgf
- \* **Backhoe loading capacity:** 1000 kg
- \* **Backhoe splitting power:** 4100 kgf
- \* **Loader bucket volume:** 1.1 m<sup>3</sup>
- \* **Backhoe bucket volume:** 0.15 m<sup>3</sup>
- \* **Maximum loader unloading height:** 2300 mm
- \* **Maximum backhoe unloading height:** 4604 mm
- \* **Maximum backhoe drilling depth:** 3650 mm
- \* **Hydraulic system working pressure:** 230 bar
- \* **Brake system:** hydraulic (equipped with booster)
- \* **Handbrake:** hydraulic with electric control
- \* **Steering:** hydraulic

### Advantages:

- \* High safety
- \* low consumption
- \* High engine performance and power
- \* It has windows with wide viewing angles
- \* Possibility to install accessories such as hydraulic hammer, hole drill and four-functional bucket
- \* It has hydraulic jacks with internal accelerator design to control the impact in backhoe structures



## ➤ Valve and Meter for Low Pressure Irrigation System

🏠 Hooshmand Tajhiz Ab Sharif Co.



### Product Introduction:

This product meets the two technical needs of flow rate control and water consumption measurement. Also, two important goals of fair distribution of water and consistent water delivery through irrigation networks (low pressure) can be achieved this way.

In addition to innovation in design and construction, this product has a reasonable price and financial and is economically justified.

**Annual Production Capacity:**

Up to 1000 Valves

**Founded:**

2019

### Application:

Agricultural water management

*This product is a final B2B & B2C equipment.*

### Technical Specifications:

- \* **Flow rate range:** 10 to 100 liters per second
- \* **Working pressure range:** up to 20 meters and minimum safety factor of 1.5
- \* **Pressure drop range:** 2 to 15 meters
- \* **Normal operating temperature:** 5 to 30 °C for fluid and up to 60 °C for ambient
- \* **Dimensions:** Height:185 cm, outer diameter: 200 to 280 cm, inner diameter: 140 to 200 cm

### Advantages:

- \* Technical superiority and better performance in flow rate control compared to similar devices
- \* No need for other equipment to measure the flow rate
- \* Low cost and competitive price compared to other measuring equipment in the market



## ➤ Agricultural Smart Valve

### 🏠 Chatr Sabz Sanaat Barbod Co.

www.hss-co.ir



#### Product Introduction:

The agricultural smart valve consists of three general parts, including:  
The body of the valve The protective cap of the control unit and the electronic board The sensors and the central control board.

The body of the product is made of metal like a pyramid. Safe against environmental shocks and insulated against weather conditions, it can be used underground.

This valve is placed in two general modes of flange and thread connections in irrigation circuits and has six general working modes: water diversion to the subordinate route, water diversion to the main route, regulation of pressure and inlet water flow, and use in three ways and combination of two inputs and its transfer to the common output and to keep the input path open and closed. The solar panel on the valve supplies the required power and according to the environmental sensors, it can announce the type of environmental operation. It can report the type of response or the latest status of the valve according to the command.

**Annual Production Capacity:**

8000 valves

**Founded:**

2019

#### Application:

- \* Agricultural irrigation and water supply
- \* Irrigation and rural water supply
- \* Livestocks and poultry water management
- \* Oil, gas, petrochemical industries
- \* Other industries that require valve management and control

*This product is a final B2B & B2C equipment.*

#### Technical Specifications:

Support valve type	ball valve	gate valve
Product weight	5.8-9.5 kg	7.4-12.5 kg
Power supply type and voltage	DC 12-24 v	
Maximum working pressure	15 bar	
Maximum humidity	95 %	
Body material	HDPE	
Connection type	flange	screw

#### Advantages:

Due to the need to control the management of irrigation, water supply, process control in solenoid valves, the most important part of the product includes:

1. Managing energy consumption in such a way that the minimum energy is required.
2. Utilizing and adapting the design of electronic parts and equipment of the device with new energy (solar energy and lithium ion battery)
3. Most use in the environment against the least impact of adverse environmental conditions
4. Matching and matching with different types of irrigation pipes and fittings and standard irrigation valve fittings
5. Communication ports, especially radio communication





## ➤ Mechanized Irrigation System

### 🏠 Vista Sanaat Zist Kia Co.

[www.epikgroup.ir](http://www.epikgroup.ir)



#### Product Introduction:

The company designed and produced Intelligent irrigation systems in 14 models for irrigation of greenhouses, gardens, and private villas and domestic water consumption as well as industrial agriculture. These products can adapt to the specific climatic conditions of each region, plant type, and soil moisture level, and based on these data, irrigate the area intelligently.

**Founded:**

2014

#### Application:

- ✧ Agricultural lands, gardens and nurseries
- ✧ Conservatory and commercial greenhouses
- ✧ Industrial and Urban public green spaces

*This product is the final B2B equipment.*

#### Technical Specifications:

- ✧ Ability to synchronize with weather station
- ✧ Based on the model, this device has sensors to detect soil temperature, soil moisture, and soil EC, as well as solar panel and wireless radio

#### Advantages:

- ✧ Saving water, energy and time
- ✧ Possibility of remote irrigation management

**International Standards or Permission:**

Ministry of agriculture license and approval in Iran



## ➤ Intelligent Irrigation Management System

🏠 Rayan Arvin Algorithm Co.



### Product Introduction:

This system is for optimizing water use in agricultural irrigation by the regulated deficit irrigation (RDI) method. To this end, irrigation interval in the development stage (Development Stage) of plants is eliminated or the amount of water used for irrigation is reduced; This method is used for watering small plants and is performed by the fuzzy algorithm.

In this method, in some irrigation intervals, the amount of water required by the plant is reduced. This operation is done in a way that does not have a negative effect on the plant and in some cases will even improve it. The web-based system and Android software provide the possibility of monitoring and controlling irrigation for the farmer. Another feature of this system is the provision of remote sensing analyzes of satellite images that help farmers to get feedback from the water supply system.

#### Exports History:

Up to 500,000 \$

#### Annual Production Capacity:

1.5 Million systems

#### Founded:

2016

### Application:

- \* Agricultural water management

*This product is the final B2B equipment.*

### Technical Specifications:

#### Electrical specifications:

- \* Power: 12 volts DC - 1.5 amps
- \* Digital outputs: open collector - NPN 200 mA
- \* Digital inputs: +12 volts DC
- \* Analog outputs: 4-20ma (10 bit resolution)
- \* Analog inputs: 4-20ma (12 bit resolution)
- \* Analog voltage inputs: 0-10 volts DC (12 bit resolution)

#### Communications Specifications:

- \* Analog wire: 4-20 mm
- \* Digital wire: RS485 (Modbus) and RS232
- \* GSM: 2G with MQTT protocol
- \* Wireless: IEEE802.15.4 MAC Layer
- \* Wireless frequency: 2.4 GHz
- \* Security: Hardware Security Engine (AES-128)

#### Operational specifications:

- \* Operating temperature: -40 to +85 degrees Celsius
- \* Operating environment: Internal and external with IP68 box
- \* Use in high power panels: Allowed
- \* Use in environments with high electromagnetic noise: Allowed

#### Application specifications:

- \* Mainboard panel
- \* Number of digital outputs: "spring" model: 14 with expandability
- \* "Dew" model: 8, expandable
- \* Number of digital inputs: "spring" model: 6 with the ability to expand
- \* "Dew" model: 4, expandable
- \* Number of analog outputs: This feature is not enabled
- \* Number of analog inputs: "Spring" model: 2 (0-10v) with expandability
- \* "Dew" model: 2 (0-10v) with expandability
- \* Maximum number of "spring" models: 32 with the ability to expand
- \* Wired Expanders (Modbus): "Dew" Model: This feature is not enabled
- \* Maximum number 65000

#### Wireless extenders:

- \* Antenna range: up to 1200 meters, PCB antenna



## ➤ Ultrasonic Water Flow Meter Farming Well

🏠 Fara Sanjesh Afzar Pardis Co.

### Product Introduction:

The inline ultrasonic water flow meter is used to measure the instantaneous water flow rate in pipelines and to calculate the volume of water displaced bilaterally. These devices operate by sending and receiving ultrasound waves to a moving fluid and measuring the frequency difference.

The smart well monitoring system is a device that monitors the extraction of water from water wells and allows the consumer to extract water from the well under the specified quota.

**Founded:**

2014

### Application:

#### Ultrasonic water flow meter:

- ✳ For industrial and domestic uses, as well as agriculture and power plants
- ✳ Measurement of energy in facilities (heat meter)
- ✳ View information remotely

#### Smart well monitoring system:

- ✳ Water and sewage, water treatment plants, and any consumption that requires precise quotas.
- ✳ All agricultural, industrial, etc. wells which are needed to be monitored and controlled, intelligently and precisely.

*This product is the final B2B equipment.*

### Technical Specifications:

Ultrasonic water flow meter	Smart well monitoring system
<ul style="list-style-type: none"> <li>✳ <b>Power supply:</b> 3.6 volt lithium batteries</li> <li>✳ <b>Pulse output:</b> communication interface</li> <li>✳ <b>Battery replacement time:</b> 7 years</li> </ul>	<ul style="list-style-type: none"> <li>✳ Design in accordance with the INLINE ultrasonic Precision flow meter with %0.5 accuracy, with seven-years battery life</li> <li>✳ Designed for agricultural/drinking water (DN 300-20 )</li> <li>✳ The meter has a degree of protection of 68IP</li> <li>✳ Internal modem and antenna</li> <li>✳ Automatic water cut-off/back-on by smart circuit</li> <li>✳ Ability to cut off the water flow in the final 20% and restart as desired.</li> </ul>

### Advantages:

Ultrasonic water flow meter	Agricultural well smart system
<ul style="list-style-type: none"> <li>✳ Above 99% accuracy</li> <li>✳ Suitable material for measurement</li> <li>✳ Distilled water</li> <li>✳ Sensitivity to low currents</li> <li>✳ Minimal susceptibility to temperature changes</li> </ul>	<ul style="list-style-type: none"> <li>✳ Accuracy in measuring consumption</li> <li>✳ Two-way sensing</li> <li>✳ Good solution to prevent fraud</li> </ul>



## ➤ Round Dripper Irrigation Pipe Production Line

🏠 Alborz Machin Jey Co.

www.amjco.ir



### Product Introduction:

The production line of drip irrigation tapes is used in the agricultural industry. In this irrigation system, water is applied to the ground near the root zone of the plant, to wet a small area and depth from the soil surface. Using drip irrigation method, water losses can be significantly reduced and soil erosion can be prevented.

The tape is made of polyethylene and unlike hard polyethylene pipes, tape is very soft and flexible and is usually flat. When water flows inside the tape, it becomes a pipe and after the water stops flowing, it returns to the flat position. The product of this production line improves water distribution and flexibility of irrigation.

The shape, number, diameter and output areas are different according to the model of the production line.

### Main Export Destinations:

Russia, Afghanistan, Iraq, Tajikistan, Turkmenistan

### Exports History:

Up to 500,000 \$

### Founded:

1997

### Application:

Agricultural industry and irrigation systems

*This equipment is the product production line.*

### Technical Specifications:

Model	Pipe Size	Tank Length (mm)	Draw Speed (m/min)	In Use Power (kw)	Total Power (kw)	Production Line Length (m)
AMJ-PVC 63	20-63	3500	1-16/1-32	15	50	22
AMJ-PVC 125	63-125	4500	1-45	50	50	25
AMJ-PVC 160	63-160	4500	0.4 - 4 / 0.7 - 7	65	65	25
AMJ-PVC 315	160-315	5000	0.1 - 1 / 0.2 - 2	70	70	30

### Advantages:

- \* Increasing productivity in agricultural production by drip irrigation
- \* High quality product at an affordable price
- \* High production speed and power
- \* 1 year warranty and 10 years after-sales services

### International Standards or Permission:

- \* ISO 9001: 2008





## ➤ Centrifugal Pumps for Use in Agriculture

🏠 PUMPIRAN Co.

www.pumpiran.com



### Product Introduction:

The NON API pumps include different types of Centrifugal pumps like single stage pumps, multistage pumps, double suction pumps, etc. with different power.

These pumps are designed and manufactured according to ISO 9908 or ISO 5199 standard. These pumps are subdivided into the following two categories in terms of power:

- \* NON API pumps with power of 30 kW up to 149 kW
- \* NON API pumps with power of 150 kW and higher

### Main Export Destinations:

Tanzania, Armenia, Sudan, Iraq, Syria

### Annual Production Capacity:

750 pumps per year

### Founded:

1995

### Application:

NON API pumps with power of 30 kW up to 149 kW	<ul style="list-style-type: none"> <li>* Water transfer for agricultural, urban and industrial uses</li> <li>* Hot water transfer of heating and cooling facilities</li> </ul>
NON API pump with power of 150 kW and higher	<ul style="list-style-type: none"> <li>* Drinking water supply, industrial processes</li> <li>* Water pumping station, power plants and etc.</li> </ul>

*This product is the final B2B and B2C equipment.*

### Technical Specifications:

	Centrifugal pumps		Multistage pumps		Double suction pumps	
	Capacity (m <sup>3</sup> /h)	Head (m)	Capacity (m <sup>3</sup> /h)	Head (m)	Capacity (m <sup>3</sup> /h)	Head (m)
NON API pumps with power of 30 kW up to 149 kW	5-1800	5-90	2-440	Up to 700	Up to 4500	Up to 130
NON API pump with power of 150 kW and higher			Up to 1200	Up to 510	Up to 9000	Up to 260

### Advantages:

- \* High quality
- \* Reasonable price
- \* Satisfactory after-sales service
- \* Availability of spare parts

### International Standards or Permission:

- \* ISO 5199
- \* ISO 9908



## ➤ Centrifugal Pumps for Use in Agriculture

### 🏠 Navid Sahand Pumping Industry Co.

[www.navidsahandpump.com](http://www.navidsahandpump.com)



صنایع پمپ سناری  
نوید سهندک

#### Product Introduction:

These centrifugal pumps operates in a way that the fluid enters the pump parallel to the pump axis and exits the wheel pump perpendicular to it, and the pressure of the fluid increases as it moves through the pump shell (spiral or volute).

KRT models in accordance to ISO 5199 standard for exploitation in water, sewage, mining and different industries.

#### Exports History:

Up to 500,000\$

#### Main Export Destinations:

Iraq, Syria

#### Annual Production Capacity:

2500 Pumps per year

#### Founded:

2008

#### Application:

- \* KRT models : Water, sewage, mining, agriculture and different industries

*This product is the final B2B equipment.*

#### Technical Specifications:

##### 1- KRT models

- \* Vertical, single-stage, close-coupled submersible motor pump with various impeller types, for wet-well installation, stationary or portable design.
- \* KRT is the safe, reliable and energy-efficient solution for all pumping jobs in municipal and industrial waste water Engineering.
- \* In developing the KRT, NSP Co. Engineers aimed at maximum versatility and flexibility of application by offering the pump in a various materials.
- \* Protection against excessive temperature rise in the motor winding, absolutely watertight cable entries and bearings dimensioned to give long service lives are features enabling long, trouble free pump operation
- \* The material of the propeller is cast iron alloys, stainless steel alloys, the shell material is based on casting fluid.
- \* Type of impeller: open, closed, multi-bladed, radial, etc.

#### Advantages:

- \* High quality
- \* Reasonable price
- \* Warranty
- \* Providing after sales service
- \* Customer satisfaction in all different industries

#### International Standards or Permission:

- \* ISO 5199
- \* ISO 9001:2015
- \* OHSAS 18001:2007
- \* ISO 14001:2015
- \* ISO/IEC 17025
- \* ISO 10006:2003
- \* ISO 10002:2004
- \* ISO 10004 :2012



## ➤ Centrifugal Pumps for Use in Agriculture

### 🏠 Arya Sepehr Keyhan Co.

[www.aryask.com](http://www.aryask.com)



#### Product Introduction:

A pump is a device that moves fluids (liquids or gases), or sometimes slurries, by mechanical action, typically converted from electrical energy into hydraulic energy. Pumps can be classified into three major groups according to the method they use to move the fluid: Pumps operate by some mechanism (typically reciprocating or rotary), and consume energy to perform mechanical work moving the fluid. Pumps operate via many energy sources, including manual operation, electricity, engines, or wind power, and come in many sizes, from microscopic for use in medical applications, to large industrial pumps. The company's Non-API pumps include a single-stage floor pump, slurry centrifugal pump, and horizontal bottom-end suction pump (single-stage horizontal centrifuge). The first two categories of these pumps can be made with elastomeric coatings or wear-resistant metals.

#### Exports History:

Up to 500,000 \$

#### Annual Production Capacity:

500 Pumps per year

#### Founded:

2008

#### Application:

- \* Chemical and petrochemical industries
- \* Water transfer and public utilities

*This product is the final B2B and B2C equipment.*

#### Technical Specifications:

- \* **Flow rate:** up to 1800 m<sup>3</sup>/h
- \* **Pressure:** up to 140 meters
- \* **Power:** up to 315 kW
- \* **Made of** cast iron, carbon steel, stainless steel and high corrosion resistance materials

#### Advantages:

- \* Accurate and high efficiency design
- \* Compliance with strict standards and complex performance tests

#### International Standards or Permission:

- \* ISO 5199
- \* ISO 2858





## ➤ Centrifugal Pumps for Use in Agriculture

🏠 Momtaz Pomp Pooya Co.

[www.momtazpump.com](http://www.momtazpump.com)



### Product Introduction:

The company manufactures high-pressure horizontal pumps (for use in reverse osmosis systems of seawater desalination facilities, etc.), Vertical pumps (used to transfer fluid from levels below ground level and include all pumps in which the impeller is immersed in the fluid and connected by a shaft to the motor located outside the well pump) and fire pumps (according to NFPA20 standard, pumps do not have a head loss of more than 35% at 1.5 times the normal flow rate, and at zero flow, the no-delivery head does not exceed 140% of the nominal head)

### Application:

Agricultural machinery

*This product is the final B2B and B2C equipment.*

**Annual Production Capacity:**

250 Pumps per year

**Founded:**

1985



Agriculture

Knowledge-Based Products and Equipment





## ➤ Centrifugal Pumps for Use in Agriculture

Khavar Toos Engineering Co.

www.khavar.com



### Product Introduction:

High-pressure Multistage Centrifugal pumps are generally used in high pressure fluid feed systems.

The key features of these pumps are as given below:

1. Providing the product with alloys suitable for the demanded application
2. Presenting the product based on the performance requested by the customer
3. Providing the highest level of energy efficiency
4. Utilizing efficient mechanisms to balance the axial forces
5. High service life

**Annual Production Capacity:**

30 Pumps per year

**Founded:**

2010

### Application:

Some of the major applications of these pumps include:

- \* Boiler feed pump for power plants
- \* Main pump in Reverse Osmosis (RO) desalination plants
- \* Descaler pump in steel foundries

And;

- \* Oil, gas and petrochemical industries
- \* Power industries
- \* Pulp and paper manufacturing industries
- \* Steel and mineral industries
- \* Water and wastewater treatment
- \* Chemical Industries
- \* General industries and etc.

*This product is the final B2B and B2C equipment.*

### Technical Specifications:

- \* **Capacity:** up to 900 m<sup>3</sup>/hr
- \* **Head:** up to 850 m
- \* **Pressure:** up to 100 bar
- \* **Speed:** up to 3600 rpm
- \* **Liquid:** sea water, salty water, brackish water, Hydrocarbons, chemical liquids
- \* Properly selected alloys to be used for highly corrosive liquids such as sea water or chemical liquids

### Advantages:

- \* Properly selected alloys to be used for highly corrosive liquids such as sea water or chemical liquids
- \* High energy consumption efficiency
- \* High reliability and durability
- \* Superior distinctive after sales service

**International Standards or Permission:**

- \* The centrifugal pumps are manufactured according to ISO 5199
- \* The performance test is according to ISO 9906



## ➤ Centrifugal Pumps for Use in Agriculture

🏠 Abran Sanat Co.

[www.abransanatco.com](http://www.abransanatco.com)



### Product Introduction:

These pumps are usually used to create high pressures at low flow rates. Therefore, centrifugal pumps mostly have a good ability to generate high pressures. Like most pumps, a centrifugal pump converts rotational energy, often from a motor, to energy in a moving fluid. The operation of the centrifugal pump is based on centrifugal force. The moving part of the pump throws water droplets out of the center in a circular motion. Since the droplets are thrown so fast, their velocity turns into pressure when they hit the shell.

In the oil and gas industry, in order to operate pumps and equipment for a long time, different standards have been set that are designed for long-term operation and the easiest and shortest time for repairs.

The company manufactures non-API pumps including 37 kW self-priming electric pumps, vacuum pumps, and submersible sludge pumps.

### Application:

Agricultural machinery

*This product is the final B2B and B2C equipment.*

**Annual Production Capacity:**  
400 Pumps per year

**Founded:**  
1992



Knowledge-Based Products and Equipment





## ➤ Centrifugal Pumps for Use in Agriculture

### 🏠 Behriz Pump Saman Co.

[www.behrizpump.com](http://www.behrizpump.com)



#### Product Introduction:

The company operates in the field of production of water purification pumps and mineral pumps. Mineral pumps are resistant to abrasion. The types of mineral pump products of this company are: single-shell vertical mineral pump, tunnel drilling mineral pump and double-shell mineral pump.

Water purification pumps are used as one of the desalination methods of salt water, and include a variety of seawater and well pumps, feed pumps, high pressure floor pumps, and according to the conditions, they are equipped with energy recovery system of pelton turbine or turbocharger.

**Annual Production Capacity:**

500 Pumps

**Founded:**

2007

#### Application:

- \* Water treatment
- \* Industrial and mining processes
- \* Mineral transfer and slurry

*This product is the final B2B and B2C equipment.*

#### Technical Specifications:

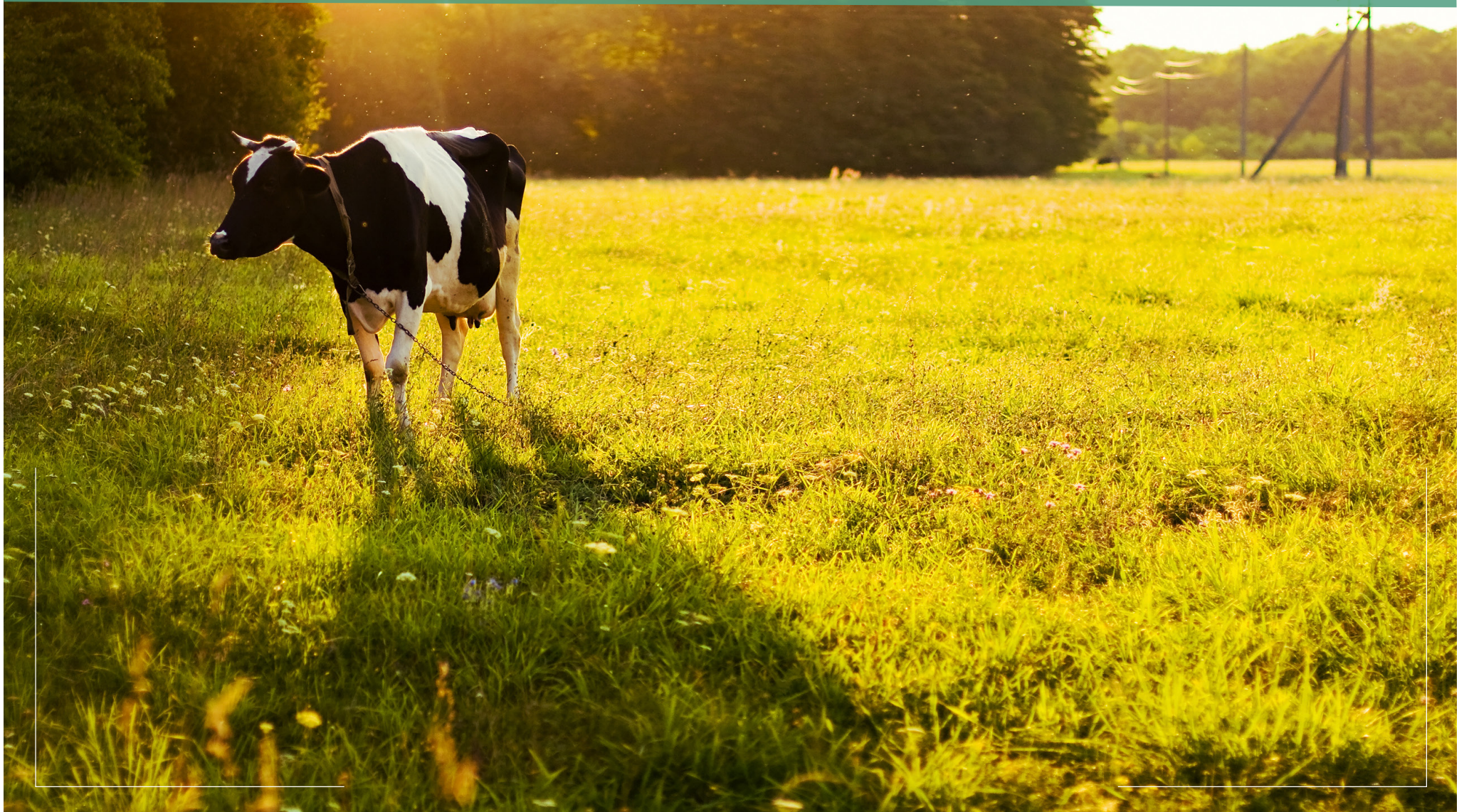
- \* Mineral pumps:
- \* Material: A532 CLASS III (high chrome)
- \* Size: 2-12 inches
- \* Capacity: 5-400 liters per second
- \* Total head: 5-90 cm

#### Advantages:

- \* Variable speed
- \* Long life and durability
- \* Adjustable motor installation
- \* Resistant to corrosion and abrasion



Third Chapter  
Livestock and Poultry





# 3<sup>RD</sup> CHAPTER

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## Livestock and Poultry

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➤ **Small Ruminant Plague Vaccine**  
Peste Des Petits Ruminants (PPR)

🏠 **Vira Vaccine Shaya Co.**

[www.viravaccine.com](http://www.viravaccine.com)



**Product Introduction:**

The small ruminant plague vaccine (PPR) vaccine is designed and manufactured to provide long-term immunity to the target animal against all known serotypes of plague.

The main element of this vaccine is the “1.75 Nigeria vaccine strain” and it has been used to prevent annual diseases with 0.9% sodium chloride solvent.

**Main Export Destinations:**

Ethiopia

**Exports History:**

Up to 500.000 \$

**Annual Production Capacity:**

240 million doses

**Founded:**

2017

**Application:**

- \* It is used to create safety in sheep and goats to prevent peste des petite ruminant disease.
- \* It is categorized in the immunity system.
- \* Vaccination is repeated annually.

*This product is a final B2B consumer product.*

**Technical Specifications:**

- \* Biological vaccine  
(live attenuated virus with Nigeria 1/75 vaccine strain  $\geq 10^{2.5} \text{TCID}_{50}/\text{dose}$ )
- \* Nigeria 1/75 vaccine strain purchased from the French company CIRAD
- \* Stabilizers include sucrose, lactalbumin and glutamine
- \* The vaccine is in the form of vials and lyophilized powder
- \* The vaccine is given as a subcutaneous injection of 1 ml
- \* Each vial contains 100 doses of vaccine
- \* Target animals: goats and sheep
- \* Storage temperature: 2 to 8 °C

**Advantages:**

- \* Competitive price
- \* High quality
- \* Thermostable (temperature stability)

**International Standards or Permission:**

- \* ISO 9001
- \* ISO 45001
- \* ISO 14001
- \* PANVAC Certificate
- \* Free Sale Certificate
- \* Iran Veterinary Organization GMP



## ➤ Contagious Ecthyma Disease Vaccine

### 🏠 Vira Vaccine Shaya Co.

[www.viravaccine.com](http://www.viravaccine.com)



#### Product Introduction:

Vira-Ectyvax vaccine is the local strain, prepared by Vira Vaccine Shaya company.

This vaccine is supplied along with an exclusive applicator and blue solvent to treat and prevent Contagious Ecthyma disease. This vaccine is readministered biannually.

It is a brand vaccine.

#### Main Export Destinations:

Ethiopia

#### Exports History:

Up to 500.000 \$

#### Annual Production Capacity:

240 million doses

#### Founded:

2017

#### Application:

- \* It is used to create immunity and prevent Contagious Ecthyma disease in sheep and goat
- \* It is categorized in the immunity system
- \* Vaccination is repeated twice a year

*This product is a final B2B consumer product.*

#### Technical Specifications:

- \* **Type:** Biological vaccine, (Live attenuated virus, Local strain  $\geq 10^{4.5}$  TCID<sub>50</sub>/dose.)
- \* Sucrose and lactalbumin as a stabilizer.
- \* The vaccine is provided in 50 doses vial, and as lyophilized powder
- \* The vaccine is inoculated by scarification method
- \* **Target animal:** sheep and goat
- \* **Storage temperature:** 2 to 8 °C

#### Advantages:

- \* Competitive price
- \* High quality
- \* An exclusive applicator

#### International Standards or Permission:

- \* ISO 9001
- \* ISO 45001
- \* ISO 14001
- \* PANVAC Certificate
- \* Free Sale Certificate
- \* Iran Veterinary Organization GMP



## ➤ Lumpy Skin Disease (LSD) Vaccine

### 🏠 Vira Vaccine Shaya Co.

[www.viravaccine.com](http://www.viravaccine.com)



#### Product Introduction:

Lumpy skin disease (LSD) vaccine prevents Lumpy skin disease in cattle and buffalo. The substance of this vaccine is Neethling vaccinal strain. The vaccine is repeated annually. This is a brand vaccine.

#### Main Export Destinations:

Ethiopia

#### Exports History:

Up to 500.000 \$

#### Annual Production Capacity:

240 million doses

#### Founded:

2017

#### Application:

Prevention of lumpy skin disease in cows and buffalos

*This product is a final B2B consumer product.*

#### Technical Specifications:

- \* Biological vaccine, Live attenuated virus
- \* Neethling strain  $\geq 10^{3.5} \text{TCID}_{50} / \text{dose}$
- \* Sucrose and lactalbumin as a stabilizer
- \* The vaccine is provided in 50 ,25 and 100 doses vials, and as lyophilized powder.
- \* 1 ml of vaccine injected subcutaneously.
- \* Target animal: Cattle and buffalo
- \* Storage temperature: 2 to 8 °C

#### Advantages:

- \* Competitive prices
- \* High quality
- \* Thermostable

#### International Standards or Permission:

- \* ISO 9001
- \* ISO 45001
- \* ISO 14001
- \* PANVAC Certificate
- \* Free Sale Certificate
- \* Iran Veterinary Organization GMP





## ➤ Oil Adjuvant for Livestock and Poultry Vaccines

### 🏠 Fannavar Pars Co.



#### Product Introduction:

The use of adjuvant as a booster of the immune system's response to vaccination significantly reduces the dose of antigen in the final formulation of the vaccine and thus makes its production more economical.

One of the most common adjuvants is oil adjuvant, which is widely used in the manufacture of various types of zoonotic vaccines (common diseases between humans and animals) so that in the most of these vaccines that are used inactively, this product is used.

This product has a two-component formulation and 90% of the formulation is paraffin. Paraffin itself stimulates the immune system and has been shown to be most stimulated by paraffin with carbon content between C16 - C20.

Paraffin grade must be pharmaceutical grade to prevent any problems for human beings due to consumption of chicken meat.

#### Exports History:

Up to 500.000\$

#### Main Export Destinations:

Pakistan

#### Annual Production Capacity:

200 thousand liters

#### Founded:

2011

*This product is a final B2B consumer product.*

#### Technical Specifications:

In terms of physicochemical and immunological specifications, the domestic sample of this product is similar to foreign products such as Seppic adjuvant (made in France).

#### International Standards or Permission:

- \* Production license (from Iran Veterinary Organization)
- \* Certificate of free sale (from Iran Veterinary Organization)
- \* ISO 9001-2015 (from IMQ)



## ➤ Newcastle and Influenza Antigen in The Form of Leukocytes Produced in Eggs

◆ Pasouk Co.

[www.pasouk.ir](http://www.pasouk.ir)



### Product Introduction:

Since antigens inhibit red blood cell hemagglutination, they are used to detect the presence and antibody levels of influenza and Newcastle disease viruses. Newcastle antigen contains the Newcastle lentogenic virus and influenza antigen contains influenza A virus subtype H9N2 isolated from infected birds. The virus of both antigens was cultured and propagated inside the allantoic membrane of the egg embryo. In order to neutralize the virus, 1% aldehyde is added to the allantoic fluid containing the virus. Also, 20,000 :1 thiomersal has been added to maintain and prevent the growth and multiplication of bacteria.

**Founded:**  
2013

### Application:

These products are used to know the presence and amount of Newcastle and influenza antibodies, and their amount is determined and recorded according to the intensity of inhibition of hemagglutination.

*This product is a final B2B consumer product.*

### Technical Specifications:

The vaccine is available in 5 ml bottles in lyophilized form.

### Advantages:

- \* Reasonable price and quality
- \* Valid standards

### International Standards or Permission:

- \* Certification of safety and health from the National Veterinary Organization of Iran (Sterility-safety)
- \* GMP



## ➤ Triple and Quadruple Vaccines for Foot-and-Mouth Diseases Consisting of Aftovak and Aphtpasol

◆ Pasouk Co.

[www.pasouk.ir](http://www.pasouk.ir)



### Product Introduction:

AFTOVAK vaccine consists of three virus serotypes of ASIA, O, and A22 which transform into an emulsion after adding Buffer and Thiomerals and being mixed with oil-based adjuvants.

Oil-based quadruple vaccines for FMD, containing inactivated antigens of FMD virus existent in the country's livestock, are used to control this disease in cows, buffalos, calves, sheep, and goats.

The liquid containing the virus is a result of virus cultivation in the fermenter on the BHK cell. When we are certain that it is free of any microbes and viruses, it is inactivated using Binary Ethylenimine; when we know that all the viruses are killed, we purify and condense the liquid. This vaccine has a safety period of 6 to 9 months.

**Founded:**  
2013

### Application:

Preventing FMD in ruminants

*This product is a final B2B consumer product.*

### Technical Specifications:

- \* Has circulations of strains A05/AGVII/Opnasia2/Asia1- Sindh08
- \* The vaccine is completely inactivated and the virus is killed (Innocuity=0)
- \* This vaccine is provided in 100 cc flacons (100 doses for sheep, and 50 doses for cows)

### Advantages:

- \* Its potency is higher than 6 (PD6<50)
- \* The value equals 100 regarding its circulatory strains

### International Standards or Permission:

- \* Certification of safety and health from the National Veterinary Organization of Iran (Sterility-safety)





## ➤ Poultry Vaccines Newcastle, Flu, and Gumboro (Dual and Triple Vaccines Combination)

🏠 Pasouk Co.

www.pasouk.ir



### Product Introduction:

Poultry vaccines including Newcastle, Flu, Gumboro (dual and triple vaccines combination), and acute Avian influenza (H5N8) are created using the 7G strain in eggs to prevent two main poultry diseases of Newcastle and Bird flu. It is produced and multiplied in eggs.

The 101 Newpasol vaccines or the anti-Newcastle-virus vaccine are produced to vaccinate broiler chickens, pullets, and laying hens. The Newcastle virus has a strain of 74.

The dual 102 Newpasol vaccine is a mixture of two antigens of the Newcastle virus (V4), influenza type A, and type H9N2.

The 103 Newpasol vaccine is a mixture of three antigens of the Newcastle virus (V4), Gumboro virus, influenza type A, and type H9N2.

The Flupasol or inactivated vaccine of influenzas type A, and H9N2 is used to vaccinate broilers and laying hens to prevent these types of influenza.

Inactivated acute influenza vaccine (H5N8) is used to immunize poultry against this disease.

**Founded:**

2013

### Application:

Preventing and controlling bird flu and Newcastle diseases

*This product is a final B2B consumer product.*

### Technical Specifications:

Type of Vaccine	Provided in
101 Newpasol	2000 doses in 500 ml bottles
102 dual Newpasol	2000 doses in 500 ml bottles
103 triple Newpasol	2500 doses in 500 ml bottles
Flupasol	2000 doses in 500 ml bottles
Acute avian influenza for poultry (H5N8)	250 ml bottles

### Advantages:

- \* High quality, low price
- \* Acquired approvals and standards
- \* Diversity

### International Standards or Permission:

- \* Certification of safety and health from the National Veterinary Organization of Iran (Sterility-safety)



## ➤ Broncofin of Poultry

### 🏠 Pars Imen Daru Co.

[www.parsimendaru.com](http://www.parsimendaru.com)



#### Product Introduction:

Broncofin is a completely natural medicine that consists of active ingredients found in eucalyptus, rosemary, thyme and some other medicinal plants. This medicine is formulated in such a way that its different components intensify and strengthen each other's therapeutic effects.

Broncofin's active ingredients are mucolytics (expectorants) that liquefy the secretions and facilitate the excretion of the secretions. These substances have antibacterial and antifungal properties and are anti-inflammatory and open the respiratory tract.

#### Exports History:

Between 1,000,000 - 5,000,000 \$

#### Main Export Destinations:

Iraq, Afghanistan, Syria, Kenya

#### Annual Production Capacity:

400,000 Liters

#### Founded:

2007

#### Application:

Prevention and treatment of Bronchitis in poultry such as hen, turkey, etc.

*This product is a final B2B consumer product.*

#### Technical Specifications:

- \* The active ingredients used in this drug are: 1, 8-Cineole, Camphene, Fenchone and Terpeneole.
- \* **THERAPEUTIC PROPERTIES:** The active ingredients of Broncofin are mucolytic (expectorant), which liquefy the mucosal secretions and facilitate the excretion of the secretions. In addition, it has strong antibacterial and anti-fungal properties and also anti-inflammatory
- \* **INDICATIONS:** Broncofin is used to prevent and treat respiratory diseases particularly bronchitis.
- \* Soluble in water
- \* Available in liquid form
- \* **How to use:** Dissolve 250 to 1000 ml of the drug in 1000 liters of drinking water and consume it for 3 to 5 days (8 hours a day) according to the veterinarian, until the symptoms of the disease have improved.

#### Advantages:

- \* It's completely natural. Broncofin can play a significant role in the treatment of respiratory diseases in poultry; In addition, it has a preventive role in respiratory infections diseases such as bronchitis. As a complementary effect, it can also act as a growth promotion supplement.

#### International Standards or Permission:

- \* License of veterinary organization of Iran



## ➤ Aftofin of Livestock

### 🏠 Pars Imen Daru Co.

[www.parsimendaru.com](http://www.parsimendaru.com)



#### Product Introduction:

Aftofin is a pure natural herbal remedy made of Peppermint, Myrtle and a few other medicinal herbs. The drug contains an intelligent blend of herbal active ingredients so that its components can strengthen and amplify each other's therapeutic effects in a synergistic manner. One of the active ingredients in this product is flavonoids.

This drug is used as a healer and treatment for blisters, rashes and infectious wounds and ulcers of the skin, lips, mouth and mucous caused by viruses (Foot-and-Mouth Disease), bacteria, fungi and secondary infections, treatment of poison wounds and contagious ecthyma in sheep (as a symptomatic treatment). Also, it has an impressive healing effect on hoof ulcers and wounds. Aftofin prevents animal loss of appetite by anesthetizing mouth sores and ulcers.

#### Main Export Destinations:

Iraq, Afghanistan, Syria, Kenya

#### Exports History:

Between 1,000,000 - 5,000,000 \$

#### Annual Production Capacity:

400,000 Liters

#### Founded:

2007

### Application:

Treating and healing blisters, rashes and all infectious wounds caused by viruses, bacteria (especially in foot and mouth disease) in livestock.

*This product is a final B2B consumer product.*

#### Technical Specifications:

- \* A combination of herbal products. Pharmaceutical form: herbal spray Please shake the spray bottle well before use. Then, spray the drug from a safe distance onto the wound or the infection site; in the case of FMD, spray it all over the mouth and tongue. It is recommended to repeat the procedure twice a day until complete healing/recovery. For a better response, it is suggested that to rinse the inflammation/wound site with distilled water or saline to remove the debris before spraying the drug. In fact, it is better to do a wound debridement if there is a necrosis layer on the wound. Moreover, in cases where the animal is severely affected, the spray repeats should be increased up to 3-2 times a day. If the treatment strategy contains both a topical antibiotic and the Aftofin, please first apply the topical antibiotic then spray the Aftofin on the wound site.

#### Advantages:

- \* It's herbal. it prevents losing the appetite by making the wounds numb.
- \* Increasing the healing speed of wounds compared to similar products.

#### International Standards or Permission:

- \* License of veterinary organization of Iran





### ➤ Formulation of Solutions Injected into Livestock with Slow and Sustained Release

#### ◆ Erfan Darou Co.

[www.erfandarou.com](http://www.erfandarou.com)



#### Product Introduction:

Formulation of solutions injected into livestock with sustained and controlled release contains Tramanicsin 30, Erfamycin LA20, Erfamycin %5, and %10 (all with sustained and controlled release).

Tramanicsin 30 is a mixture of an antibiotic (Oxytetracycline) with long-lasting effects, and a nonsteroidal anti-inflammatory drug (Flunixin Meglumine).

Erfamycin LA solution is sterile, clear, sustainable, ready for use, and straw yellow. One ml of this solution (containing Oxytetracycline dihydrate) equals 200 milligrams of Oxytetracycline combined with magnesium, solved in water and Polyvinylpyrrolidone.

This medicine influences microorganisms selectively and does not affect the host (mammals) cell. Its unique formulation causes long-lasting effects after intramuscular injection.

1 ml of Erfamycin %5 contains 50 milligrams of the active ingredient Oxytetracycline dihydrate.

1 ml of Erfamycin %10 contains 100 milligrams of the active ingredient Oxytetracycline dihydrate.

**This product is the final B2B and B2C consumer product.**

#### Main Export Destinations:

Armenia, Tajikistan, Afghanistan

#### Exports History:

Between 1,000,000 - 5,000,000 \$

#### Founded:

1994

Name	For cow	For sheep	For lamb
<b>Tramanicsin 30</b>	Curing respiratory diseases that originated from Pasteurella hemolytic like Pasteurella spp, Arcanobacterium pyogenes, Staphylococcus aureus & Mycoplasma (diseases that require antibiotic, anti-inflammatory, and antipyretic).	Curing respiratory diseases that originated from Pasteurella hemolytic like Pasteurella spp, Arcanobacterium pyogenes, Staphylococcus aureus & Mycoplasma (diseases that require antibiotic, anti-inflammatory, and antipyretic).	Curing respiratory diseases that originated from Pasteurella hemolytic like Pasteurella spp, Arcanobacterium pyogenes, Staphylococcus aureus & Mycoplasma (diseases that require antibiotic, anti-inflammatory, and antipyretic).
<b>Erfamycin LA20</b>	Curing and controlling Pasteurellosis and pneumonia caused by microorganism sensitivity to Oxytetracycline; curing foot-rot and Keratoconjunctivitis in livestock	Controlling enzootic abortion and pneumonia caused by microorganism sensitivity, foot-rot, acute mastitis, and Keratoconjunctivitis in livestock (pink-eye or conjunctivitis)	Curing fever and infection resulting from a tick bite
<b>Erfamycin 5%</b>	Curing and controlling Pasteurellosis and pneumonia caused by microorganism sensitivity to Oxytetracycline, diseases, diphtheria, and metritis	Controlling enzootic abortion and pneumonia caused by microorganism sensitivity to Oxytetracycline, foot-rot, acute mastitis, and Keratoconjunctivitis in livestock (pink-eye or conjunctivitis)	Curing fever resulting from a tick bite
<b>Erfamycin 10%</b>	Curing and controlling Pasteurellosis and pneumonia caused by microorganism sensitivity to Oxytetracycline, diseases, diphtheria, and metritis	Controlling enzootic abortion and pneumonia caused by microorganism sensitivity to Oxytetracycline, foot-rot, acute mastitis, and Keratoconjunctivitis in livestock (pink-eye or conjunctivitis)	Curing fever resulting from a tick bite

Name	Active ingredient	Medicine classification	Pharmaceutical form	Provided in
<b>Tramanicsin 30</b>	Oxytetracycline dihydrate, and Flunixin Meglumine	Antibiotic, anti-inflammatory, and nonsteroidal	Injectable solution	Brown Flip cap vials of 20, 50, and 100 ml
<b>Erfamycin LA20</b>	Oxytetracycline dihydrate	Antibiotic	Injectable solution	Brown Flip cap vials of 20, 50, and 100 ml, and Pfizer formulations
<b>Erfamycin 5%</b>	Oxytetracycline Hydrochloride	Antibiotic	Injectable solution	Brown Flip cap vials of 20, 50, and 100 ml
<b>Erfamycin 10%</b>	Oxytetracycline Hydrochloride	Antibiotic	Injectable solution	Brown Flip cap vials of 20, 50, and 100 ml



## ➤ Formulation of Suspensions Injected into Livestock with Sustained and Controlled Release

🏠 Erfan Darou Co.

[www.erfandarou.com](http://www.erfandarou.com)



### Product Introduction:

Formulation of suspensions injected into livestock with sustained and controlled release consists of Amoxicillin %15 LA, and Gentamox (both having sustained and controlled releases).

Amoxicillin is a  $\beta$ -Lactam antibiotic in which the bactericidal effect emerges when a Bacteria cell wall is synthesized. The ester and oil used in the formulation of this antibiotic (trihydrate) give it long-lasting effects; thus, it is prescribed every 24 hours.

Gentamox is a combination antibiotic of the  $\beta$ -Lactam and aminoglycoside classification with bactericidal synergic effects. These antibiotic effects on gram-positive and gram-negative bacteria cause bactericidal effects by preventing the synthesis of the Bacteria cell walls. Gentamicin is also an aminoglycoside. This product demonstrates its bactericidal effects by preventing protein synthesis in the bacterial ribosome. The permeability of Gentamicin is reinforced when this antibiotic is combined with Amoxicillin; and therefore, lower doses of this product provide better results. The ester (trihydrate) and oil are used in the formulation of this antibiotic; therefore, this medication does not need to be taken every 8 to 12 hours, and it can be repeated every 24 hours.

#### Main Export Destinations:

Armenia, Tajikistan, Afghanistan

#### Exports History:

Between 1,000,000 - 5,000,000 \$

#### Founded:

1994

### Application:

- ✳ Amoxicillin 15% LA is used to cure infectious diseases (digestive, respiratory, urogenital, and dermal in all livestock) that resulted from microorganism sensitivity to Amoxicillin
- ✳ Gentamox is used to cure pneumonia, diarrhea, enteritis, dermapostasis, Urinary tract infection, Lower extremities infection, and any sort of infection that has resulted from microorganism sensitivity to Amoxicillin, and Gentamicin in big livestock.

*This product is a final B2B consumer product.*

### Technical Specifications:

Name	Active ingredient	Medicine classification	Pharmaceutical form	Provided in
Amoxicillin 15% LA	150 milligrams of trihydrate in 1 ml	Antibiotic	Injectable suspension	Brown Flip cap vials of 20, 50, and 100 ml
Gentamox		Antibiotic	Injectable suspension	Brown Flip cap vials of 20, 50, and 100 ml



## ➤ Fertirelin Acetate of Livestock

🏠 Kimia Pajouh Dorsa Co.

[www.kpdorsa.ir](http://www.kpdorsa.ir)



### Product Introduction:

A gonadotropin-releasing hormone agonist (GnRH agonist) that is used in the treatment of various kinds of ovarian failure in cattle.

**Founded:**  
2013

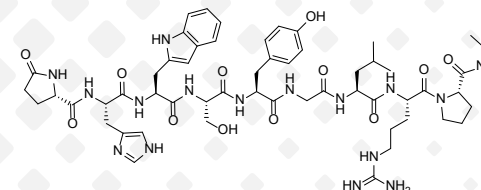
### Application:

Treating various types of bovine ovarian failure

*This product is technical knowledge for synthesis of final product.*

### Technical Specifications:

- \* **Cas No.:** 2-66-66002
- \* **Chemical Structure:**



- \* **Sequence:** Pyr-His-Trp-Ser-Tyr-Gly-Leu-Arg-Pro-NHEt

### International Standards or Permission:

- \* Food and drug control laboratory approval
- \* The principled agreement for preparing the active pharmaceutical ingredients





## ➤ Livestock and Poultry Probiotic Products

### 🏠 Tak Gene Zist Co.

[www.takgene.com](http://www.takgene.com)



#### Product Introduction:

##### Livestock probiotic products:

**DiPro:** DiPro bacteria multiply and become active when they reach the host intestine. These bacteria increase disease resistance by stimulating the immune system, and on the other hand, by secreting digestive enzymes and increasing the height of intestinal villi, they improve digestion and increase the absorption of nutrients. Secondary metabolites produced by these bacteria, such as bacteriocin, increase the fish's resistance to disease by applying antimicrobial effects, thereby reducing mortality.

**U-Pro:** This probiotic product is made from the yeast *Saccharomyces cerevisiae* (also known as brewer's or baker's yeast), which inhibits the growth of acid-producing aerobic bacteria by increasing oxygen consumption in the rumen environment and greatly reduces the risk of acidosis. The unique properties of this yeast improve the enzymatic activity of the gastrointestinal tract and thus improve digestion. On the other hand, by raising the level of the animal's immune system, U-Pro increases their resistance to pathogens and reduces the risk of death from infections. The use of this product in ruminant breeding increases the production efficiency.

*This product is the final B2B and B2C consumer product.*

##### Main Export Destinations:

Azerbaijan, Lebanon, Iraq

##### Exports History:

Up to 500,000 \$

##### Founded:

2014

**ProGen Food Supplement:** «ProGen» probiotic contains a variety of bacteria that produce lactic acid, which is one of the natural microorganisms in the digestive tract of honeybees. Lactic bacteria produce lactic acid by fermenting sugars (sucrose, glucose, fructose, etc.) in the bee's digestive tract, thereby lowering the pH of the bee's digestive tract and causing the acidification of the honey. Thanks to this product, the growth of the microbial population of lactic acid bacteria in the gastrointestinal tract is increased and the population of pathogens is reduced, thus reducing the risk of infectious diseases. Lactic bacteria with different metabolic pathways have the ability to break down sucrose in the bee's digestive tract, thereby helping to improve the quality of honey.

##### Livestock, poultry and aquatic animals:

**Toxin:** binders will prevent the transfer of toxins caused by the activity of fungi in livestock fodder and forage to the animal body. Absorbents such as clay and non-clay aluminosilicate minerals, activated carbon, yeast cell wall, lactobacillus cell wall, plant compounds and enzymes are used in toxin binders, Which protect the animal's body by absorbing toxins.

Animal feed supplements

##### Application:

- \* **DiPro for Livestock:** Suitable for cattle, sheep, calf, and goat
- \* **DiPro for Aquatic animals:** Pellet and extruded feed mills - concentrate mills - fish farms (cold water, hot water, and sturgeon)
- \* **DiPro for poultry:** Suitable for laying hens and turkey breeder hens
- \* **LU-Pro:** for ruminants
- \* **ProGen:** for honey bee

##### Technical Specifications:

DiPro	
<b>Livestock</b>	Contains heat-resistant spores with defensive function Effective elements: <i>Bacillus licheniformis</i> and <i>Bacillus subtilis</i>
<b>Aquatic animals</b>	Suitable for carp, salmon and sturgeon Contains heat-resistant spores <b>Effective elements:</b> <i>Bacillus subtilis</i> and <i>Bacillus</i>
<b>Poultry</b>	Contains heat-resistant spores Effective elements: <i>Bacillus subtilis</i> and <i>Bacillus</i>
U-Pro	
Probiotics specific for Contains live yeast Effective elements: <i>Bacillus subtilis</i> and <i>Bacillus licheniformis</i>	
ProGen	
Effective elements: <i>Lactobacillus acidophilus</i> , <i>Lactobacillus plantarum</i> , <i>Bifidobacterium</i> , <i>Enterococcus faecium</i> , <i>Saccharomyces cerevisiae</i>	



## ➤ Probiotics for Livestock, Poultry, Aquatic Animals and Pets

🏠 Nature Biotechnology Co.

www.biorun.ir



### Product Introduction:

Effective functionality of the gastrointestinal tract (GIT) and its health are important factors in determining animal performance. Several complex mechanisms are involved in the regulation of GIT functionality and health. This objective is achieved by using beneficial microbes and probiotic products to improve animal health and nutrition. Probiotics improve intestinal morphology and effective digestion and absorption of feed and effective immune status by balancing the microbiota of the gastrointestinal tract.

**Founded:**

2000

### Application:

Specific probiotic for application in poultry	Specific probiotic for application in livestock	Specific probiotic for application in aquatic animals
<ul style="list-style-type: none"> <li>* Improving immune system function</li> <li>* Decreasing feed conversion ratio (FCR)</li> <li>* Suppression of infections in the intestines</li> <li>* Prevention of adverse effects of stress</li> <li>* Reducing needs for medications (antibiotics)</li> <li>* Decreasing Salmonella contaminations</li> <li>* (in eggs, carcass and feces)</li> <li>* Decreasing cholesterol in meat and eggs</li> <li>* Reducing of mortality in chicken flocks</li> <li>* Decreasing production costs</li> </ul>	<ul style="list-style-type: none"> <li>* Prevention, improvement and treatment of diarrhea</li> <li>* Strengthening the immune system</li> <li>* Regulation and stabilization of the microbial flora of the gastrointestinal tract</li> <li>* Increasing appetite</li> <li>* Improving growth performance</li> <li>* Reducing breastfeeding time</li> <li>* Increasing the growth of ruminal villi and stimulating the growth of normal intestinal flora</li> </ul>	<ul style="list-style-type: none"> <li>* Stabilization and control of microbial population in aquatic animals breeding ponds</li> <li>* Remove stressors such as nitrate, nitrite and ammonia</li> <li>* Establishment of effective indicators in maintaining water quality</li> <li>* Prevention of bacterial, viral and parasitic infections</li> <li>* Improving growth and feed conversion ratio</li> <li>* Improving survival rate and reducing mortality rate</li> <li>* Reducing stress and susceptibility to disease</li> <li>* Reducing the need for medication</li> <li>* Being used in extruded aquatic feeds</li> </ul>

*This product is the final B2B and B2C consumer product.*

### Technical Specifications:

These products contain different probiotic bacteria and based on the type of product and its use, the amount of consumption and the active substance differ. In terms of quality, consumption of low amount of these products (about 200 grams per ton of feed) can lead to the best results.

### Advantages:

- \* Exclusive products for poultry, livestock, horses, aquatic animals, etc.
- \* Best performance based on field studies
- \* Reducing the use of antibiotics and producing healthy food

### International Standards or Permission:

License from the Iran Veterinary Organization



## ➤ Appetonic Appetizing Powder for Livestock

🏠 **Barij Essence Co.**

[www.barijessence.com](http://www.barijessence.com)



### Product Introduction:

Chicory and anise plants are used to make this product. Because of its unique effects on the digestive tract, chicory can increase appetite. In addition to having this unique quality, this plant can help with constipation relief. The chicory plant also contains a lot of vitamin A. Additionally, anise plants provide a variety of digestive benefits for animals, including increasing milk production and stimulating appetite, as well as anti-flatulence, anti-spasm, and anti-microbial characteristics. It also has pain-relieving and antiseptic effects. The appetonic appetizing powder of Barij, which is made from natural materials, is useful in treating indigestion, ruminal atony, and lack of rumination in addition to significantly reducing anorexia and lack of appetite in animals.

#### Main Export Destinations:

China, Canada, Italy, Australia, Tajikistan, Kuwait, Georgia, Bulgaria, Kyrgyzstan, Kazakhstan, Hong Kong, Iraq, Afghanistan

#### Exports History:

Up to 500,000 \$

#### Founded:

1992

### Application:

Increasing animal appetite and eliminating indigestion

*This product is the final B2B and B2C consumer product.*

### Technical Specifications:

- \* **Product components:** chicory and anise plants
- \* **Pharmaceutical form:** Livestock feed powder





## ➤ Varstop Gel for Treatment of Varroosis

🏠 **Barij Essence Co.**

[www.barijessence.com](http://www.barijessence.com)



### Product Introduction:

Thymol, natural menthol, and an extract of eucalyptus essential oil make up this product. The most significant disease affecting Iranian hives is varroosis, which may destroy up to %40 of hives in some years and cause huge damage to the country's beekeepers every year. Iran produces herbal anti-varroa mite gel due to environmental issues of common chemical drugs, as well as their toxicity for beekeepers, poison residue in honey, creating resistance in honeybees, and other problems. The gel formulation slows down the release of the substance and releases the active ingredients in the hive gradually, making it last longer and have a greater effect than liquid formulations that are sprayed into the hive. This medication has a big impact without the drawbacks of ordinary chemical medications, which often contain active chemical ingredients.

### Main Export Destinations:

China, Canada, Italy, Australia, Tajikistan, Kuwait, Georgia, Bulgaria, Kyrgyzstan, Kazakhstan, Hong Kong, Iraq, Afghanistan

### Exports History:

Up to 500,000 \$

### Founded:

1992

### Application:

Treatment of varroosis (honeybee Scabies), especially *Varroa jacobsoni*

*This product is a final B2B consumer product.*

### Technical Specifications:

- \* **Product components:** Eucalyptus essential oil, natural thymol and menthol
- \* **Pharmaceutical form:** 50 g gel



## ➤ Feed Supplement for Honeybee

### 🏠 Spadana Mokammel Co.

[www.spadanamokammel.com](http://www.spadanamokammel.com)



#### Product Introduction:

Honeybee feed supplements enrich bees' diets and improve the quality of the honey product. In the production process of these supplements, the choice of raw materials and product formulation is done based on the desired properties, and the distribution of effective ingredients is done by adding some components such as vitamins, to finally obtain a balanced food for bees.

Two types of substances are used in these supplements: protein substances and energy substances. In the production of these products, the protein raw materials that bees need, including soy powder, skim milk powder, and yeast, which are usually high in protein, have been used. Then special additives such as vitamins B or C are added to it. The share of vitamins is determined by scientific sources and based on the experience of experts.

The innovation used in this product is the addition of some plant extracts that according to research and studies have antibiotic properties and inhibit the growth of microbes and increase the lifespan of bees.

#### Annual Production Capacity:

1200 tons

#### Founded:

2010

### Application:

Beekeeping

*This product is the final B2B and B2C consumer product.*

#### Technical Specifications:

- \* Using two main groups of substances, including protein substances and energy substances
- \* Specific additives such as B or C vitamins
- \* Contains plant extracts with antibiotic properties
- \* Contains edible organic acids and probiotics with tested performance on bees in different apiaries in different areas

#### Advantages:

- \* Increasing the productivity of bees and the quality and quantity of producing honey
- \* Increase the lifespan of bees
- \* Optimal price and at the same time, high-quality product
- \* Eliminate or reduce sugar in the honey production cycle



## ➤ Yeast and Related Products

### 🏠 Kimia Anyme Co.

[www.kimiazyme.com](http://www.kimiazyme.com)



#### Product Introduction:

The autolysis yeast product consists of two soluble components (extract) and insoluble (cell wall) of healthy yeast cells; Therefore, yeast by-products include yeast cell wall, yeast extract, and microbial yeast extract.

Special flavoring compounds such as nucleotides (adenylate and guanylate) and amino acids (glutamic acid and aspartic acid) are involved in yeast extract, which enhances its aroma and flavor and makes it possible to use the extract in the foods.

Microbial yeast extract is a non-contaminated yeast extract. Yeast can be used as a rich source of protein and nutrients and as a suitable substrate for the growth of various cells - from bacteria to animal cells - and the cultivation of most microorganisms in the laboratory and even in industry.

The most important functional characteristics of these products as feed for livestock, poultry, and aquatic animals are as follows.

#### Autolyzed yeast:

1. Stabilizes and improves the gastrointestinal system
2. Controlling pathogens and toxins
3. Improve the digestibility of organic matter and feed efficiency
4. Improves the immune system and increases the body's resistance to stress.

**Annual Production Capacity:**

2400 tons

**Founded:**

2014

#### Yeast cell wall:

1. Alternatives to antibiotics in the control and treatment of gastrointestinal diseases in poultry diets
2. Stimulation of poultry's immune system and its improvement due to stimulated beta-glucan in poultry diet
3. Use as a growth stimulant in calf starter
4. Use in laying hen feed to reduce egg contamination
5. Stimulation of the microflora of the aquatic gastrointestinal tract and reduction of pathogens

#### Yeast extract:

1. Stabilizes and improves the gastrointestinal tract
2. Improve the digestibility of organic matter and feed efficiency
3. increases resistance to stress
4. Provides a variety of micronutrients such as B vitamins

#### Application:

##### \* Yeast Autolysis:

- \* Livestock, poultry and aquatic feed supplements
- \* In the food industry to enhance the taste of food, especially in soups, sauces and snacks, breads, pastries and chocolates

##### \* Yeast cell wall:

- \* Livestock, poultry and aquatic feed supplements

##### \* Yeast extract:

- \* As a food additive or flavoring
- \* Livestock, poultry and aquatic feed supplements

##### \* Microbial yeast extract:

- \* Microbial and fermentation culture medium supplement

*This product is a final B2B consumer product.*

#### Technical Specifications:

- \* **Autolyzed yeast:** contains about %50-45 protein, %40-33 sugar, and %55-48 dry soluble content (general analysis). These products are available in 2 forms of liquid and cream-brown powder, relatively light and soft.
- \* **Yeast cell wall:** Contains about %50-40 sugar, %40-30 protein, %20-18 beta-glucan, and %19-15 mannan oligosaccharide.
- \* **Yeast extract:** Contains about %60-50 of hydrolyzed protein and is soluble in water. This product is produced in the form of relatively light and soft light cream-brown powder.





## ➤ Hydrolyzed Yeast-Based Livestock, Poultry, Aquatic Animals and Bee Supplement Formulation

🏠 Soren Tech Toos Co.

[www.sorentt.ir](http://www.sorentt.ir)



### Product Introduction:

This product is hydrolyzed from yeast derivatives and is used in formulations by adding auxiliary ingredients to help the animal grow and stay safe. This substance is also used as a toxin binder due to the high mannan content, which is highly beneficial in lowering losses and illnesses in animals and birds.

**Founded:**  
2004

### Application:

- ✳ Food supplement having advantageous nutritional and breeding benefits for cattle, poultry, and aquatic animals
- ✳ Strengthening the immune system of livestock, poultry, and aquatic creatures

*This product is a final B2B consumer product.*

### Technical Specifications:

- ✳ **Product components:**  
hydrolyzed yeast, maltodextrin, wheat bran, rice bran, bentonite, etc.
- ✳ **Brand name:** Yeasttoos –Bio Yeast.

### Advantages:

- ✳ Low price and high product quality

### International Standards or Permission:

- ✳ Manufacturing license from Iran Ministry of Health



## ➤ Mineral Supplement of Chelated Animal Feed

### 🏠 Ariana Biotechnology Co.

[www.arianabiotech.com](http://www.arianabiotech.com)



#### Product Introduction:

Types of concentrate products rich in organic minerals include organic zinc, organic iron, organic copper, organic manganese, organic calcium, organic chromium, organic selenium and organic cobalt.

These products are used as a beneficial additive in the diet of ruminants, including dairy cows, beef cattle, calves, sheep, as well as poultry and aquatic animals. Organic salts are a good substitute for mineral salts in livestock, poultry and aquatic diets. Organic solutes have higher intestinal absorption than mineral solutes. High intestinal absorption performance can meet production and immune system needs in stressful conditions.

These supplements are produced through the identification of probiotic microorganism strain, extraction, screening and optimization, protease enzyme purification and also optimization of fermentation operations at the pilot and industrial levels.

**Founded:**

2017

#### Application:

Animal feed supplements

*This product is the final B2B and B2C consumer product.*

#### Technical Specifications:

The reasons for choosing this microbial strain are its fast growth, its ability to be isolated from the digestive system of ruminants (higher homogenization and efficiency), and the efficiency of protease enzyme production is acceptable and desirable. Constituent compounds include probiotic microbial strains, microbial metabolites including various microbial enzymes (protease, xylanase, amylase), organic acids such as (lactate, acetate, propionate and butyrate), fructo-oligosaccharide, xylooligosaccharide, mannan oligosaccharide and each of the organic minerals are with different and specific proportions in the manufactured product.

#### Advantages:

- \* Improving the feed conversion ratio
- \* Increasing the milk fat
- \* Improving milk production under stressful conditions
- \* Improving reproduction efficiency
- \* Reduction of milk somatic cells
- \* Reducing the prevalence of mastitis
- \* Reducing the prevalence of lameness in the cattle herd



## ➤ Bank of Animal Germ Cells and Embryos

Embryos of Premium Dairy, Beef and Dual-Purpose Cattle

### 🏠 Sina Fanavaran Mandegar Co.

[www.biomandegar.ir](http://www.biomandegar.ir)



#### Product Introduction:

Frozen embryos with superior genetic characteristics are produced from premium beef, dairy and dual-purpose cattle by using the technique of ultrasound oocyte retrieval (OPU). Frozen bovine embryos are produced from cows with favorable breeding value, with 30-50% conception rate and 100% racial purity by in vitro method.

#### Exports History:

Up to 500,000 \$

#### Main Export Destinations:

Turkey, Kyrgyzstan

#### Annual Production Capacity:

10,000 doses of embryos

#### Founded:

2021

#### Application:

- \* Accelerating the breeding process
- \* Proliferation of superior herd cows
- \* Reducing production costs

*This product is a final B2B consumer product.*

#### Technical Specifications:

Production Process:

##### 1. Selecting and providing premium cows:

Supplying premium cows based on the premium genetic characteristics of production and reproduction (including food conversion ratio, weighing, quantity and quality of milk production, longevity in the herd, resistance to diseases, reproductive indicators, etc.)

##### 2. In vitro production of embryos:

Using ovum pick up (OPU) technique

##### 3. Embryo freezing:

Embryos are frozen in the blastocyst stage using the latest vitrification method and kept in nitrogen tanks at -296 degrees Celsius.

##### 4. Embryo transfer:

At this stage, the frozen embryos are thawed and placed in a special gun for embryo transfer and transferred gently and without damage to the uterus of the receiving cow.

#### Advantages:

Low price compared to other similar products and providing embryo transfer services by an expert and experienced team.

#### International Standards or Permission:

Operating license of Iran Livestock Embryo Production, Freezing and Storage Center - Iran Veterinary Organization





## ➤ Cow Embryo Production by Ivf Method

### High Genetic Potential Cow Embryo and Semen

🏠 Fka Co.

[www.fkaco.ir](http://www.fkaco.ir)



### Product Introduction:

Production of fresh and frozen cow embryos by IVF method. In this method, the breeding of the herd is done more quickly and with high genetic purity, the breeding of the top and short livestock of the herd becomes more and more possible from two generations and is implemented.

#### Exports History:

Up to 500,000 \$

#### Main Export Destination:

Azerbaijan

#### Annual Production Capacity:

10,000 doses of embryos

#### Founded:

1974

### Application:

In order to breed and breed dairy cows and treat cows that have reproductive problems such as ovarian adhesions. These animals can be fertilized with the help of embryo transfer technique.

*This product is a final B2B consumer product.*

### Technical Specifications:

Types of fetuses of Holstein and Jersey breeds. Using IVF and in vitro embryo production, weakly genetic embryo recipients have virtually no genetic similarity to strong genetic calves implanted in their wombs.

### Advantages:

- \* Low number of producers
- \* Genetic potential of FKA cattle herd
- \* Utilization of first-class sperm with excellent genetics

### International Standards or Permission:

Based on IETS protocols



## ➤ Breeding and Multiple Births of Sheep

Proved Elite Afshari Sheep

### 🏠 Dorsa Gene Bakhtar Co.

[www.dorsagene.com](http://www.dorsagene.com)



#### Product Introduction:

Afshari multi-birth (prolific) sheep carrying the FecB gene, unlike local sheep, can produce twice as many lambs. This breed of sheep can adapt to harsh climates and different weather. Afshari sheep are one of the heaviest breeds in Iran and ram and ewe weighs 79 and 59 kg, respectively. The fecundity of lambs can be detected in early ages of lambs using molecular genetic methods from their DNA. Therefore, not only the productivity will be increased but the farm management will be easier and more cost-effective. The prolific Afshari sheep has applicants from all over Iran and its breeding is now done in livestock farms in most parts of the country.

#### Annual Production Capacity:

400 ewes and 100 rams

#### Founded:

2020

#### Application:

Animal gene interbreeding

*This product is a final B2B consumer product.*

#### Technical Specifications:

Afshari multi-birth sheep has the following characteristics:

- \* The birth weight of twins is about 3.5 kg
- \* The birth weight of triplets is about 3 kg
- \* Weight of -100days lambs is about 35 kg
- \* Mutant homozygous animals have two alleles of FecB gene (BB) and heterozygous have one allele (B+B).

#### Advantages:

Nowadays, there are many prolific sheep breeds today are prolific but unlike sheep carrying the FecB gene (like Afshari sheep), most breeds do not have a laboratory-detectable gene. Therefore, when they crossed with local breeds, their prolific characteristics cannot be easily transferred to native breeds. As a result, costs are rising sharply. In addition, Afshari sheep can be easily farmed in most harsh climate conditions.



## ➤ Genetically Improved Sheep in order to Produce Thin-Tailed Sheep

### 🏠 Gahar Dorood Co.

#### Product Introduction:

Animal geneticists have recommended mixing native fat-tailed sheep breeds with foreign thin-tailed sheep breeds as a quick and effective way to reduce fat. The results of experiments show that the reduction of the tail in this method is associated with an increase in subcutaneous fat.

**Founded:**

1998

#### Application:

Livestock industries of Asian and European countries

*This product is a final B2B consumer product.*

#### Technical Specifications:

In this genetic modification program, one of the Iranian sheep breeds was used. The average weight of the tail in the first herd in this program (4 years ago) was about 5.1kg and its daily weight gain from birth to weaning and feeding period was 115 and 155 grams, respectively.

The company's animal geneticists by controlling the breeds and recording the detailed data and then estimating the breeding values of each sheep and finally selecting the best for the next generation have been able to achieve products with a tail weight of 4.9 kg (930 g reduction) and The daily weight gain from weaning and after weaning of 103 g (55 g increase) and 935 g (53 g increase)

#### Advantages:

- ※ Reasonable price and at the same time great quality
- ※ Creating added value for lamb producers





## ➤ Genetic Material and Artificial Insemination

Semen of Romanov Sheep

### 🏠 Damgostar Pishgam Co.

[www.damgostarco.com](http://www.damgostarco.com)



#### Product Introduction:

Premium Romanov sheep is the result of fertilization of fresh and frozen semen obtained from high-quality (in terms of genetics and performance) sheep and ram breeds, which produces superior genetics of sheeps and goats in terms of meat, dairy products and twinning.

This superior breed is created through the production of genetic material (sperm) of Romanov.

#### Main Export Destinations:

Iraq, Afghanistan and Persian Gulf countries

#### Exports History:

Up to 500,000 \$

#### Annual Production Capacity:

500,000 doses per year

#### Founded:

2011

#### Application:

For artificial insemination of ewes and producing genetically superior offspring

*This product is a final B2B consumer product.*

#### Technical Specifications:

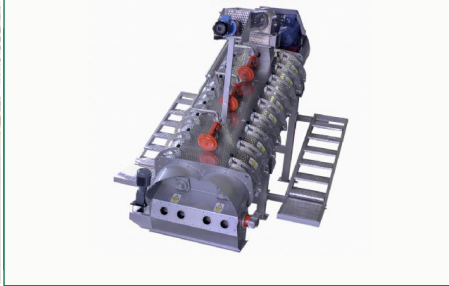
Each dose contains at least 50 million live sperms of good quality in 0.25 cc straws

#### Advantages:

- \* Higher quality
- \* Lower price

#### International Standards or Permission:

License from OCflock for light livestock sperm



## ➤ Livestock, Poultry and Aquatic Animals Feed Processing Machine with Oblique Tank

### ◆ Asiab Machinery Production Group

[www.asiab.ir](http://www.asiab.ir)

**ASIAB**

#### Product Introduction:

Animal and poultry feed processing machine with oblique tank is one of the most important devices in the feed production line. This device aims to gelatinize the starch in the grain in the cooking process and also to eliminate harmful bacteria in the feed (Salmonella).

#### Main Export Destinations:

Afghanistan, Iraq, Uzbekistan

#### Exports History:

Up to 500,000 \$

#### Annual Production Capacity:

20 pcs per year

#### Founded:

2016

#### Application:

This machine is used in the feed production line of feed manufacturing and processing factories.

*This product is final B2B equipment.*

#### Technical Specifications:

- \* Unique diagonal tank
- \* Stainless steel material
- \* Intelligent control system
- \* Equipped with intelligent feeding and draining system

#### Advantages:

- \* Use of modern technologies in design and construction
- \* High quality
- \* Reasonable and competitive price

#### International Standards or Permission:

- \* CE certified
- \* ISO certified



## ➤ Industrial Vacuum Loader

🏠 Zagros Sanat Arka Co.

[www.zsarka.com](http://www.zsarka.com)



### Product Introduction:

Industrial vacuum loader is used to collect and transfer useful and non-useful industrial materials. Among the useful materials that can be collected and transferred, we can include all kinds of catalysts in the reactors of oil and gas, petrochemical and steel industries, pure or impure materials of steel, cement, copper and aluminum factories, heavy metals in mines, and agricultural products and human and animal food. Also, waste materials including industrial effluents, sludge, sulfur and acids can be transferred with this equipment.

In order to comply with the safety principles of manpower in the collection and transfer of materials in special industrial environments, especially in deep, high and closed areas, as well as practical problems in the collection and transfer of materials (dust and pollutant), production and use of industrial vacuum loaders can be very important.

### Annual Production Capacity:

5000 machines per year

### Founded:

2011

### Application:

- ※ Collecting and transferring materials in various industries
- ※ Vacuuming all types of liquids and solids

*This product is final B2B equipment.*

### Technical Specifications:

- ※ **Vacuum power:** 10,000 m<sup>3</sup>/h
- ※ **Tank volume:** 12,000 liters
- ※ **Chassis type:** scissor spring
- ※ The ability to vacuum all kinds of liquids and solids

### Advantages:

Significantly reduces physical and manpower injuries by detecting instantaneous defects and rapidly stopping the process using an intelligent control and refining unit and displaying instant error messages and audible alerts.

### International Standards or Permission:

- ※ ISO 9001
- ※ ISO 10002





## ➤ Manure Vacuum and Collector

🏠 Sadr Azma Sepahan Co.

[www.sadrzma.com](http://www.sadrzma.com)



### Product Introduction:

The manure collector is one of the best solutions used for manure management. Since manure management is one of the most important and costly day-to-day operations of an industrial cattle farm, in recent years, with the conversion of cattle keeping halls to the free stall system, the necessity of timely collection and disposal of manure in these halls has doubled.

By examining the situation of manure collection in these cattle farms, it is easy to see that no effective and economic system has been used for this important matter, and practically the working methods are the same as the old methods, which naturally have a negative effect on the efficiency of herd management. It is worth mentioning that one of the most important reasons of using the free stall system is the need for timely cleaning of cattle passageways, which leads to an increase in herd health, milk hygiene, and reduction of poison problems in cows. Behroob manure collection device collects the manure in the corridors in the best way and in the fastest time and in the most economical way and unloads it in the right place.

**Founded:**

2014

### Application:

All industrial and semi-industrial cattle farms and animal husbandry

*This product is final B2B equipment.*

### Technical Specifications:

- \* **The main parts of the device:** tank, chassis and wheel axle, paddle, hydraulic system, jacks and vacuum pump
- \* **Material of tank, chassis and paddle:** Corrosion-resistant alloy steel
- \* **Capacity:** 6 and 12 square meters
- \* **Number of vacuum pumps:** 2

### Advantages:

- \* High accuracy and elegance in design
- \* Lower price than similar products
- \* Extensive after-sales service
- \* Higher power and maneuverability of the product compared to similar products
- \* Better hydraulic control system than similar products



## ➤ Pellet Die

### 🏠 Refah Avaran Mazand Co.

[www.refahavaranmazand.com](http://www.refahavaranmazand.com)



#### Product Introduction:

Pellet die is a part of a pellet mill mainly used to pelletize the ground material into cylindrical granules. Roller shells force the raw material under intense pressure to produce pellets. Holes & working length of the pellet die to determine the pellet size.

Pellet die is used in the production of livestock, poultry and aquatic feed, which is used in pellet and extruder machines, as well as in the production of agricultural fertilizers, wood pellets and biomass fuel.

The pellets of this company are made of hardened stainless steel, with holes of 1.2 to 24 mm in diameter. Also, any type of drilling with different cross-section levels is produced on a custom basis.

#### Main Export Destinations:

Turkey, Iraq

#### Exports History:

Up to 500,000 \$

#### Annual Production Capacity:

5000 machines per year

#### Founded:

2014

#### Application:

Production of livestock, poultry and aquatic feed

*This product is final B2B equipment.*

#### Technical Specifications:

- \* In internal diameters from 350 to 900 mm and holes from 1.2 mm to 24 mm
- \* **Number of holes:** Up to 71,000 holes (depending on the type and size of the die)
- \* **Hardness:** 51 to 55 HRC
- \* **Conic:** 40 to 60 degrees
- \* **Screw size:** 8 to 24
- \* **Size to hole ratio:** 1 to 11 - 1 to 15

#### Advantages:

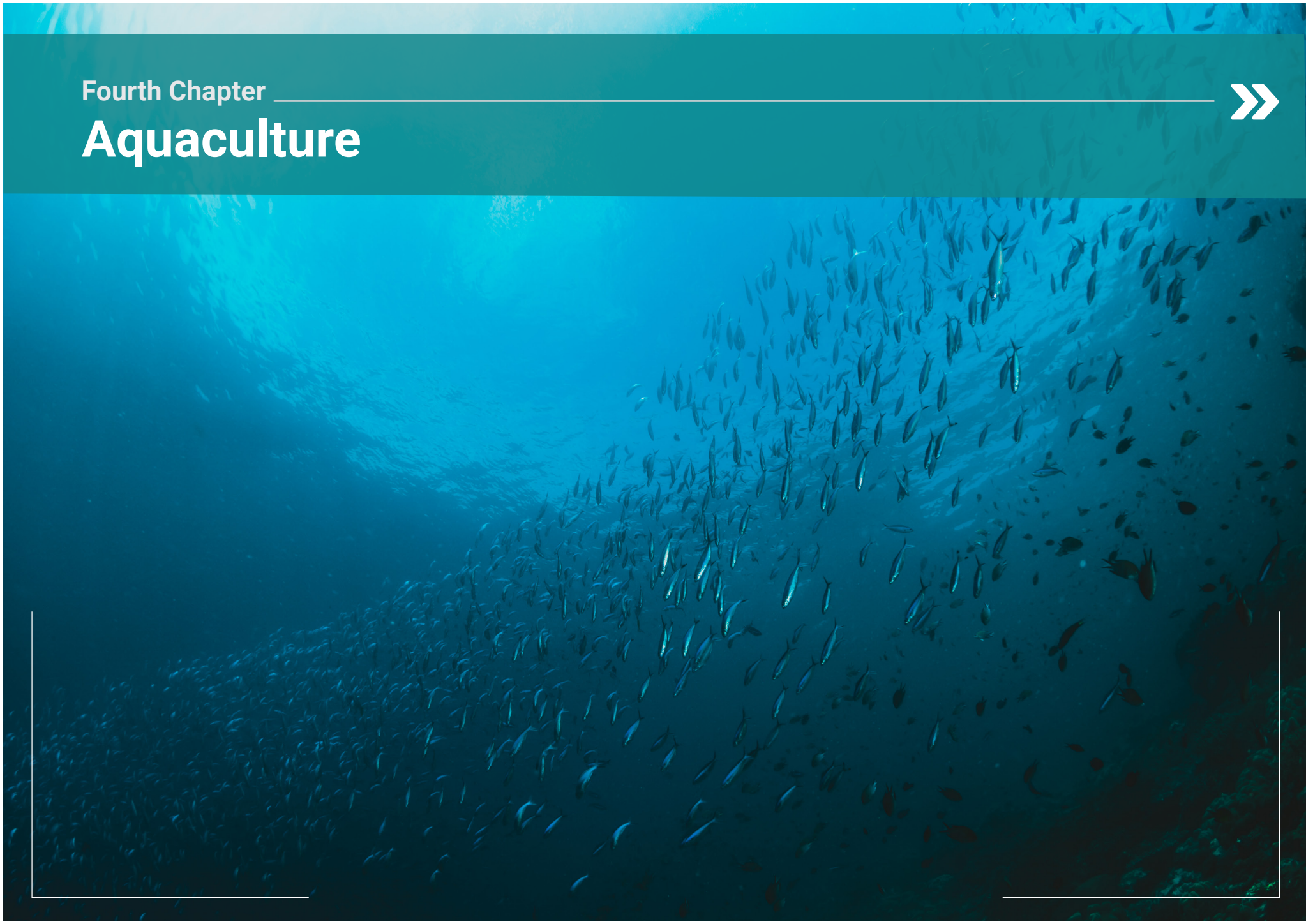
- \* The first and only producer in the Middle East-
- \* Using the technical knowledge of European producers
- \* Delivery of the maximum production tonnage to the consumer
- \* Breakage warranty
- \* The presence of an installation expert during the delivery or start of the product work

#### International Standards or Permission:

- \* ISO 9001
- \* ISO 10002

Fourth Chapter

# Aquaculture



# 4<sup>TH</sup> CHAPTER

First Chapter

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Third Chapter

Fourth Chapter

## Aquaculture

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### Sections

Aquaculture Equipment ○

Feeders for Fish ○





## ➤ Construction of Fish Farms in The Sea

### 🏠 Caspianzhik Co.

[www.caspianzhik.com](http://www.caspianzhik.com)



#### Product Introduction:

Fish farming in floating cages in the sea has been welcomed in the world for the last 5 decades. In this method, due to the use of nutrients and oxygen in sea water, the cost of fish farming in high capacities is greatly reduced. Each farm consists of a very large cage or several medium floating cages according to the production capacity. According to the investor's goal of breeding, the number of cages is adjusted within the scope of the license obtained from the Fisheries Department.

The price of each fish breeding cage of size 90 is about 35,000 dollars, but the baby fish that are put in it for breeding costs up to 200,000 billion dollars. Therefore, care must be taken in designing the cage to avoid wasting resources.

**Founded:**  
2020

#### Application:

Fish farming farms and cages are used in seas and coastal areas to grow edible fish.

*This product is final B2B equipment.*

#### Technical Specifications:

Each fish breeding cage consists of three main parts of the cage, the bracing system and the support float. Cages are named according to the perimeter of their opening. 90 cage means a cage whose Kevlar circumference is 90 meters.

#### Advantages:

- \* Increasing fish production from the sea
- \* High volume of production compared to the price
- \* Preventing the wastage of resources

#### International Standards or Permission:

- \* NS 9415
- \* NYTEK



## ➤ Extruder Aquatic Feed Production Line

### ◆ Atiye Sazan Negin Faraz Co.

[www.iranlco.com](http://www.iranlco.com)



#### Product Introduction:

Extruder aquatic feed production line includes 54 different items of equipment including transporters, hammer mill, pulverizer mill, different mixers, feed processing extruder, dryer, stabilizer, vacuum coater for coating nutrients and growth stimulants and drugs, air supply system, boilers steam supply system, packing system, control room.

Generally, the purpose of this feed production line is to create a high feed conversion ratio, and for example, obtaining one kilogram of fish meat by consuming one kilogram of aquatic feed. Therefore, the raw materials (a mixture of grains) are converted to fine grains, and then in the cooking process, the starch is gelatinized and the proteins are cooked in order to increase the absorption and digestibility, and also with the help of an extruder, hydrocarbons are crushed and converted into fine sugar, which increases the absorption of food. Eventually, the feed will be shaped and dried with other equipment.

**Founded:**

2014

#### Application:

Production of aquatic feed for aquaculture and marine industries

*This product is final B2B equipment.*

#### Technical Specifications:

- ※ **Pressure:** 200 bar
- ※ **Capacity:** 10 tons per hour
- ※ **Subsystem:** 54 subsystems

#### Advantages:

- ※ Maintains the nutritional value of the feed and improves the feed conversion ratio
- ※ Production of various foods according to the type and species of aquatic animals
- ※ Reduces the possibility of feed contamination due to the use of high temperatures in the production process
- ※ Proper packaging and prevent produced food from being crushed
- ※ Reduces water pollution
- ※ Reasonable price with after-sales services

**International Standards or Permission:**

GMP Certificate



## ➤ Multicat Fishing Service Vessels

### 🏠 Fanavaran Syraf Co.

[www.syraf.com](http://www.syraf.com)



#### Product Introduction:

Multi-cat Fishing Service Vessels is a type of multi-purpose vessel. This type of vessel, due to its special design, provides the possibility to provide most of the sea activities required by farms in the form of one vessel.

#### Main Export Destinations:

Qatar, Azerbaijan, Oman, Iraq, Kenya, Senegal

#### Exports History:

About 2 million euros

#### Annual Production Capacity:

12 pcs per year

#### Founded:

2001

#### Application:

Multi-cat Fishing Service Vessels can provide a variety of specialized services for fish farms at sea (in the marine section) as follows:

- \* Transfer of baby fish
- \* Cage Net changing
- \* Food transfer
- \* change crew
- \* Providing cage installation services, including transportation and anchoring and...
- \* Providing ancillary services such as net washing and ...
- \* Providing similar services to the port services

*This product is a final B2B equipment.*

#### Technical Specifications:

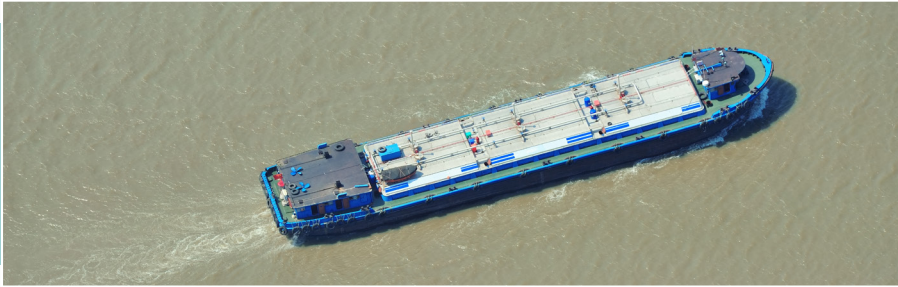
- \* **Material:** marine aluminum or steel
- \* **Sea State:** Coastal / Force 3
- \* **Length:** 12 to 24 meters
- \* **Beam:** 3 to 8 meters
- \* **Speed:** 8-12 knots
- \* **Propulsion System:** 2 diesel engine with fixed pitch propellers and streamlined double plate rudder
- \* **Navigation and communication systems:** according to standard
- \* **Safety equipment:** according to standard
- \* **System:** Crane

#### Advantages:

The use of the special design of Syraf Company has caused the initial investment costs, usage and maintenance costs and the amount of marine expertise required by the farms to be properly managed and reduced. Also, due to the familiarity of the Syraf design team with the specific climate of region, as well as special knowledge of the specific user and specialized operations of the above farms, this vessel can offer more productivity in its services than other models.

#### International Standards or Permission:

- \* ISO 9001:2015
- \* ISO 21001:2018



## ➤ Automatic Feeding Barge for Fish Farms in Cage

### 🏠 Fanavaran Syraf Co.

[www.syraf.com](http://www.syraf.com)



#### Product Introduction:

Automatic feeding barge for fish farms is a suitable product for serving in small and medium sea farms. This fully automatic barge, after initial planning by the user, can manage up to 5 tons of feed and deliver them according to the intended schedule. The fully automatic barge supplies energy to its activities using solar panels mounted on it. The special design of the body of this product makes it float on the water at all times and it is not possible to sink under any conditions (even in the worst weather conditions).

#### Main Export Destinations:

Qatar, Azerbaijan, Oman, Iraq, Kenya, Senegal

#### Exports History:

About 2 million euros

#### Annual Production Capacity:

12 pcs per year

#### Founded:

2001

#### Application:

Automatic feeding barges for sea fish farms have been produced for feeding small and medium farms (two cages at the same time). This product can be used to feed the fish up to a storage volume of 5 tons after docking next to the farms due to the automatic and programmable feeding system installed on it.

*This product is final B2B equipment.*

#### Technical Specifications:

- \* **Hull Material:** Marine Steel Grade A
- \* **Classification / Force:** ICS / Force 5
- \* **Length O.A.:** 5-12 m
- \* **Beam O.A.:** 5-12 m
- \* **Draught Max:** 3-5 m
- \* **Height:** 5-7 m
- \* **Feed tank:** 4-16 m<sup>3</sup>

#### Advantages:

Fully automatic feeding barge has the following capabilities:

- saving and storage of feed in the amount of 5 tons
- Feeding as planned
- Energy supply through solar energy
- Ability to do several different scheduling
- Affordable prices for small farm volumes

#### International Standards or Permission:

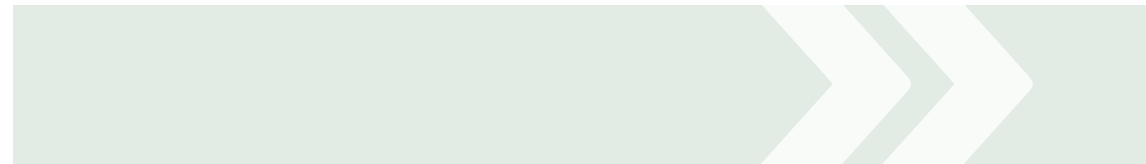
- \* ISO 9001:2015
- \* ISO 21001:2018

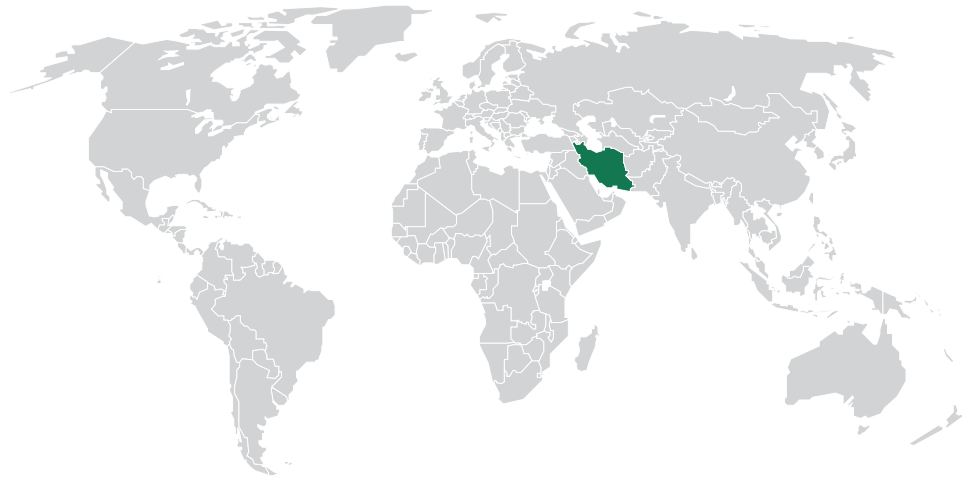




### **Iranian House of Innovation and Technology (iHiT)**

Iranian house of Innovation and Technology (iHiT) is one of the types of export intermediaries that launched under the auspices of the Vice President for Science and Technology in Kenya, China, Russia, Turkey, Syria and Iraq. In addition to accessing the export instructions, these houses provide variety of services for companies to enter the interactional service markets such as: private and shared workspace, permanent exhibition of products, finding business partners and investing in the target countries of export, company registration, product registration, medicine, medical equipment and trademarks registration, dispatch and admission of business delegations, hiring local specialists to present products and service.





## TEHRAN iHiT

**Manager:** Mohammad Karami

**Field of Activity:** Permanent International Exhibition | Export of products and services of knowledge-based, creative and technology companies in Tehran

**Country:** Islamic Republic of Iran – Tehran

### Services:

- Holding permanent exhibition of knowledge-based products and services
- Holding specialized events and meetings
- Providing dedicated and shared workspace in Tehran
- Identifying export opportunities
- Identifying opportunities for scientific, technological and industrial cooperation

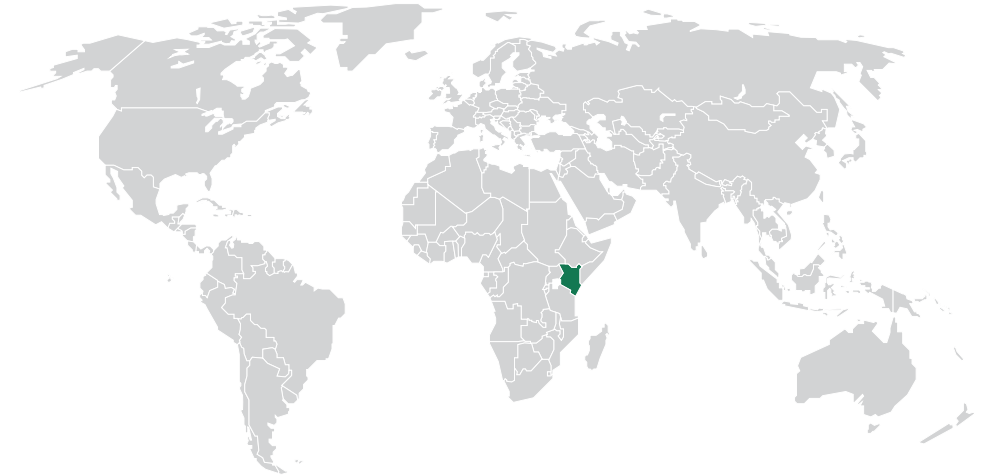
**Address:** Hall 37A, Tehran International Exhibition, Tehran, Iran

**website:** [www.ihit-expo.com](http://www.ihit-expo.com)

**Tel No:** (+98) 912 444 9958 / (+98) 21 910 737 37

**Supervisor:** Mohammad Mahdi Agharafiee

**Office Phone:** (+98) 912 706 9611



## NAIROBI iHiT

**Manager:** Ali Baniamerian

**Field of Activity:** Export of products and services of knowledge-based, creative and technology companies

**Country:** Republic of Kenya – Nairobi

### Services:

- Holding Permanent exhibition of products and services
- Providing dedicated and co-working space
- Holding the National Pavilion of the Islamic Republic of Iran in international exhibitions
- Export development of knowledge-based products
- Identifying opportunities for scientific, technological and industrial cooperation
- Providing export instructions of the Center for International Science and Technology Cooperation

**Address:** Dennis Pritt Road, Next to Maalim Juma Road, Kilimani, Nairobi, Kenya

**website:** [www.ihit.co.ke](http://www.ihit.co.ke)

**Tel No:** (+254) 111 606 113

**Supervisor:** Fahime Zabihi

**Office Phone:** (+98) 21 910 700 80 INT 301



## SUZHOU iHiT

**Manager:** Amir Ghorbanali

**Field of Activity:** Export of products and services of knowledge-based, creative and technology companies

**Country:** People's Republic of China - Shanghai

### Services:

- Holding Permanent exhibition of products and services
- Export development of knowledge-based products
- Providing dedicated and co-working space
- Identifying opportunities for scientific, technological and industrial cooperation
- Holding the National Pavilion of the Islamic Republic of Iran in international exhibitions
- Providing export instructions of the Center for International Science and Technology Cooperation

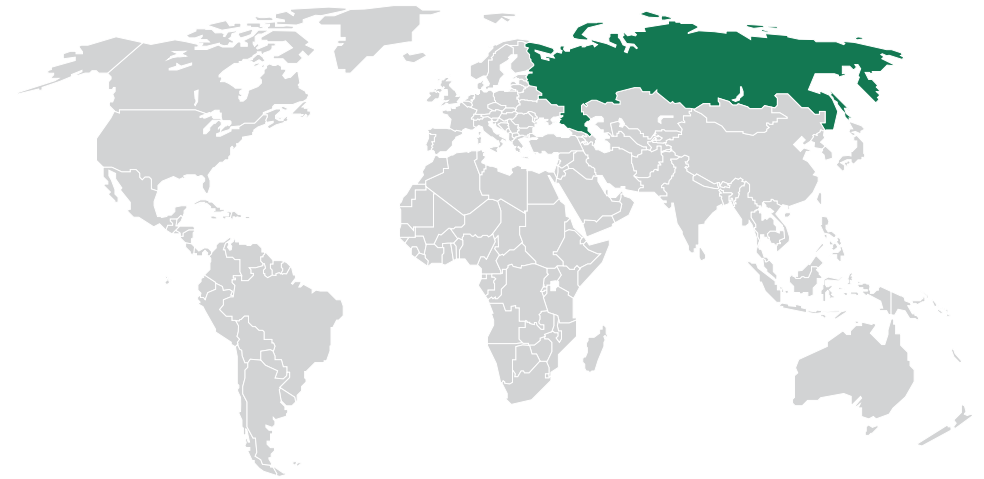
**Address:** Room 88 ,409 Keling Road, Advanced District, Suzhou, Jiangsu Province, China

**website:** [www.innotechexport.ir](http://www.innotechexport.ir)

**Tel No:** (+86) 182 062 123 92

**Supervisor:** Simin Rafeapour

**Office Phone:** (+98) 935 841 44 22



## MOSCOW iHiT

**Manager:** Mahdi Deilam Salehi

**Field of Activity:** Export of products and services of knowledge-based, creative and technology companies

**Country:** Russian Federation – Moscow

### Services:

- Holding Permanent exhibition of products and services
- Providing dedicated and co-working space
- Holding the National Pavilion of the Islamic Republic of Iran in international exhibitions
- Export development of knowledge-based products
- Identifying opportunities for scientific, technological and industrial cooperation
- Providing export instructions of the Center for International Science and Technology Cooperation

**Address:** No. 7, Unit 4, Arkhangelsky St., Moscow, Russian Federation

**website:** [www.ihit-ru.com](http://www.ihit-ru.com)

**Tel No:** (+7) 903 123 16 31

**Supervisor:** Malek Saeidi

**Office Phone:** (+98) 912 617 6293 | (+98) 21 860 537 15 INT 309



## ISTANBUL iHiT

**Manager:** Masoud Hasani

**Field of Activity:** Export of products and services of knowledge-based, creative and technology companies

**Country:** Turkey – Istanbul

### Services:

- Holding Permanent exhibition of products and services
- Providing dedicated and co-working space
- Holding the National Pavilion of the Islamic Republic of Iran in international exhibitions
- Export development of knowledge-based products
- Identifying opportunities for scientific, technological and industrial cooperation
- Providing export instructions of the Center for International Science and Technology Cooperation

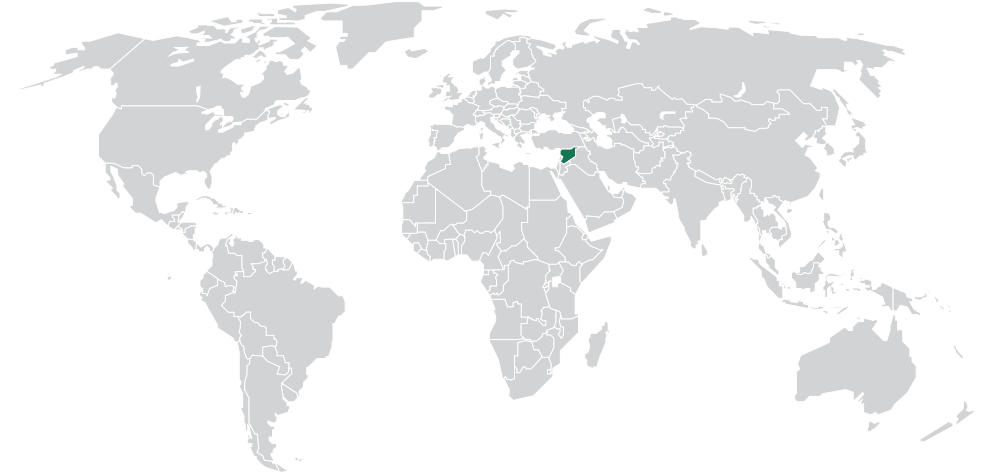
**Address:** Halaskargazi, Halaskargazi Cd. No: 34371 ,66-38 Şişli/Istanbul

**website:** [www.istanbulihit.com](http://www.istanbulihit.com) **Email:** [info@istanbulihit.com](mailto:info@istanbulihit.com)

**Tel No:** (+90) 21 240 141 44 **Whatsapp:** (+90) 533 505 4589

**Supervisor:** Masoud Hasani

**Office Phone:** (+98) 21 882 227 55



## DAMASCUS iHiT

**Manager:** Mohammad Hadi Zeighami

**Field of Activity:** Export of products and services of knowledge-based, creative and technology companies

**Country:** Syrian Arab Republic – Damascus

### Services:

- Holding Permanent exhibition of products and services
- Providing dedicated and co-working space
- Export development of knowledge-based products
- Identifying opportunities for scientific, technological and industrial cooperation
- Holding the National Pavilion of the Islamic Republic of Iran in international exhibitions
- Providing export instructions of the Center for International Science and Technology Cooperation

**Address:** Damascus Freezone, Jamarag Sq., Damascus, Syria

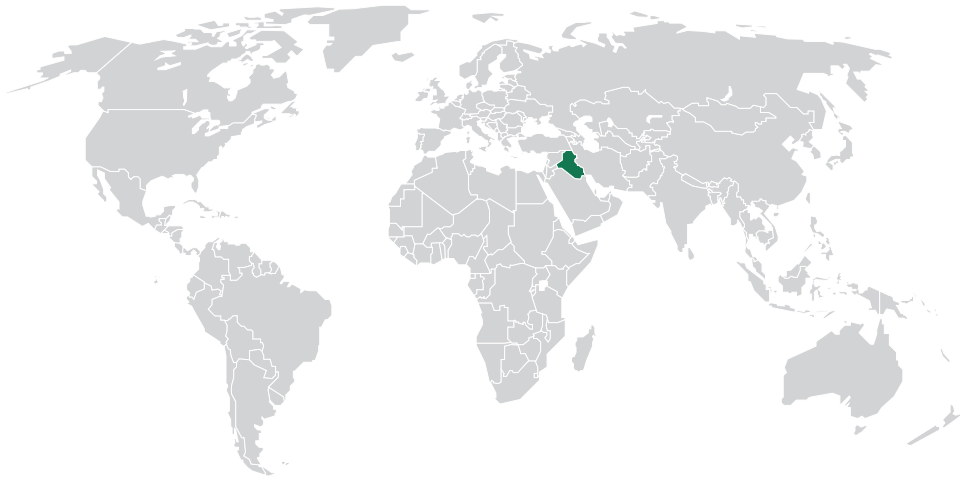
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