

IRAN **Animal Feed Market**

First Edition, Sep 2018



Iran Feed
Industry Association

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IRAN
Animal Feed Market
First Edition 2018



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Iran Feed Industry Association Services

Tax Advice

The tax advisers of this association seek to resolve the tax cases of members

Social Security Consultant

Advice on employers' rights in law and regulations as well as resolving disputes

Contract matters Supervision

Due to the problems experienced by our members with their clients in relation to business contracts, experienced experts of association advice members

Ranking Center

Ranking the feed mills for the issuance of compilation records, training and advice in the field of quality, excellence and productivity

Arbitration Center

All claims and disputes arising out of and relating to commercial contracts can be referred to the Arbitration Center

Commercial Consulting

We are committed to helping our businessmen and manufacturers by delivering the best and accurate information and providing analysis of marketing for domestic and international markets

Legal Claims

The group of lawyers of this association began its activity in 2014 in order to provide consultancy services to applicants

International Affairs

Trying to improve trade relations with other countries, removing barriers and trade problems of its members in foreign countries, capacity building, informing and advising the members and stakeholders for increasing their share from the export target markets



We Try More



**Majid
Movafegh Ghadirly**

*Author & IFIA
Chairman of the Board*

Foreword

Iran has numerous potentials and capacities based on its geography, which is considered as important factors for attracting foreign investors. The Middle East stability and security is Iran's main advantage; Iran has vital role in preserving the mentioned stability in the region as well. Other Iran's capacities are as follows: the young and educated work force, the availability of appropriate industrial infrastructure in the region in comparison to neighbor countries, the unlimited production capacity and competitive contracting in the region, the 7th place in the world chicken production, the 9th rank in egg production, the 19th rank in the animal feed production, Mineral reserves, pioneer situation in international transit and the huge potential in fisheries.

Although the essential information has not been available about investment condition, cooperation and the governing rules on different economic sectors in Iran, but after concluding the JCPOA contract between Iran and 5+1, the intention of investors and economic activists as well as domestic enterprises are increased to develop the businesses and international relations.

One of the most important economic sectors in Iran is the agricultural sector (Agribusiness), especially the livestock as the second Iranian industry, and animal feed industry as the supply chain for the large animal husbandry industry; however, Lack of information about livestock and animal feed industry has reduced domestic and foreign investment in the industry. Since statistics and information are essential factors in the economic, social, cultural and sustainable development, so the data collection, statistical analysis and proper planning are vital and considered as the main components of efficient management to achieve development goals, which have been neglected.

Therefore, the international report of Iran animal feed industry is provided to present statistics and information about agricultural sector, husbandry subsector and animal feed industry from investment trend, mechanisms of quantitative and qualitative production development and export, and the domestic and foreign investment opportunities.

The report is prepared by the latest analyses, information and documentation related to the livestock, poultry and aquatic sector in four chapters as follows: Iran's Economy, Agribusiness, Animal Husbandry, and the Animal Feed Industry. The report embodied the viewpoints of managers, businessmen, economic activists and the owners of animal feed industries as well as the potentials and actual capacities of the industry.

We hope that the technical problems and the shortcomings to be resolved in the subsequent reports. We ask all experts and researchers also to help us to progress in this important and difficult course by offering their own suggestions and guidelines.



Iran Feed Industry Association

Overview

Over the years the formation of institutions, organizations and associations of livestock and poultry feed factories in the country, the status of an institution that could collect the views of all stakeholders of livestock and poultry and aquatic feed industry and meet the needs of large-scale industry, entrepreneurs and managers of the organization, was empty. Concern of creating such formation had engaged a number of public and private sector entrepreneurs and managers Until the occasion aroused so that the chosen founding of the animal feed industry attained to create the needed association.

IFIA, based in Tehran was established under permission of IRAN Chamber of Commerce, Industries, Mines and Agriculture. IFIA, founded in 2013, the Official Member of IFIF (International Federation of Feed Industry) is the Iran's largest organization devoted exclusively to representing the business, legislative and regulatory interests of the Iran animal feed industry and its suppliers.

IFIA also is the recognized leader for international companies and provincial associations. Members include about 650 domestic and Member-companies are livestock feed and Additive feed manufacturers, integrators, pharmaceutical companies, ingredient suppliers, equipment manufacturers and companies which supply other products, services and suppliers to feed manufacturers. The feed industry makes a major contribution to feed safety, nutrition and the environment, and it plays a critical role in the production of healthy, wholesome meat, milk, fish and eggs. More than 80 percent of the commercial feed in the Iran is manufactured by IFIA members.

Besides, having taken some enterprises to set up interaction with some domestic and international institutions and companies to obtain the latest Know-how, the company has cooperation with some domestic universities and colleges and international entities such as IFIF (International Feed Industry Federation), FAO, as well as some Chinese, Indian and European institution.

History

Iran's feed Industry has started working 60 years ago at the same time with the industrialization of animal husbandry. Nowadays, despite the high depreciation, 3 generation of technology are working in the feed mills.

The growth of the industry in the past decade has been significant due to a free competitive atmosphere for investment. The number of animal feed mills was 300 units in 2002 with capacity of about 8 million tons' production yearly, while the number of mills receives to 645 units after 15 years with a production capacity of 20 million tons.

Further, during these years the majority of the new units have been established with a production capacity of over 30,000 tons, with consideration of high efficiency as well as having two working shifts. Above all, unlike the old units, the new units operate with higher capacity or near of their actual capacity.

Also, the technology used in these units is completely up to date; they have all of the GMP certification and new standard of the country's authorities. Most of livestock, poultry and aquatic breeding units prefer to refer to new established feed mills for preparation their required feed.

Mission

- To organize livestock and poultry feed industries and to faster coordination, consistency in the activities of the aforementioned industry.
- To enhance power of bargaining in this guild at international markets and when exposed to domestic organizations and agencies
- To raise the level of quality of products with the purpose of civil and guild management in the area of producing and hampering false rises in prices and to preserve the balance and order.
- To pave the way for more exploitation of investments for proper production of merchandise in question
- To apply and transfer scientific and practical experiences of the practitioners and to update them for realization of the legal developmental goals.
- To make efforts to organize all the affairs relating to production of livestock, poultry and aquatic feed;
- To receive the information relating to supply and demand, prices and consumption markets to be furnished to members;
- To collectively participate in decision-making and to put forward the resolutions pertaining to production of the relevant goods and products;
- To forge relationship and communication among state banks and credit institutions as well as national and international monetary organizations under the rules of the IRAN with the purpose of facilitating and expanding financial service and facilities to the members;
- To create databanks for the areas related to the goals and duties of the Association and to provide information via information network and to publish books, magazines, journals and special-interest and exchange of the relevant information;

Goals & Plans

- Develop and strengthen the contribution of animal, poultry and fish feed industry, in national economy.
- Increasing the role of animal feed industry in employment and national income.
- Efforts to promote the knowledge and belief of the role of animal feed industry on inclusive development.
- Attempts for Promote the knowledge, leadership skills and management of industrial and semi-industrial feed mills with the aim of strengthening integration and more effective participation in decision-making.
- Optimizing the use of resources and environmental protection.
- Participating with government agencies on the path of creating a favorable environment, unity and solidarity among activists in the field of development.
- Increasing the level of bargaining power in international markets as well as with local organizations.
- Using and transferring scientific and practical experiences of stakeholders and update them to achieve the development goals

Beliefs & Core Values

Core values are basic beliefs, traits and behavioral norms that would be motivate criteria for decision-making and changer of their organizational culture. And is expected of all members and stakeholders commit in the implementation of outlook and executive approaches and show the necessary commitment to them in practice. These beliefs include:

- Accountability
- Commitment
- Cooperation and empathy
- Holistic and independence in providing comments
- Respect the ideas of others and try to reach consensus
- Respect for national interests and the interests of society

Vision

Transforming the association into a resource of information and the decision-makers in the field of animal feed, poultry and fish industry, so that the relevant industrial policy is not done without the participation and presence of the Association. This vision will be realized by focusing on the following strategic issues:

- Becoming a stable organization having optimal financing system
- Establishing and maintaining relationships, collaboration and effective partnerships at home and abroad
- Creating a think tank and professional industrial / economical professionals
- Leader in creating and developing standards of corporate governance, social responsibility and business ethics
- Very broad recruitment and increasing the circle members

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Chairman of the Board
Managing Director of Iran Feed, Drug
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Vice – president of the Board
Managing Director of Keyvan Morghe
Partalaie Mahabad Company



Seyyed Ali Kheirie
Vice – president of the Board
Director Manager of Setare Kian
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Chairman of Amol Behdane Tabarestan



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Member of the Board (Alternate)
Managing Director of Pegahe Jahan
Nama Company



Keyvan Estiri
Member of the Board (Alternate)
Chairman of Mehr Chine Chineh Kian
Company



Iran Feed, Drug & Additive Joint-Stock Company

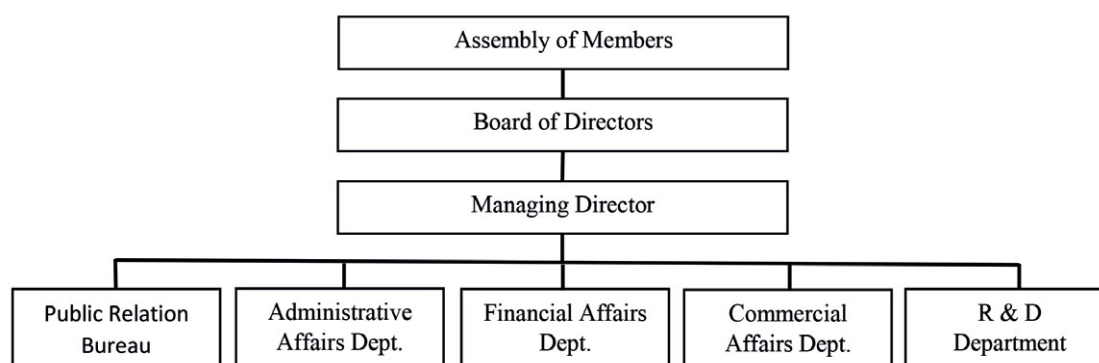
Overview

In 1998, a group of highly reputed and renowned pioneers established Iran Feed, Drug & Additive Joint-stock company to create one of the most comprehensive companies in the field of animal feed industry. This organization with Support of Ministry of Agriculture Jihad and a number of highly reputed entrepreneurs and industry owners and with more than half a century experience, managed to plan and implement strategies in order to improve the Feed industry in Iran.

Iran Feed, Drug and Additive Joint-Stock Company (IFDAC) was established with the aim of being one of the most comprehensive and consolidated commercial-trade organ to improve feed production in quality and quantity in Iran.

Having more than 145 affiliated feed manufacturing plants as the members, now this company supplies about two third of the total feed production in the country. Appropriate geographical dispersion of members, high capacity of warehousing, well-equipped laboratories, remarkable technological capabilities, considerable turnover and active educational and research department, enable the company to cope with its duties perfectly.

The organization chart of the company is illustrated below:



Mission

Participation in economic development by strengthening the promotion and expansion of livestock, poultry and aquatic feed, and provide an environment that industrial units, scientific centers, organizations and professional companies in the provincial capitals have an effective and constructive role in the recovery and improvement of business environment and quality of life of individuals.

- governance, social responsibility and business ethics.
- Very broad recruitment and increasing the circle members.

Strategy

At the moment, with support and assistant of private sector and valuable strategies of Ministry of Agriculture Jihad, this organization has the possibility of becoming a member in professional and specific related associations. Where the management is trying to expedite and facilitate the activities of this industry by following up important issues with the authorities. Possibilities of offering low interest loans, lowering custom tariffs, facilitating export, and quality control strategies are some of the activities this organization is engaged in.

Today, the R&D center of this organization, by accessing new technology of raw material or importing it, is trying to increase the quality and lower the production cost of animal feed.

To realize this concept, a high amount of investment has been made to cooperate with R&D sections and organization of Europe, Asia and India which the Pro-biotic animal feed production is one of the major implemented strategies.

Vision

Transforming the company into a resource of information and the decision-makers in the field of animal feed, poultry and fish industry, so that the relevant industrial policy is not done without the participation and presence of the Joint-stock company.

This vision will be realized by focusing on the following strategic issues:

- Becoming a stable organization having optimal financing system.
- Establishing and maintaining relationships, collaboration and effective partnerships at home and abroad.
- Creating a think tank and professional industrial/economical professionals.
- Leader in creating and developing standards of corporate

The Main Duties

- Dealing with the trade affairs through having relations with relevant state organizations.
- Providing the members with raw material and feedstuff
- Marketing and export the member's products.
- Supplying the members with technical service in order to improve the performance and profitability. Conducting some projects to enhance quality assurance of products and productivity.
- Holding seminars, workshops and short-term training courses for members' expert and staff.
- Offering technical consultation to the members as well as cattle, poultry and fishery farmers in nutrition and feeding.

In fact, this company makes efforts to facilities the activity in feed industry through making and submitting proposals to official organization and taking the relevant steps such as offering banking credits with low interest rate, lowering tariffs rate, providing export credits, lowering taxation rate, insuring the products for quality assurance, promoting the distribution system of feedstuff.

Signification Enterprises

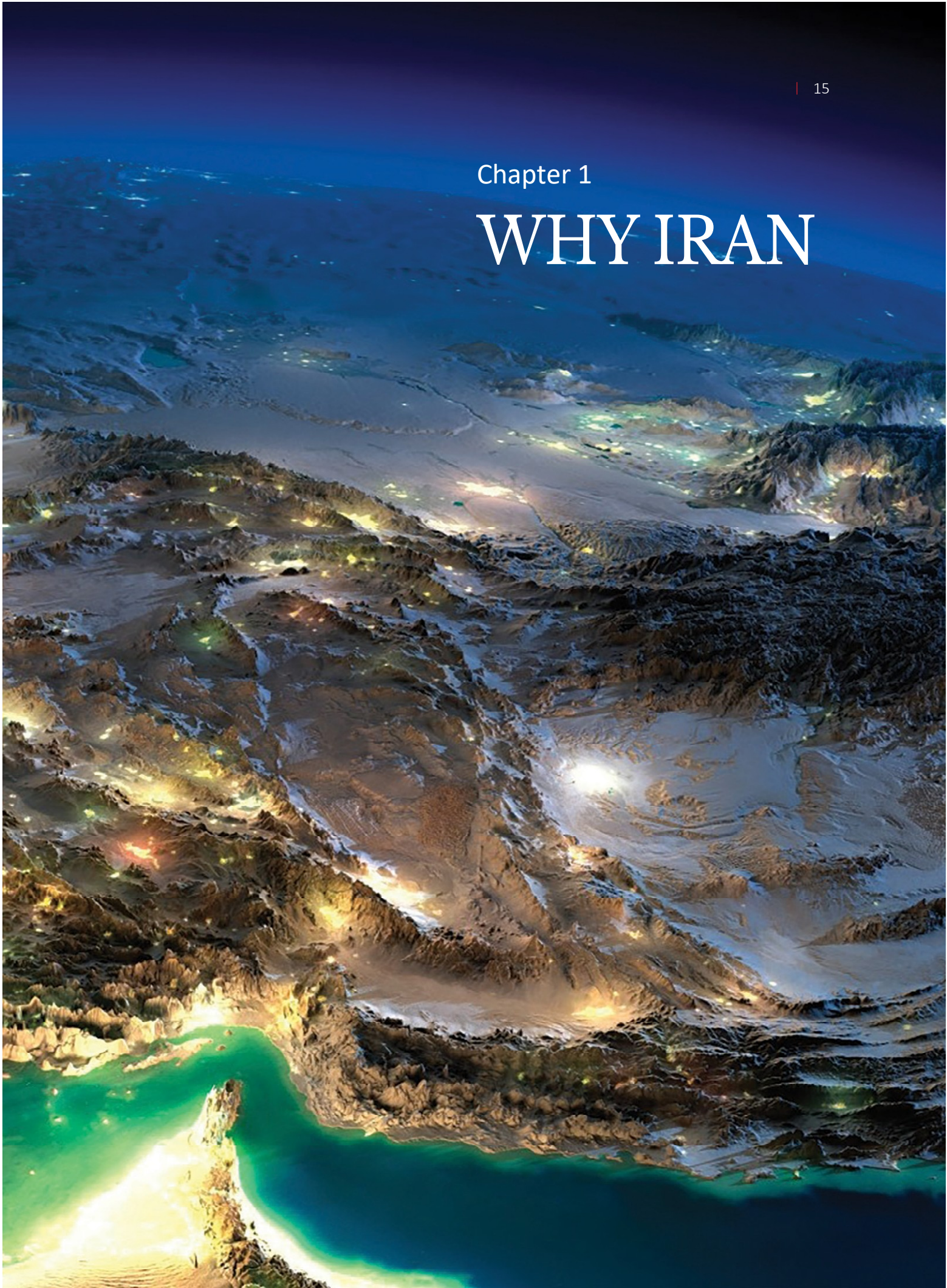
- Member of specialized committees in Jihad-Agriculture ministry.
- Member of livestock, poultry and aquatic Feed Codex Committee in Iran.
- Member of Feed Committee of Iranian Institute of Standard and Industrial Research
- Cooperating with some domestic and international educational institutions by signing up MOUs.
- Holding some domestic, regional and international workshop, short-term training courses in feed technology.
- Attending some regional and international, exhibition to present Iranian capability of feed industry.
- Having consists cooperation with domestic and international research institutions to apply the outcome of the researches in the plants.
- Offering technical services and consultation to the members as well as cattle, poultry and aquatic farmers.
- Suppling some proposals to the officials and policy makers concerning feed manufacturing to improve situation in the industry.
- Establishing a Wide Area Network (WAN) in the specialized field to join the members.





Chapter 1

WHY IRAN



THE IRANIAN TOP RANKING IN THE WORLD

- The 18th largest economy
- The world 4th rank in oil reserves
- The Middle East 2nd Largest producer of petrochemicals
- 1st place in natural gas reserves
- The top 10 countries in pharmaceuticals
- The world's 14th largest steel producer
- Iran is 10th ranking in iron ore reserves and production
- The world's largest saffron producer
- The 1st rank on handicrafts in the world by variety
- The world 6th ranking in Nano-technology
- The 14th rank in installed power generation capacity
- World 3rd ranking in agricultural products variety
- The Middle East most diverse capital market
- The world's 2nd largest producer of dates
- The world's largest pistachio producer
- The world 3rd rank in dam construction
- The world 7th rank in cement production
- The world's largest caviar producer



POTENTIALS & ADVANTAGES

Geographic Location

Iran has a unique geographic location at the heart of a cross-road, linking the Middle East, Asia and Europe and is empowered by many inter and trans-regional trade, customs, tax and investment arrangements.

Despite the abundance of aviation, land and sea routes, Iran plays super-strategic and crucial part in energy transformation, international commodities, road and maritime routes for oil and gas resources transit in the Persian Gulf.

The Strait of Hormuz is a strategically important as linking the Persian Gulf with the Gulf of Oman and Indian Oceans as one of the world's foremost chokepoints, which is a sea route for the shipment of goods. The main product of which crossing through is oil from the Middle East.

The Strait is only 21 to 60 miles (33 to 95 km) wide. Iran and Oman are the countries nearest to the Strait and share territorial rights over the waters. However, the width of the shipping lanes is much narrower, because the water is not deep enough for oil tankers throughout the strait's width. Iran dominates a number of new employments with a privileged strategic position in the Strait of Hormuz and the Gulf.

The six important islands that make up the Iranian ethnic defense chain include Hormuz, Lark, Qeshm, Hengam, the Greater Tunb and Abu Musa, which are relatively close to each other. Besides adding to the size of Iranian water, these strategic islands have long been of great value for controlling waterways.

Being adjacent to the Persian Gulf oil-rich countries such as Iraq, Kuwait, and Saudi Arabia and as the only transit path to cross fossil resources, the Strait of Hormuz is viewed as a safe alternative for Russia and provide energy for Eastern Europe, Central Asia and even Western Europe through Turkey.

Iran is a reliable passageway of oil and gas transit for Turkmenistan and Kazakhstan; also being between Caspian Sea and the Persian Gulf, is the shortest route to transfer energy resources to the Caspian Sea bordering countries. Facilitating oil export to Europe, Western countries, Japan, China and the Southeast Asia countries is Iran's another privilege.

Due to its abundant natural resources and geographical location (International Water, the Caspian Sea and its Northern countries market), Iran has access to raw materials and benefits resource-based economy.

Comparing Iran's lower tax rate to other countries, production has led to an increase of profit margin. In addition, the geographic location is such that export is greatly facilitated by access to the international transport fleet along the East-West axis.



The Cheapest Tourism Destination

According to the Travel and Tourism Competitiveness report published by World Economic Forum (WEF), Iran was ranked as the most affordable foreign tourists' destination for the third time. This biennial report, which surveys 136 countries in 14 categories indicating how well these countries could deliver sustainable economic and social benefits through their tourism sector. In terms of price competitiveness, the report states that Iran is ranked among main players of tourism industry such as Egypt, Malaysia, Russia, Turkey, Greece, Spain, the US, France and Italy. Iran Global Competitiveness Index (GCI) is 6.66 and holds the first global place. Costs relating to travel such as ticket prices, fuel rates and taxes as well as costs accommodation and food prices are the indicators for "price competitiveness".

Table 1-1. Travel & Tourism Price Competitiveness Index in 2017

Index Component	Rank/136	Score
Price competitiveness	1	6.7
Ticket taxes & airport charges 0-100 (best)	13	92.9
Hotel price index USD	NA	NA
Purchasing power parity PPP USD	10	0.3
Fuel price levels USD cents/liter	5	18.7

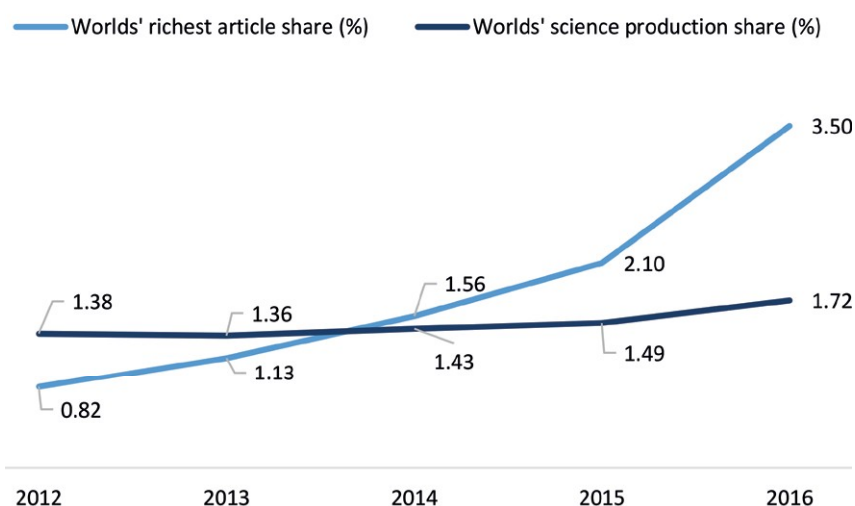
Source: World Economic Forum



Science Production

In 2016, Iran scientific production increased by 18.9% and has had the highest rate in the last five years, with the world's first scientific growth compared to the global 25th large science producers. Iran's contribution to the world science-production quantity reached 1.72% in 2016; however, its share was 1.49%, obtaining the world 17th rank while 19th in 2015. In terms of valuable articles, Iran gained the world's 3.5% compared to the previous year by 2.1%, in 2016.

Figure 1-1. Iran Share of World's Science & Articles Production



Source: ISI

Iran also made significant progress and reached the 15th rank in stem cells technology in Islamic countries over the last few years. The first spark of nanotechnology began in 2000 when Nano was developed as a modern technology, known only to less than 10 university professors; Now, ranked the world's 6th in Nano-science and above countries such as Japan and France, Iran holds 1st place in the region and Islamic countries.

The Transit Hub of the Region

Having common border on the north by the Caspian Sea and on the south by the Persian Gulf and the Oman Sea, has allowed Iran to have more than 5,800 km coastal access. Iran has a privileged position in transit, being connected to the Eurasian and the Central Asian countries from the north, and the east and to Turkey from the West, thus using a part of the Silk Road. The geographic location over the transatlantic crossroads has turned the country to a hub on the North-South and East-West corridors.

Trans-boundary transit of Afghanistan and Central Asia through the eastern border i.e. "Chabahar-Milk Road" the geographical location of Bandar-Chabahar to Afghanistan, investments in maritime transportation, transport infrastructures on the east and government extensive supports have made Chabahar a hub of Afghanistan.

Iran is located in the geographic center of the ECO member states; therefore, this is an opportunity to play main role in establishing trade and economic relations between the members.

Since the goods from China, Uzbekistan, Kyrgyzstan, Kazakhstan, Turkmenistan, Tajikistan have to cross Iran to reach the Arab countries such as Oman, Qatar, Saudi Arabia, Kuwait and Iraq. The Black Sea and the Mediterranean Sea, the European Union, the Eurasian countries, and to the continent of Oceania connect to Iran through Turkey, Azerbaijan and Georgia. Thus, creating advantageous position among the three international unions.



Rich Natural Resources

Turkey's consumption potential, Saudi Arabia's oil, Russia's gas and Australia's mining reserves, all are found in Iran, holding the world 4th and 1st rank in oil and natural gas reserves. In addition, it has the 15th ranking in mineral resources with 68 types of various products with about 37 and 57 bn tons of proven and potential reserves, respectively.

Concerning natural resources i.e. chrome, coal, copper, iron ore, lead, manganese, oil; Iran possesses the world's 7% mining resource, that is the 4th rank in lead and zinc, 9th in copper, 12th in iron and 5th in strontium. It holds the world 1.2% sodium chloride, 3.7% of barite, as well as the 2nd producer of gypsum by 9% after China.

Table 1-2. Iran Mineral Resources

Mineral	Reserve (mn ton)	Mineral	Reserve (mn ton)
Oil	158.4 bbl	Kaolin, Fire	100
Gas	33.5 TCM	Lead & Zinc	11
Asbestos	120	Silica & Quartz	128
Barite	24	Turquoise	500
Bauxite and Aluminum	1,200	Dimension Stone	3,000
Phosphate Rock	16.5	Limestone	8,500
Chromium	8.5	Gold	340 ton
Manganese	9.7	Gypsum	1,600
Coal	2,800	Iron Ore	2,700
		Copper	4,200

Source: Ministry of Industry, Mine & Trade - USGS

The Economic Arena Infrastructure

Iran has the largest and the most extended industries in MENA region, led to providing sufficient infrastructures in upstream, downstream and knowledge-based industries. It provides the world markets with an annual petrochemical production capacity equal to 60 mn tons.

In pharmaceutical sector, Iran has been one of the world and region medicinal poles with a wide range of raw materials for 70 years of experience.

Iran holds the world 4th ranking in cement, 12th in steel production (1st in the Middle East), and 1.2% automotive. It has over 214,000 km of transit road and 11,000 km of railway, with over 600 dams under operation, with power plant capacity by 76,000 MW.

Energy Security

After Russia, Iran is ranked 2nd compared to the oil and gas producing countries. This global position allows national security resulted from appropriate strategies for energy security. Concerning accessibility, Iran claims 154.8 bn barrels about 9.3 % of the world's proven crude reserves.

Given the current production and holding 33,500 BCM of gas, up to 18% of proven natural gas reserves, which will produce natural gas for another 165.5 years.

Being located in the Middle East and the Caspian Sea energy-rich regions, Iran is not affected by the policies of major consumers. The West's efforts to reduce its dependence on Middle Eastern oil and gas will result in the Caspian Sea's and Iran energy resources boost.

Table 1-3. Comparison of Reserves, Production & Life Expectancy of Iran's Oil & Gas to the World in 2016

	Oil			Gas		
	Reserves (bn bbl)	Production (000bbl/d)	R/P	Reserves (TCM)	Production (BCM)	R/P
Iran	158.4	4,600	94.1	33.5	202.4	165.5
North America	227.5	19,270	32.3	11.1	948.4	11.7
S. & Cent. America	327.9	7,474	119.9	7.6	177	42.9
Europe & Eurasia	161.5	17,716	24.9	56.7	1,000	56.3
The Middle East	813.5	31,789	69.9	79.4	637.8	124.5
Africa	128	7,892	44.3	14.3	208.3	68.4
Asia Pacific	48.4	8,010	16.5	17.5	579.9	30.2
Total World	1,706.80	92,151	50.6	186.6	3,551.40	52.5

Source: BP

Young Educated Human Resources

Having young population as an advantages, the average age is 31.1 years, with more than 25.1% of the population between 15 and 29 years old, according to the year ended March 2017 census. The labor age population (aged 15-64) reached from 52% in 1986 to 70% in 2016 of the total population, providing a "demographic opportunity".

Table 1-4. Total Population by Age Group (%)

	Yr. ended Mar 1997	Yr. ended Mar 2007	Yr. ended Mar 2012	Yr. ended Mar 2017
0-4	39.5	25.1	23.4	24
15-29	28.4	35.4	31.5	25.1
30-64	27.7	34.3	39.3	44.8
65	4.4	5.2	5.7	6.1

Source: Statistical Center of Iran

The literacy rate is 87.6 % and more than 11 mn people have university degree, with average more than 4 mn students enlisted in universities each year. The major part of the young population are both educated.

Currently, with more than 2,500 active universities and related institutions, Iran is one of the world top states in secondary school graduates attending universities. The students in the academic year of 2015-2016 was over 4.3 mn, which 46.1% and 53.9% are women and men, respectively.

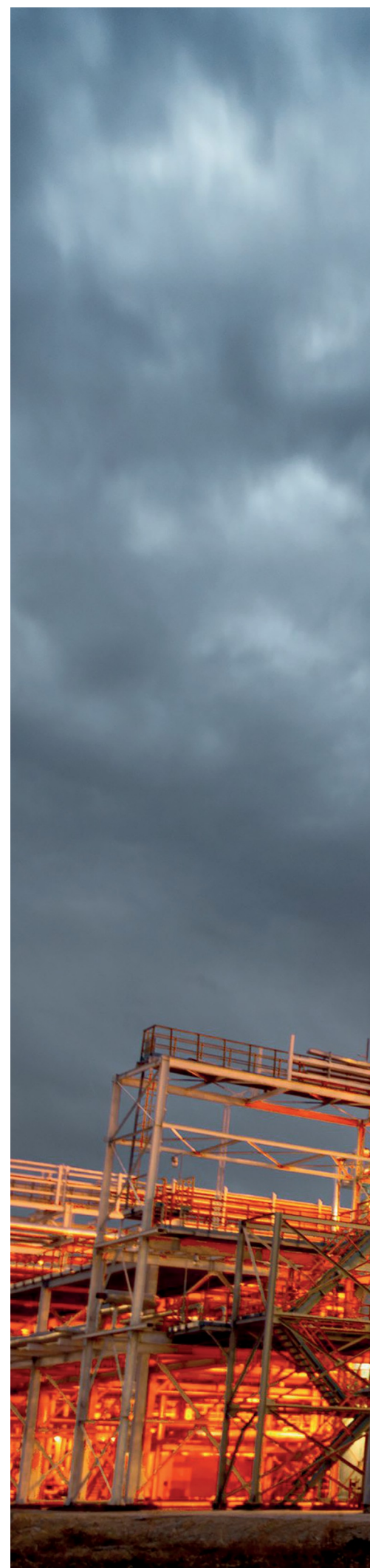
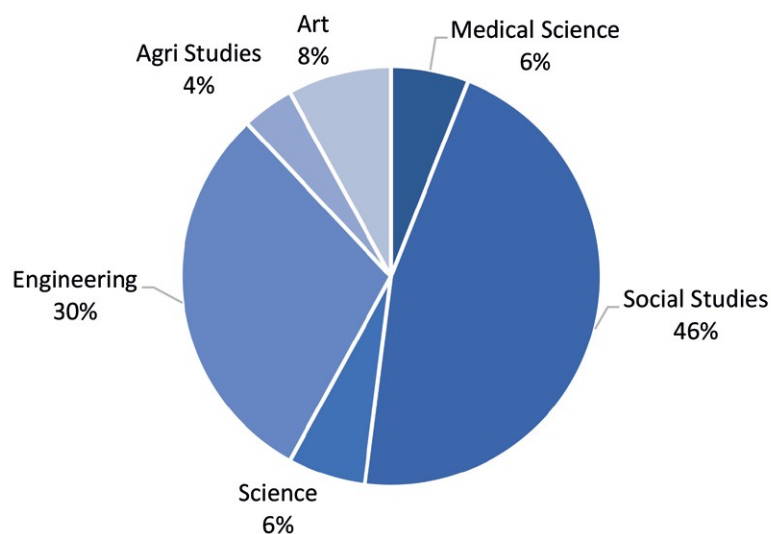




Figure 1-2. Iranian Students by Major Group

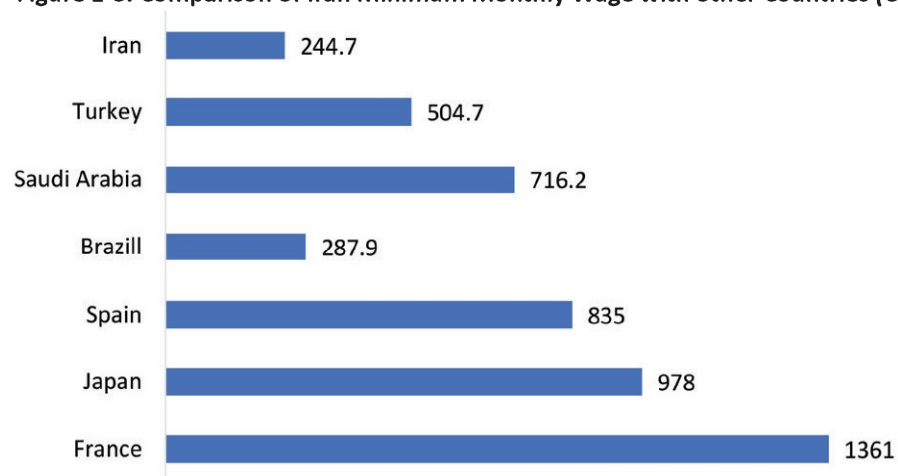


Source: Statistical Center of Iran

Utility & Low Production Cost

Despite the youngest and highest educated workforce in the region, Iran has the lowest salary in the Middle East. Foreign investors can enjoy highly trained workforce with the minimum monthly wage by 244 USD.

Figure 1-3. Comparison of Iran Minimum Monthly Wage with other Countries (USD)



Source: ILO

Table 1-5. Infrastructure & Utility Cost

	Unit	Cost (IRR)
Gasoline	Liter	10,000
Gas oil	Liter	3,000
Fuel oil	Liter	3,000
Kerosene	Liter	1,500
Liquefied gas	kg	2,300
Cellphone /domestic	1 minute	499-929
Fixed phone/ domestic	1 minute	330-625
Cell/Fixed /international	1 minute	700-100,000
Electricity	kwh	700
CBI official exchange rate in the year ended March 2107		31,389

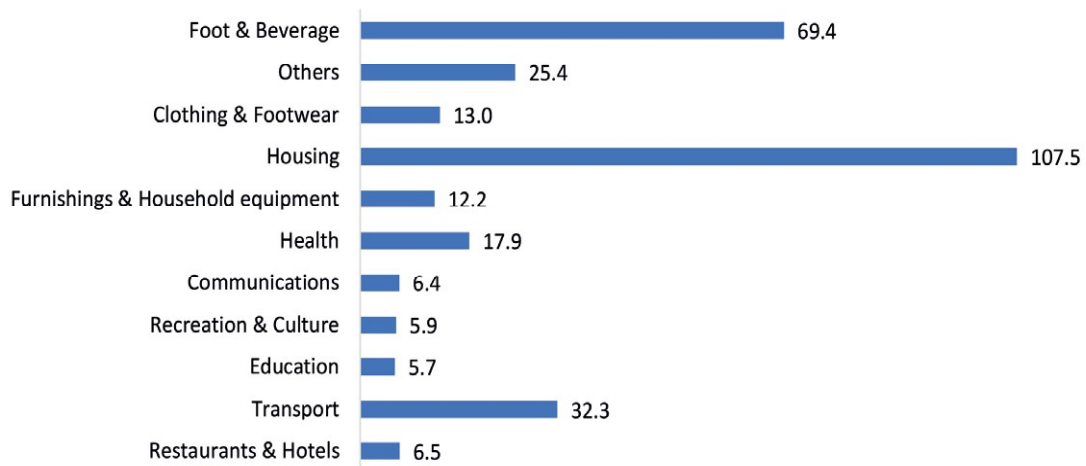
Source: CBI



Vast Domestic Market

Iran ranks 17th of the world with 80 mn population and the most populous country in the Middle East after Egypt. There are large middle class households with increased income distribution equality, annual net expenditure and changing consumption patterns.

Figure 1-4. Iranian Household's Expenditure in the year ended March 2018



Source: CBI

Regional Market

Iran is surrounded by the consuming countries, which lack the sufficient infrastructures for industrial development and can hold the main part of importing required goods. In addition, proximity to countries such as Azerbaijan, Turkmenistan and Armenia has opened a unique capacity to enter into 300-mn market of the Central Asia. Meanwhile, Iran plays a key role since being as a linking chain of North to South and East to West for the transit of goods, Swaps (Oil Swap) and connectivity to international electricity transmission networks.

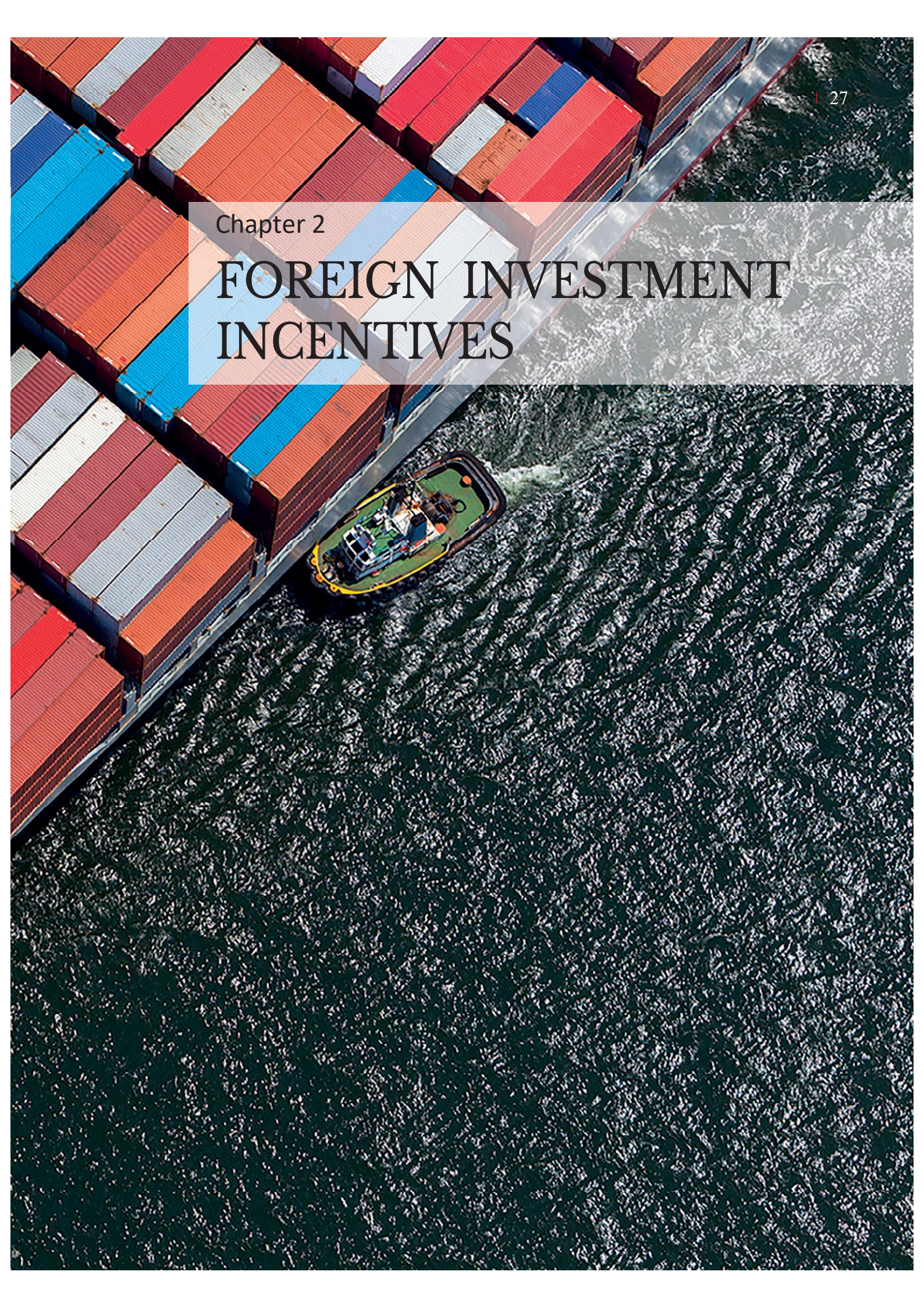
Security & Political Stability

Concerning the security aspects in the Middle East and West Asia, Iran is among safest countries, where the terrorism, ethnic groups and political conflicts are existing in the region and even in the world.



Chapter 2

FOREIGN INVESTMENT INCENTIVES



FOREIGN INVESTMENT INCENTIVES

Incentives features & Advantages of Foreign Investment Promotion & Protection Act (FIPPA)

- Unrestricted volume and percentage on foreign investment participation Iranian company registration possibility with 100% foreign capital.
- Transfer of capital, dividend and the profits gained by using capital in the form of currency or goods.
- Equal behavior with both foreign and domestic investors.
- Investment possibility for foreign natural and legal persons and Iranians residing abroad Investment possibility in all areas permitted for the private sector.
- Providing protection for all foreign investment plans Approving foreign capital in a short and fast process.
- Issuance of a 3-year residence visa for investors, managers, foreign experts and their first-degree relatives.

Risks Covered by FIPPA

- Expropriation and nationalization.
- Unlimited transfer of principal and dividend.
- Guarantee of purchasing goods and services produced in foreign investment projects with BOT method via monopsony.

Customs Incentives

- Exemption of Customs duties production line machineries and equipment provided that being new and not being made domestically.
- Raw material used for export commodities production.
- All production line machineries and raw materials in free zones.
- Components imported by manufacturing units for producing domestic goods are exempted from 20% customs duties, provided that they have not been made in Iran and recognized by Ministry of Industries, Mine and Trade.
- Knowledge-based companies and institutions are exempted from commercial taxes, customs and export duties.

Tax Incentive

- Taxable incomes of knowledge-based institutions resulted from the contracts, research and development activities, commercialization and knowledge-based services are exempted from taxes for 20-year.
- Companies with more than 50 employees: in case of increasing the employment volume up to 50% in comparison to the last year, will enjoy one added year exemption.
- If foreign companies with the capacity of domestic production units start business with authentic brands and export at least 20% of total production, can benefit 50% of tax exemption.

Table 2-1. Fixed Corporation Income Tax at a Flat Rate of 25%

Activity	Level of Exemption	Duration Of Exemption
Industry & mining	80%	4 Years
Industry & mining in less developed areas	100%	20 Years
Agriculture	100%	Perpetual
Tourism	50%	Perpetual
Export of services and non-oil goods	100%	During 6th development
Salary in less developed area	50%	Perpetual
Profit used to development of existing unites or setting up new units	50%	Perpetual

Source: Ministry of Industry, Mine & Trade

Table 2-2. Income Tax with rate of 0%

Duration of Exemption	Economic Sector
5 Years	Industry, mining and services (Hospital & Hotels)
7 Years	Industry, mining and services (Hospital & Hotels) years in industrial parks and economic especial zones
10 Years	Industry, mining and services (Hospital & Hotels) years in less developed areas
13 Years	Industry, mining and services (Hospital & Hotels) in less developed areas located at industrial parks and economic especial zones

Source: Ministry of Industry, Mine & Trade

Other Tax

Total taxable income <= registered capital 50% of income is tax free

Less Development Areas

Total taxable income capital <= double of registered capital 100% of income is tax free.

In case of each 5% foreign investment, 10% will be added to these 2 incentives, maximum up to 50%.



Regional Incentives: Investment Incentive in Special Economic Zones

- Import from economic zone for domestic consumption would be subordinate to export and import regulations, while export from these areas will be carried out without any formalities.
- Import from abroad, free zones, or industrial areas would be carried out with minimal customs formalities and domestic transit are performed in accordance with the relevant Regulations.
- Goods imported from abroad, industrial areas or other commercial zones can be exported with no formalities.
- Management of the region is allowed to assign the region to qualified natural or legal persons after classification and valuation.
- Owners of goods imported to the region can send all or part of their goods for temporary entry in to the country after doing customs clearance regulations.
- If the processing of imported goods were to some extent that changes the tariff of goods, the rate commercial benefit of the goods would be calculated equal the commercial benefit of raw material and spare parts of the country.
- Importers of goods are allowed to hand over to others part or all of their products against warehouse receipt to be issued by the district administration, in this case the breakdown warehouse receipt holder would be the owner of the goods.
- The management of each district is authorized to issue certificated of origin for goods per applicant out of the area with the approval of the customs.
- All the goods imported to the region for the required production or services are exempted from the general import-export laws. Import of goods to other parts of the country will be subordinated to export and import regulations.
- Percentage of goods produced in the zone, based on paragraph (d) of clause (25) of the law of the second economic, social and cultural development plan of the Islamic republic of Iran imported to the country, the proportion of total value added and domestic parts and material used in the total price of the commodity production is allowed without any limitation and in addition to not having to order and open letter of credit.
- Goods manufactured in special economic zones, as well as raw material and imported CKD parts into the country is not subject to price regulation due to unutilized resources and allocated currency.



Incentive & Advantages for Investment in Trade-Industrial Free Zones

The list of the special economic zones of the Islamic Republic of Iran are as follows:

- Salafchegan special economic zone Shiraz special economic zone
- Assaluye special economic zone
- Arge Jadid special economic zone
- Payam Airport special economic zone Persian Gulf special economic zone Lorestan special economic zone
- Amirabad port special economic zone
- Bushehr Port special economic zone
- Shahid Rajaei Port special economic zone Sarakhs special economic zone
- Sirjan special economic zone
- Yazd special economic zone
- Bushehr special economic zone
- Tax exemption for 20 years from the date of operation for all economic activities.
- Foreign investment and nearly a hundred percent of the amount invested.
- Freedom of entry and exit of capital and profits.
- Protection and guarantees for foreign investments.
- Abolition of entry visas and easily issue of residence permits for foreigners.
- Facilitated regulation on labor relations, employment and social security.
- Transfer of part manufactured goods to the mainland without paying customs duties.
- Elimination of pay customs duties on import from outside to the region and vice versa.
- Employing trained and skilled work force in all different skill levels and professions.
- Utilization of raw materials, oil and gas as feedstock and fuel for all industrial activities.

The list of the Trade-Industrial Free Zones of the Islamic Republic of Iran are as follows:

- Qeshm Trade-Industrial Free Zone
- Chabahar Trade-Industrial Free Zone
- Aras Trade-Industrial Free Zone
- Anzali Trade-Industrial Free Zone
- Arvand Trade-Industrial Free Zone
- Kish Trade-Industrial Free Zone
- Maku Trade-Industrial Free Zone

Other Incentives

- Take advantage from local currency facilities of the National Development Fund.
- The partnership possibility of development organizations (Iran Industrial Development and Renovation Organization, Iranian Mines and Mining Industries Development and Renovation Organization) in implementation of investment projects in less developed regions.
- The possibility of establishing new industries in estates industries areas with restrictions of the establishment of industries (120 kilometers distance from Tehran and 50 km and 30 km distance from the centers of some provinces).
- Government's guarantee for foreign investment while political risks emerges.
- Foreign investments have benefited from all rights, protections and similar facilities to local investors.
- Guarantee importation and exportation of original interest and installment of investors' financial facilities.
- Freedom of export commodities produced by financial corporation with participation of foreign investors.
- Possibility of temporary importation without customs duties payment for export commodity processing.
- Awards and export subsidies (the costs of participating in fairs and marketing).
- Export commodities exemption from paying all type of duties.
- Possibility of foreign investment for private sector activity in all permitted areas in Iran. No restrictions in investment volume and the percentage of partnership.
- Free import of machinery and raw material to free industrial trade zones and special economic zones (except passenger cars and recreational boats).



Chapter 3

IRAN ECONOMY



IRAN ECONOMY

Overview

The Islamic Republic of Iran is a country in the Middle East (West Asia) and is bordered on the north by Armenia, Azerbaijan, Turkmenistan, Kazakhstan and Russia, on the east by Afghanistan and Pakistan, on the south by the Persian Gulf and the Sea of Oman, on the west by Iraq and Kuwait and on the northwest by Turkey. Iran is divided into five regions with 31 provinces (Ostān); the provinces are divided into counties (Shahrestān) and subdivided into districts (Bakhsh) and sub-districts (Dehestān, each governed by an appointed governor-general (Ostāndār).

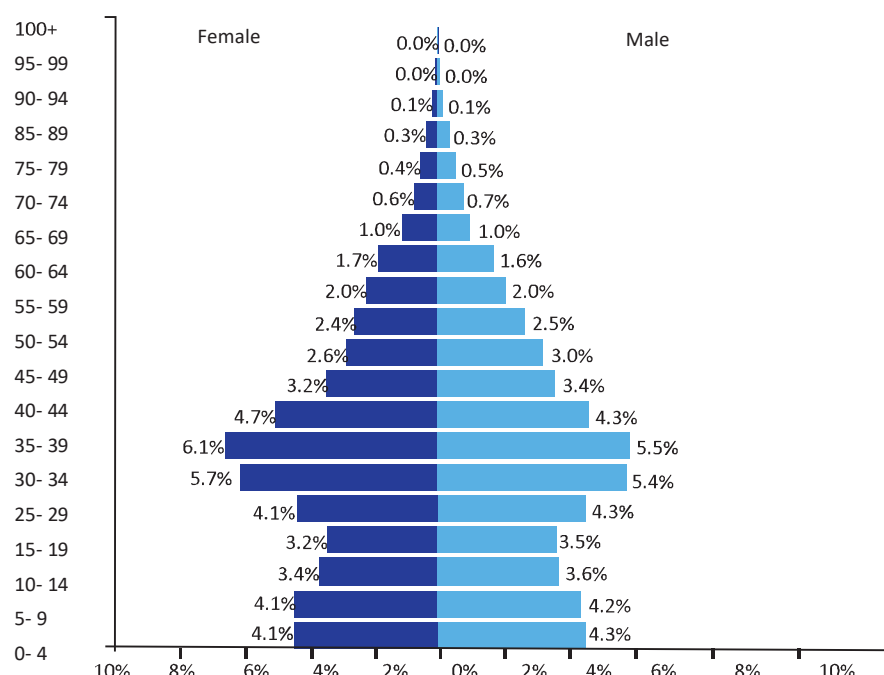
Table 3-1. Status of Iran

Official name	The Islamic Republic of Iran
Capital	Tehran
Largest city	Tehran
Official language	Persian
Government	Islamic republic
Area	Total 1,648,195 km ² (18 th) - Water: (%) 0.7
Population:	79.93 mn, 2016 census, (17 th) - Density: 45/km ² (163 rd) - 116.6/sq m ²
Currency	Rial (IRR)
Time zone	IRST (UTC+3:30)- Summer (DST) Iran Daylight Time (IRDT) (UTC+4:30)
Drive	on the right
Internet TLD	.ir
Calling code	+98

Population

According to Latest census, Iran's total population was 81.1 mn of which 40.50 and 39.43 mn were male and female; also 74.35% and 25.64% were urban and rural, respectively, in the year ended March 2018. The population growth has had a downward trend, reaching from 2.46% during 1986 - 1991 to 1.4% in the year ended March 2018.

Figure 3-1. Population Pyramid in the year ended March 2017



Source: Statistical Center of Iran

Language, Ethnic Groups & Religions

Iran official language is Persian (Farsi) along with Indo-European languages and ethnicities. In terms of religion, the majority 89% of the population are Shi'a, with 10% of Sunni and the remaining minorities such as Christian, Jewish, Zoroastrianism by 1%. The Persian and Azeri people contribute the largest ethnic groups. Persians account for 61% of the population, followed by Kurds (10%), Lurs (6%), Balochs (2%) and the remaining 21% including the Azeri (16%), Arabs (2%), Turkmen and Turkic tribes (2%), as well as Armenians, Assyrians and Georgians (1%).

Climatic Features

Iran is one of the world's four-season climate countries, which have 11 of 14 climatic varieties in the world. While it is snowing in Ardebil province (north), the Persian Gulf experiences sunlight (south). Additionally, Bandar-Anzali (north) has 1,800 mm and Mirjaveh in Sistan and Baluchestan (south) has less than 50 mm rainfall. This climate has led to diverse natural, which is hardly experienced in other countries. Abundant plants and animals are existing in this country compared to other parts of the world. There are 168 species of wild mammals, which are equal to the total number of species in Europe and 8,000 plants, 174 fish, 20 amphibians, reptiles and 514 bird species in Iran.

Iranian herbaceous diversity is twice the size of European continent and equals the Indian subcontinent, which mostly include bulb plants and herbs, such as Lamiaceae, Umbelliferon are found in Iran.

GDP & Economic Growth

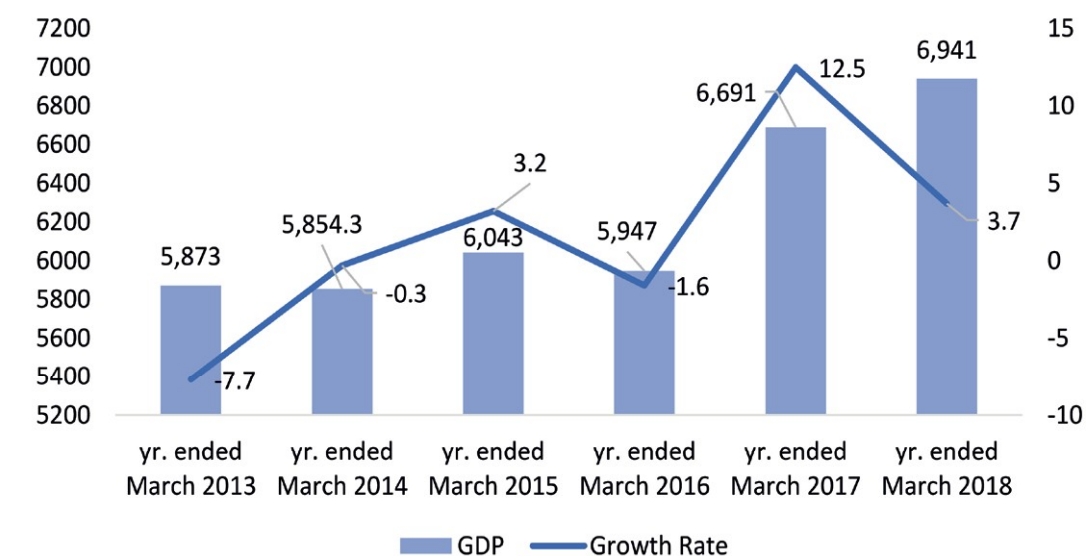
According to the Central Bank, the GDP amounted to 6,941,000 bn IRR (Constant Price; 2012) and the economy experienced 3.7% growth in the year ended March 2018. The International Monetary Fund (IMF) predicted that GDP growth will reach 4% in the year ending March 2019 and given the financial sector reforms, this trend will even increase to 4.5%, in the medium run and the GDP evaluated to 431.9 bn USD in the year ended March 2018.

Table 3-2. GDP & Economic Growth (Constant Price; 2012)

	Yr. ended Mar. 2014	Yr. ended Mar. 2015	Yr. ended Mar. 2016	Yr. ended Mar. 2017	Yr. ended Mar. 2018
GDP; Constant Price (000 bn IRR)	5,854	6,043	5,947	6,691	6,941
Economic Growth (%)	-0.3	3.2	-1.6	12.5	3.7
GDP; Current Price (bn USD)	467.4	434.5	376.2	405.0	431.9

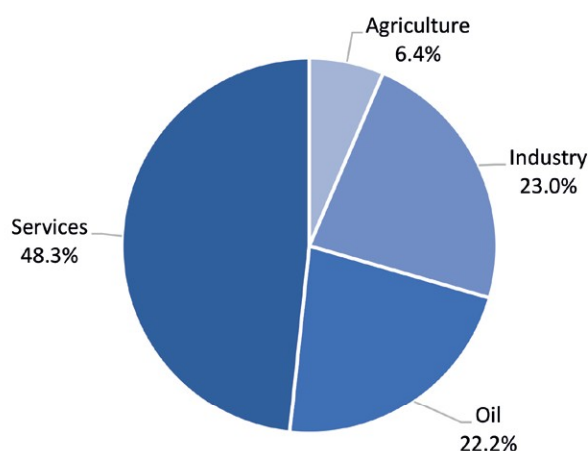
Source: CBI, IMF

Figure 3-2. GDP & Economic Growth



Source: CBI, IMF

Figure 2-3. GDP Composition



Source: CBI

Inflation

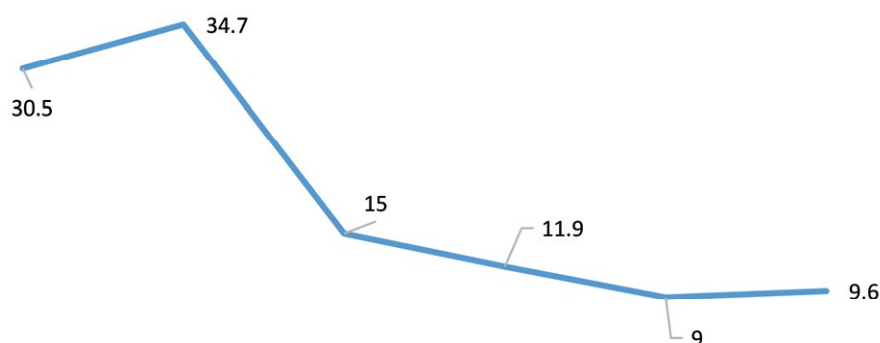
Currently, the increasing of production cost and aggregate demand are among the main determinants of inflation. The average inflation rate has reached 9.6% the year ended March 2018. According to the International Monetary Fund forecast, Iran inflation rate will be 10.529% to 10.1% from 2017 to 2018.

Table 3-3 Inflation

Yr. ended Mar. 2013	Yr. ended Mar. 2014	Yr. ended Mar. 2015	Yr. ended Mar. 2016	Yr. ended Mar. 2017	Yr. ended Mar. 2018
30.5	34.7	15.6	11.9	9	9.6

Source: CBI

Figure 3-4. Inflation



yr. ended March 2014 yr. ended March 2015 yr. ended March 2016 yr. ended March 2017 yr. ended March 2017 yr. ended March 2018

Source: CBI

Employment & Unemployment

In the year ended March 2018, Iran working population was approximately 26.6 mn, of which employed and unemployed accounted for 23.8 and 3.2 mn, respectively. The unemployment rate was 12.1% in the year ended March 2018 and was predicted to reach 11.7% in 2019, according to the IMF.

Table 3-4. Comparison between Employment & Unemployment

	Yr. ended Mar. 2017	Yr. ended Mar.2018	Changes	
			Amount	%
Active Population	25,791,177	26,588,819	797,642	3.09
Employed Population	22,587,779	23,778,613	1,190,834	5.27
Unemployed Population	3,203,398	3,210,206	6,808	0.21
Unemployment Rate (%)	12.4	12.1	-0.3	
Economic Participation Rate (%)	39.4	40.3	0.9	

Source: Statistical Center of Iran



Foreign Trade

The non-oil export amounted to 38,736 tons, 54,302 mn USD, declined by 15.98% in volume and 24.31% in value in the year ended March 2018. The import volume reached 132,300 tons and 46,931 mn USD, which has growth by 1.85% and 6.56% in volume and value, compared to the same period of last year.

Table 3-5. Non-Oil Export & Import

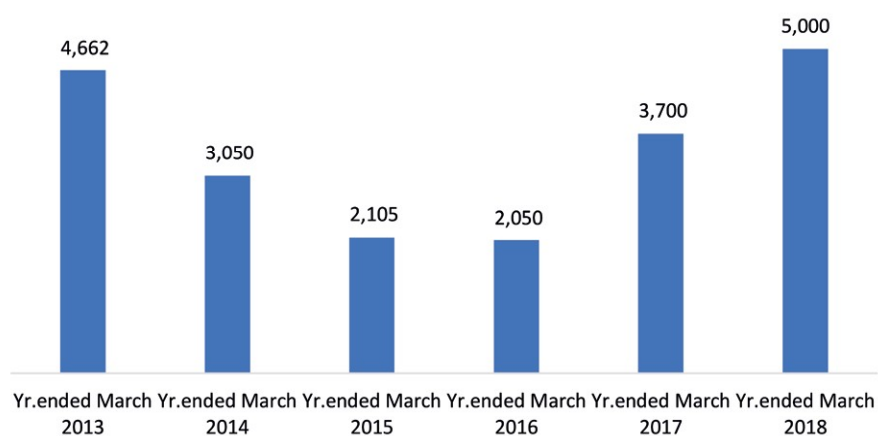
	Yr. ended Mar. 2016		Yr. ended Mar. 2017		Yr. ended Mar. 2018	
	Value (mnUSD)	Volume (000tons)	Value (mnUSD)	Volume (000tons)	Value (mnUSD)	Volume (000tons)
Export	42,429	93,907	44,042	129,892	46,931	132,300
Import	41,539	35,152	43,684	33,399	54,302	38,736
Trade Balance (mn USD)	890		358		(7,371)	

Source: IRICA

Foreign Investment

European and Chinese countries have had an increasing investment in Iranian markets over the past two years, so that the amount of FDI was 8 bn USD, with China having the most share in the year ended March 2018.

Figure 3-5. Iran FDI (mn USD)

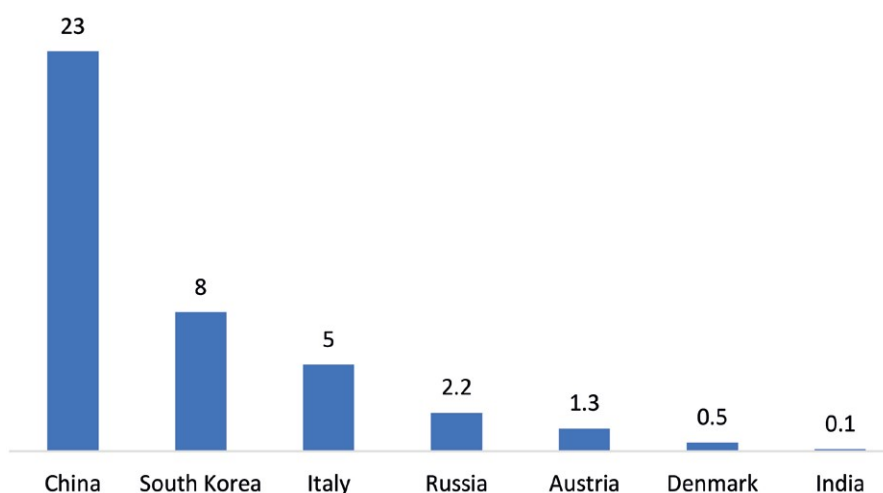


Source: UNCTAD, Official State Report

Financing Agreements

China, South Korea, Italy, Russia, Austria, Denmark and India have allocated the highest contribution in the line of credit (LOC), respectively by signing finance agreements with Iran for 40 bn EUR, after JCPOA.

Figure 3-6. Financing Agreements (bn EUR)



Source: dolat.ir

Monetary Base & Liquidity

In the year ended March 2018, liquidity and monetary base were equal to 15,299,800 bn IRR and 2,139,800 bn IRR, respectively, which grew by 22.06% and 18.99% year-on-year. The money and quasi money share of liquidity was 12.72% and 87.27%, in the same period. The growth of liquidity was resulted by a synchronic increase in the monetary base and liquidity coefficient, in the year ended March 2018.

Table 3-6. Liquidity & Monetary Base (000 bn IRR)

	Yr. ended Mar.2014	Yr. ended Mar.2015	Yr. ended Mar. 2016	Yr. ended Mar.2017	Yr. ended Mar.2018
Liquidity	6,395.5	7,823.8	10,172.8	12,533.9	15,299.8
Monetary Base	1,184.9	1,311.5	1,533.6	17,98.3	2,139.8

Source: CBI



Budget

According to budget plan, the total budget growth will reach 3.7%, in the year ended March 2019 compared to budget act of the year ended March 2018.

Table 3-7. Budget (bn IRR)

	Yr. ended Mar. 2016	Yr. ended Mar. 2017	Yr. ended Mar. 2018	Yr. ended Mar. 2019
Revenues	847,411.5	9,785,530.0	11,524,566.0	11,949,354.7
Public Revenues	2,362,817.2	2,943,937.2	3,467,521.0	3,680,490.0
Ministries and Governmental Institutions Revenues	381,284.4	410,957.9	521,010.3	568,620.9
Governmental Companies, Banks & government related Profit Institutions Revenues	6,019,377.0	6,828,171.9	8,005,021.0	8,139,871.5

Source: Majlis (Iran parliament)

Gini Index

The income distribution indicates the Gini coefficient increase in urban and rural households to 0.40 in the year ended March 2017, since the highest rate of 2003. The status of the class distinction has improved more than previous years.

Table 3-8. Gini Index

	Yr. ended Mar. 2013	Yr. ended Mar. 2014	Yr. ended Mar. 2015	Yr. ended Mar. 2016	Yr. ended Mar. 2017
Total Gini Coefficient	0.37	0.37	0.38	0.39	0.39
Urban Gini Coefficient	0.35	0.35	0.36	0.37	0.37
Rural Gini Coefficient	0.33	0.32	0.34	0.34	0.34

Source: CBI

Stock exchange Index

The Iranian stock exchange market grew significantly in the year ended March 2018, the main reason of which was the growth of metals and minerals price in global market, led to stock price increase, which placed metal group at the top of the shareholder's interest.

Table 3-9. Stock Exchange Index

	Yr. ended Mar. 2014	Yr. ended Mar. 2015	Yr. ended Mar. 2016	Yr. ended Mar. 2017	Yr. ended Mar. 2018
TEDPIX	79,015	62,532	80,219	77,230	96,290
Industry Index	65,837	51,296	66,994	66,100	86,082
Top 50 Index	3,336	2,576	3,254	3,035	4,036

Source: TSE

Exchange Rate

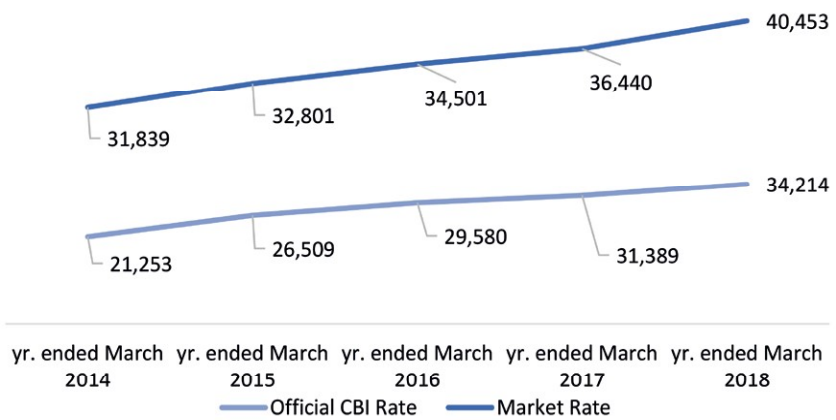
The official rate of the Central Bank and the market rose by 9% and 11%, while the exchange rate gap was 6,239 IRR, which has grown by 23.5%, in the year ended March 2018.

Table 3-10. Average Exchange Rate (USD/IRR)

	Yr. ended Mar. 2014	Yr. ended Mar. 2015	Yr. ended Mar. 2016	Yr. ended Mar. 2017	Yr. ended Mar. 2018
Official CBI Rate	21,253	26,509	29,580	31,389	34,214
Market Rate	31,839	32,801	34,501	36,440	40,453

Source: CBI

Figure 3-7. Average Exchange Rate (USD/IRR)



Source: CBI

Price Index

The consumer and the producer price index rose to 109.6 and 248.8 equal to 9.6% and 10.5%, respectively. In addition, export price index reached 267.9 showing an increase of 20.6%, in the year ended March 2018, compared to the previous year.

Table 3-11. Price Index

	Yr. ended Mar. 2014	Yr. ended Mar. 2015	Yr. ended Mar. 2016	Yr. ended Mar. 2017	Yr. ended Mar. 2018
Consumer Price Index (Constant Price; 2017)	70.9	81.9	91.7	100	109.6
Producer Price Index (Constant Price; 2012)	178.1	204.5	214.5	225.2	248.8
Export Price Index (Constant Price; 2012)	273	271.7	228.3	222.2	267.9

Source: CBI

Doing Business Index

In doing business, Iran ranked the world 120th by gaining the score 56.22, in 2016 and declined 4 ranks to 124th by 56.48, in 2017. In terms of the top 10-business facility indices, Iran has improved in global ranking for 4 sub-indices including startup, licensing, credit and foreign trade compared to the last year. However, in other 6 sub-indices has experienced a relative decline in its global rank, including electricity access, property registration, supporting minority investors, tax payments, contracts, bankruptcy and debt payment.

Table 3-12. Iran Status in Ease of Doing Business Index

Description	2016		2017	
	Rank	Distance from leading Index	Rank	Distance from leading Index
Ease of Doing Business Index	120	56.2	124	56.5
Starting a Business	102	85.1	97	85.2
Dealing with Construction Permits	27	78.5	25	78.1
Getting Electricity	94	69.2	99	68.4
Registering Property	86	64.2	87	64.6
Getting Credit	101	45.0	90	50.0
Protecting Minority Investors	165	33.3	170	33.3
Paying Taxes	100	56.6	150	56.6
Trading Across Borders	170	46.1	166	46.1
Enforcing Contracts	70	59.1	80	59.1
Resolving Insolvency	156	25.3	160	23.9

Source: World Bank Group

Global Competitiveness Index (CGI)

Iran reached the 69th rank by ascending 7 steps, among 137 countries in the Global Competitiveness Index (CGI) in 2017, compared to the previous year position, 76th among 138 countries. The comparison shows that Iranian CGI have improved other than health and education in 2017, since this has been due to the macroeconomic performance, followed by “innovation” as the next highest expansion.

Table 3-13. Iran's Rank and Score Regarding Competitiveness Index

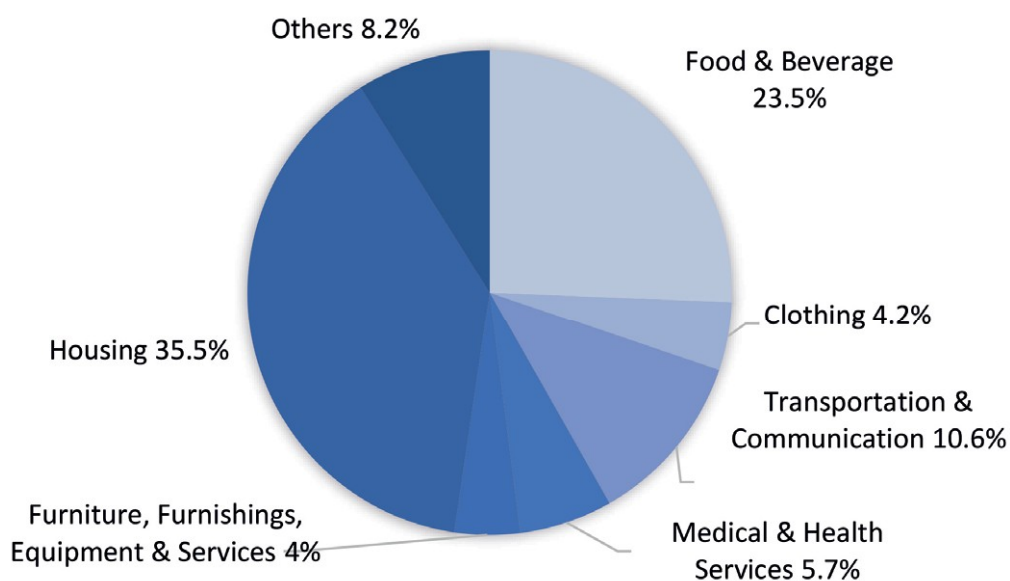
	2015-2016		2016-2017	
	Rank	Score	Rank	Score
Global Competitiveness Index	76	4.1	69	4.3
Institutions	90	3.6	85	3.7
Infrastructure	59	4.2	57	4.4
Macroeconomic Environment	72	4.6	44	5.2
Health & Primary Education	49	6.1	50	6.0
Higher Education & Training	60	4.6	51	4.7
Goods Market Efficiency	111	4.0	100	4.0
Labor Market Efficiency	134	3.2	130	3.3
Financial Market Development	131	2.9	128	3.0
Technological Readiness	97	3.3	91	3.6
Market Size	19	5.2	19	5.2
Business Sophistication	109	3.5	97	3.7
Innovation	89	3.2	66	3.3

Source: WEF

Household Budget in Urban Areas

The annual household expenditure increased by 7.2% equaled 421,308,524 IRR, in the year ended March 2018 compare to the previous year. The composition of household budget indicates that the highest contribution belongs to the housing, food and beverage, in the year ended March 2018.

Figure 3-8. Composition of Urban Household Expenditure in the year ended March 2018



Source: CBI

Credit Rank

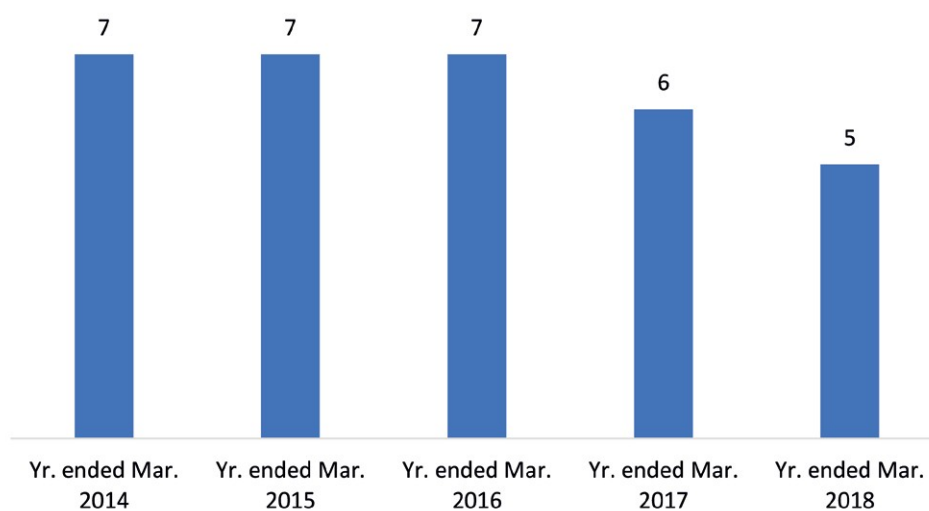
According to the Committee for Risk Assessment (RAC), Iran's OECD ranking upgraded one-step from 6th to 5th. At the time of sanctions, Iran's credit rating was seven out of seven. After the implementation of the nuclear deal, the rating was upgraded.

Table 3-14. Credit Rank of Iran

	Yr. ended Mar. 2014	Yr. ended Mar. 2015	Yr. ended Mar. 2016	Yr. ended Mar. 2017	Yr. ended Mar. 2018
Credit Rank	7	7	7	6	5

Source: Fitch Ratings

Figure 3-9. Credit Rank of Iran



Source: Fitch Ratings



Chapter 4

AGRICULTURAL SECTOR



AGRICULTURAL SECTOR

Overview

Iran is the only Asian country in the Northern Hemisphere with four seasons, which has led to the best agriculture and livestock production and potentials to export fresh and processed products. Since land and air, transit infrastructures are being constructed in Iran and investors can easily export products after processing and receive investment profits.

The cultivated areas have grown to 18 mn hectares and there are 20 types of horticultural products, which placed Iran between the 7th and 8th rankings in the world. According to FAO, in addition to its food supply, has the potential to supply Persian Gulf countries and there is 30 to 35% agricultural waste. The agricultural and natural resources sectors account for gaining income and employment, as roughly 90% of the nutrition value and 19% of the employment. The value added of agricultural sector in the year ended March 2017, was estimated at 441,972 bn IRR (14.08 bn USD), at constant price; 2012, which has increased by 4.2% over the same period of the previous year.

Table 4-1. Agriculture Value Added & GDP Contribution (Constant Price; 2012)

	Yr. ended Mar 2012	Yr. ended Mar 2013	Yr. ended Mar 2014	Yr. ended Mar 2015	Yr. ended Mar 2016	Yr. ended Mar 2017
Value added (bn IRR)	348,425	364,659	384,633	405,433	424,173	441,972
Value added growth (%)	-	4.66	5.48	5.41	4.62	4.20
GDP contribution (%)	5.47	6.21	6.57	6.71	7.13	6.61
CBI official exchange rate (IRR)	10,964	12,260	21,253	26,509	29,580	31,389

Source: CBI

Recent Trends

- The increase of agricultural production up to 118 mn tons in the year ended March 2017.
- Wheat production self-sufficiency.
- About 20% of the total non-oil import is agricultural products.

Agricultural Lands

There are 35 mn hectares of usable lands in Iran, 18.7 mn hectares of which are agricultural lands holding 50% share of total lands and 11.5% of total area. Of total agricultural land, 2.3 mn hectares are allocated to the gardens and about 16 mn are arable lands, of which, about 4 mn hectares are not active due to being arid and only about 11.7 mn hectares are used for producing crops. However, about 5 mn hectares are rainfed and about 6.5 mn hectares are irrigated. Despite the 47% rainfed land, the share of this cultivation is less than 10% of total agricultural production.

Production

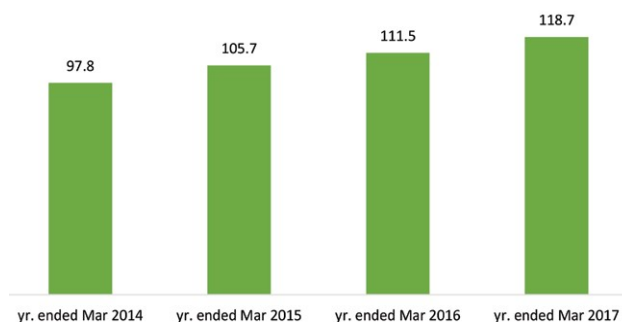
Over the recent years, agricultural production has had a steady growth, with 21.4% rising from 118.7 mn tons year ended March 2017 compared to the same period in 2015. Arable crops contribute up about 70% of total agricultural production with fisheries and aquaculture share of less than 1% as the smallest agricultural sector.

Table 4-2. Agricultural Production (mn tons)

	Yr. ended Mar 2015	Yr. ended Mar 2016	Yr. ended Mar 2017
Crops	74.6	77	82.99
Share from total production (%)	70.6	69.1	69.94
Horticultural	16.5	19.4	21.02
Share from total production (%)	15.6	17.4	17.71
Livestock & poultry	13.6	14.1	13.57
Share from total production (%)	12.8	12.6	11.43
Fisheries & aquaculture	0.95	0.98	1.07
Share from total production (%)	0.9	0.88	0.9
Total	105.7	111.5	118.7

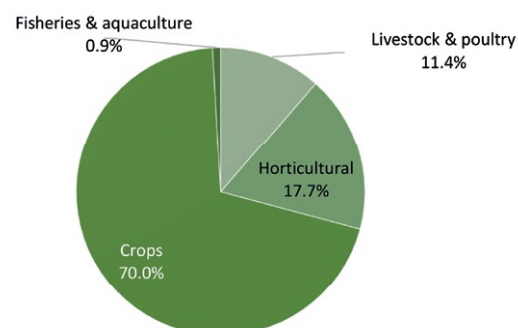
Source: Ministry of Agriculture Jihad

Figure 4-1. Agricultural Production (mn tons)



Source: Ministry of Agriculture Jihad

Figure 4-2. Agricultural Production in the year ended March 2017



Source: Ministry of Agriculture Jihad



Consumption & Demand

The annual need for livestock feed is over 9 mn tons, 7 mn tons, 700,000 tons and 5 mn tons for corn, wheat and feed barley. The share of import are 90%, 30% and 36%. 90% of livestock and poultry meal are imported. The wheat per capita consumption is 167 kg, which accounts for almost 13.4 mn tons per year, considering 80 mn population. Iran has managed to achieve self-sufficient in the production of 14.6 mn tons of wheat in the year ended March 2017 and there is no need to import this product. The rice per capita consumption is over 50 kg, with an annual consumption of nearly 4 mn tons, which due to 2.4 mn tons the domestic production, 1.7 mn tons import is required. With regard to per capita consumption of livestock products and compared to domestic production, excluding red meat, Iran is able to provide domestic demand and export livestock and poultry products.

With 140,000 tons of surplus production in seafood and fishery, Iran has 10 kg per capita's consumption in agricultural and food products and achieved self-sufficiency in most agricultural strategic products. Livestock and poultry feed call for import of approximately 70%.

Table 4-3. Agricultural Products Consumption per capita (kg)

	Yr. ended Mar 2014	Yr. ended Mar 2015	Yr. ended Mar 2016
Wheat	166.9	167	167.4
Rice	49.9	50.2	50.4
Beef	10.99	10.79	11.43
Poultry Meat	25.16	25.48	26.1
Egg	11.12	10.99	10.7
Milk	102.28	105.45	109.35
Honey	0.923	0.93	0.96
Seafood & Aquaculture	8.5	9.2	10

Source: Ministry of Agriculture Jihad

Export & Import

Agriculture has a major share of non-oil export and agricultural crops in both export and import. In recent years, agricultural export accounted for about 13% of non-oil export. (Excluding gas condensate).

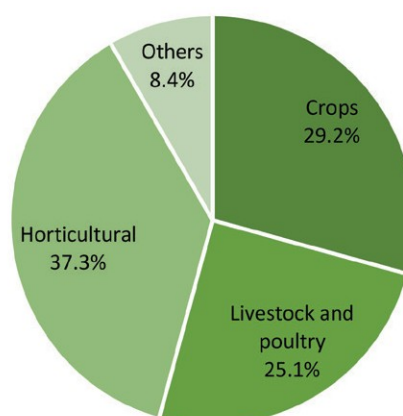
Table 4-4. Agricultural Export

	Yr. ended Mar 2015	Yr. ended Mar 2016	Yr. ended Mar 2017	Apr-Sep 2017
Value (mn USD)	6,200.30	5,447.01	5,685.92	2,072.77
Non-Oil Export Contribution (%)	12.26	16.7	12.97	NA

Source: Ministry of Agriculture Jihad

Horticulture and subdivisions contributed to more than 37.3% of total agricultural export from April to September 2017. The major share of export is dedicated to crops with 29.22% and livestock and poultry with 25.05%. The main export products include pistachio, nuts, fresh fruits, animal products, saffron, raisin, potato, date and aquatic products.

Figure 4-3. Agricultural Export Combination from April to September 2017



Source: Ministry of Agriculture Jihad

Iraq as the main export destination accounted for 22% of agricultural products in the year ended March 2017.

Figure 4-4. Agricultural Export Destinations in the year ended March 2017

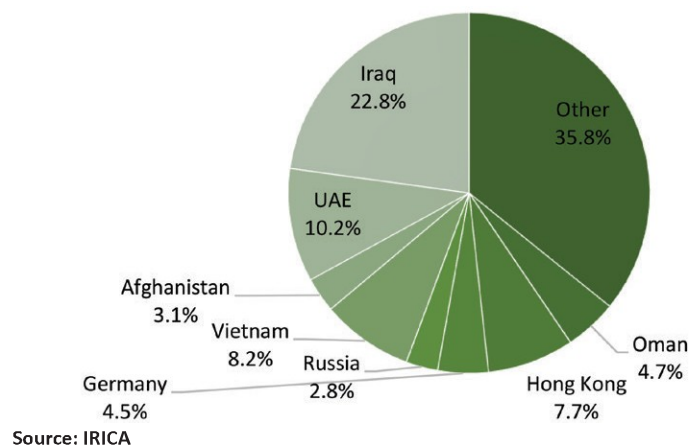


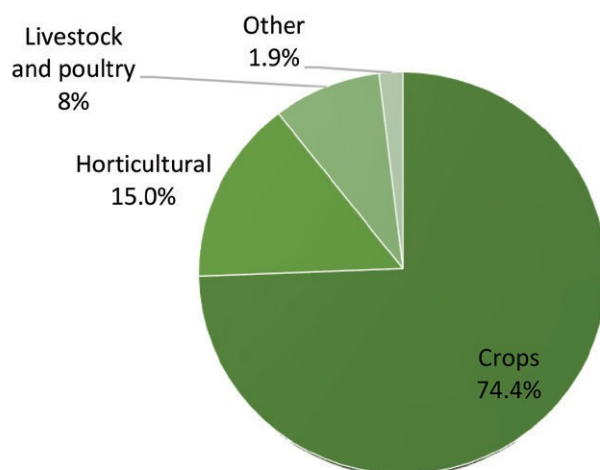
Table 4-5. Agricultural Import

	Yr. ended Mar 2015	Yr. ended Mar 2016	Yr. ended Mar 2017	Apr-Sep 2017
Value (mn USD)	8,907.0	8,882.2	8,780.4	5,506.5
Non-Oil Import Contribution (%)	16.6	22.2	20.6	NA

Source: Ministry of Agriculture Jihad

More than 14.96% of total agricultural import was dedicated to horticultural products, from April to September 2017. Crops, livestock, and poultry had the major share of agricultural import with 74.37% and 8.73%. Three major imported products are comprised of feed corn, soybean and rice.

Figure 4-5. Agricultural Import Combination from April to September 2017



Source: Ministry of Agriculture Jihad

In previous years, wheat has been one of the main imported products, but since March 2016, following the self-sufficiency, Iran had almost no import. In late 2011, the order registration for this product was prohibited at government currency rate and imported only via free currency or import-for-export.

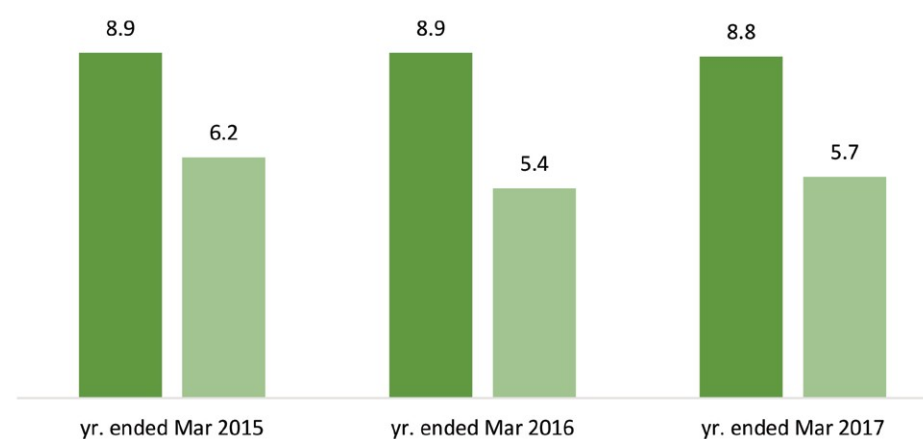


Table 4-6. Main Import Origins

	Vale (mn USD)	Exporting countries share (%)	
Feed Corn	1,413	Switzerland	(21)
		Brazil	(20.9)
		Ukraine	(20.47)
		India	(65)
Rice	690	Pakistan	(25.4)
		UAE	(4.1)
		Kazakhstan	(26.4)
Barley	265	Switzerland	(16.5)
		Russia	(16)

Source: IRICA

Agricultural commodities constituted 16.71% of Iran's total foreign trade in the year ended March 2017. In recent years, foreign trade balance has always suffered a negative level in the agricultural sector. Despite the emphasis on self-sufficiency, agricultural import is considered as the most important sector. The export and import of agricultural products were 1.7 bn USD and 4.7 bn USD, respectively from April to August 2017.

Figure 4-6. Import & Export (bn USD)

Source: Ministry of Agriculture Jihad



Crops

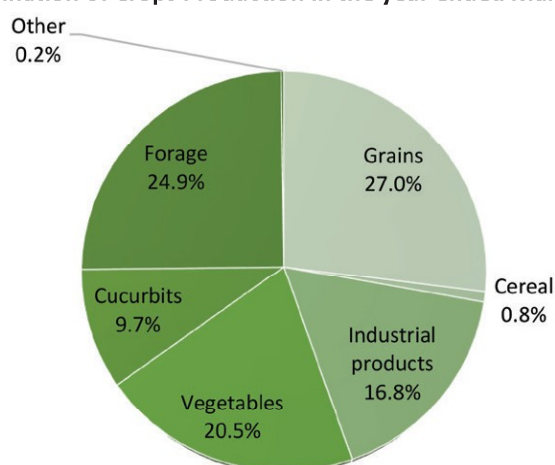
Roughly, 11.7 mn hectares of arable lands are cultivated crops, among which the grains are the main products and over 72% of the total cultivation areas are grains-related crops. Grains only account for 27% of total crop yield, despite that highest level of cultivation areas are related to these products and forage crops own the highest yield, after cereals.

Table 4-7. Crops' under Cultivation Land & Production (000 hectares- 000 tons)

	2014-2015		2015-2016		2016-2017	
	Area under Cultivation	Production	Area under Cultivation	Production	Area under Cultivation	Production
Grains	8,548	17,551	8,175	18,241	8,443	22,408
Cereal	822	615	712	519	787	671
Industrial Products	499	11,867	432	13,460	490	13,959
Vegetables	501	16,202	519	17,335	503	17,013
Cucurbits	346	9,806	305	7,607	326	8,048
Forage	1,020	18,437	1,077	19,696	1,050	20,704
Other	102	140	158	181	140	189
Total	11,838	74,619	11,377	77,039	11,739	82,992

Source: Ministry of Agriculture Jihad

Figure 4-7. Combination of Crops Production in the year ended March 2017



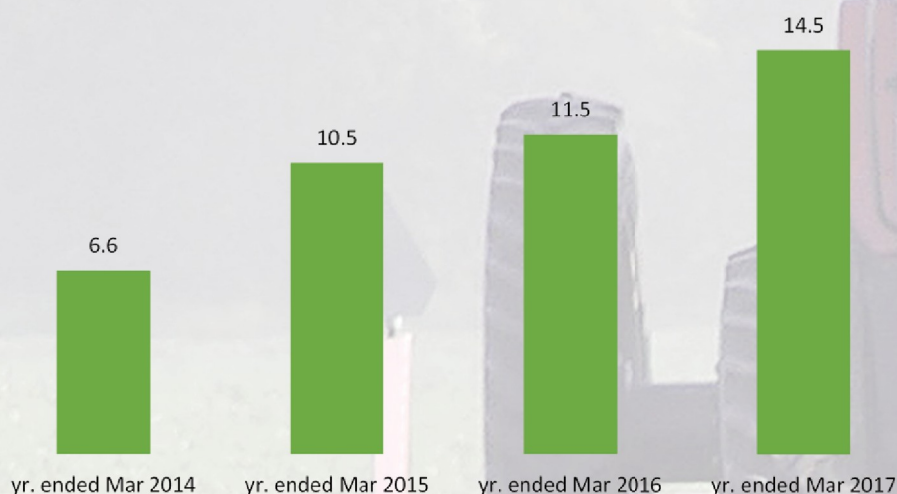
Source: Ministry of Agriculture Jihad



Wheat

Although having more than 50% of the cultivated areas, wheat possesses only 17.5% of the total crop production. Wheat production and guaranteed purchase increased from 2013 to 2017 and once again wheat self-sufficiency was experienced, producing 14.5 mn tons and purchasing 11.5 mn tons by government, however import became more limited in the year ended March 2017.

Figure 4-8. Wheat Production (mn USD)



Source: Ministry of Agriculture Jihad

Horticultural Products

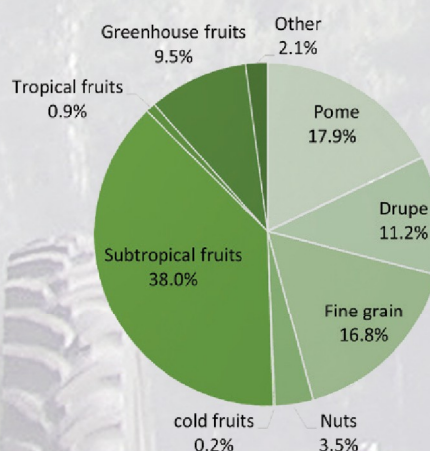
Iran's horticultural fertility level was 2.39 mn hectares, with the contribution of fertile levels of 10.1% pome, 9.5%, drupe, 12.5% small seed, 28.26% dried, 0.8% cold, 28.6% subtropical, 0.4% tropical and 0.3% greenhouse fruits in the year ended March 2017. Horticultural products were 21 mn tons in the year ended March 2017. Subtropical fruits had the highest volume with 38% of total production.

Table 4-8 Fertility Level & Production of Horticultural (000 hectares- 000 tons)

	2014-2015		2015-2016		2016-2017	
	Area under Cultivation	Production	Area under Cultivation	Production	Area under Cultivation	Production
Pome	227.0	3,683.4	233.4	3,768.4	243.3	3,756.9
Drupe	210.7	2,078.2	216.8	2,203.3	228.1	2,349.1
Fine grain	288.3	3,125.1	287.7	3,246.0	300.3	3,534.9
Nuts	622.5	610.5	651.2	679.5	678.3	730.0
Cold fruits	20.6	33.5	18.7	32.1	19.5	33.8
Subtropical fruits	644.3	6,412.9	661.3	7,106.5	686.4	7,992.2
Tropical fruits	10.0	186.9	10.1	188.5	10.5	192.1
Greenhouse fruits	-	-	7.8	1,729.4	8.7	1,996.1
Other	202.3	389.9	209.0	424.0	224.2	435.7
Total	2,225.6	16,520.5	2,296.0	19,377.7	2,399.4	21,020.9

Source: Ministry of Agriculture Jihad

Figure 4-9. Combination of Horticultural Production in the year ended March 2017



Source: Ministry of Agriculture Jihad

Saffron

Iran holds the world total production of saffron about 94%. Despite the significant contribution of Iran to global saffron production, statistics indicate that the average yield of in the year ended March 2017 was 3.2 kg per hectare, which, in this regard, has significant difference with other countries.

Table 4-9. Saffron Cultivated Land & Production (hectare- tons)

		Yr. ended Mar 2013	Yr. ended Mar 2014	Yr. ended Mar 2015	Yr. ended Mar 2016	Yr. ended Mar 2017
Area under cultivation	Fertile	78,804	83,534	86,645	92,816	102,348
	Non-fertile	590	1,205	1,285	2,303	2,922
	Total	79,394	84,739	87,930	95,119	105,270
Production	262	311	280	352	336	
Kg/ hectare	3	4	3	4	3	

Source: Ministry of Agriculture Jihad

Livestock & Poultry

Milk and white meat with 68.7% and 14.7% had the largest amount of livestock products in the year ended March 2017.

Table 4-10. Livestock & Poultry Production (000 tons)

	Yr. ended Mar 2013	Yr. ended Mar 2014	Yr. ended Mar 2015	Yr. ended Mar 2016	Yr. ended Mar 2017
Beef	747.0	755.0	785.0	806.0	823.0
Poultry meat	2,614.7	2,851.7	2,980.2	3,106.4	2,069.0
Egg	912.7	893.4	925.0	931.0	940.0
Honey	71.1	74.6	77.8	77.4	81.0
Milk	7,952.0	8,268.0	8,800.0	9,140.0	9,653.0
Total	12,297.5	12,842.7	13,568.0	14,060.8	14,060.8

Source: Ministry of Agriculture Jihad

Aquaculture

With over 1 mn tons of aquaculture production, this sector has risen over the past years.

Table 4-11. Aquaculture Production (tons)

	Yr. ended Mar 2014	Yr. ended Mar 2015	Yr. ended Mar 2016	Yr. ended Mar 2017
Fishery	514,081	575,512	582,349	634,197
Aquaculture	370,876	371,229	401,548	455,000
Total	884,957	946,741	983,897	1,089,197

Source: Ministry of Agriculture Jihad

Supportive Policies & Regulated Market in Agribusiness

Agricultural products supply, foodstuff and import management have been much considered to balance the total food supply and demand to support domestic production and create strategic reserves by introducing the products to the market, appropriate regulations and tariffs, seasonal import restrictions and support producers in harvesting season.

In addition, it is aimed to sustain the production and producers share of market margins, reducing, production costs and eliminate parallelism and mercantilism; support production and services with emphasis on value chains (from farm to table). The following measures have been taken in order to support the agricultural sector and optimize the market:

- Tax exemption as a supportive policy to exempt this sector from VAT exemptions and direct taxes of all agricultural items.
- Guaranteed purchase and pricing as supportive policies will encourage more farmers to continue operations and have self-sufficiency. Guaranteed purchases of non-essential products are subject to acceptance of suitable crop patterns by farmers and producers.
- Tariffs on agricultural import as well as tariff exemptions on import of inputs, agricultural sector.

Table 4-12. Agricultural Products Import Tariffs (%)

	Yr. ended Mar 2016	Yr. ended Mar 2017
Oil seeds	10	10
Barely	NA	5
Rice	30	26
Wheat	4-10	10
Corn	4	5
Crude sugar	NA	20
Meat of bovine animals, fresh or chilled	26	26

Source: IRICA

Import and export control of agricultural products are not limited to tariff restrictions and the government imposes non-tariff barriers and restrictions based on the conditions and the amount of production in different years. According to the customs procedures, the export of fruits and vegetables will be carried out after the beginning in November of 2017, only with approved packaging. It will also be possible to carry land and sea cargo to destinations in the buyer's countries with only refrigerated containers and boats.

Mechanization

Mechanization rate was 1.41 in the year ended March 2016. Both combine and tractor manufacturing had a growth rate of 81.3% and 23.2%, respectively in the year ended March 2017 in comparison with the previous year.

Table 4-13. Agricultural Machinery Production (Vehicle)

	Yr. ended Mar 2014	Yr. ended Mar 2015	Yr. ended Mar 2016	Yr. ended Mar 2017
Combine	202	561	225	408
Tractor	27,122	22,429	11,851	14,607

Source: Ministry of Industry, Trade and Mine





Strengths

- Diversity in agricultural activities (agriculture, horticulture, animal husbandry and fisheries) and related products
- Agricultural priority in national programs by food security
- Arable Lands
- The potential of natural resources such as medicinal plants, industrial, food and forage production
- The relative advantage of horticultural products

Opportunities

- Proximity to export markets such as Iraq, Afghanistan and the Gulf States
- Ability to develop aquaculture and fishing in southern and international waters
- Adequate capacities in mechanization development, conversion, and complementary industries

SWOT Analysis

Threats

- Reduction the quantity and quality of planned water resources for agricultural use
- Informal and retail markets through official channels led to reduction in effective flow of agricultural products and financial investment.
- Change of agricultural land use
- Increase of soil and water resources pollution

Weaknesses

- The lack of development in affiliated and related industries
- Lack of flexible infrastructures to achieve sustainability
- Extreme waste in agriculture and lack of comprehensive management
- Lack of proper use of fertilizers and the mismatch between the chemical, biological and organic fertilizer patterns in the agricultural process
- Low return and high risk of investment in the agricultural sector and inability to compete with other sectors
- Increased desertification and reduced biological power
- Traditional agriculture and low mechanization rate
- Lack of diversity in aquaculture species

Investment Advantages & Incentives

- Iran has the highest rankings in many agricultural products, which can be a significant factor for the capital owners and increased job opportunities and ranks from 1st to 9th in 35 agricultural products in the world, as being the 1st producer in pistachio, saffron and caviar and 2nd in cucurbits and 3rd in dates.
- The proceeds of all activities of agriculture, animal husbandry, livestock breeding, fish farming and honey beekeeping and poultry raising, fishing, sericulture, reviving pasture and forest, garden, or any kind of land are exempted from taxation and all natural and legal persons (Iranian and non-Iranians) can benefit from the exemption from the beginning of the activity.
- Proceeds from the export of agricultural products, including crops, horticulture, livestock and poultry, fisheries, forest and rangelands and conversion and supplementary industries are exempt from taxes by 100%.
- Agriculture and animal husbandry

provide the best opportunity to invest in Iran, because there is a volume of almost 120 mn tons of crops and livestock, in addition to high quality and has unique diversity in conversion and complementary industries. Tax and customs exemptions for the re-export of processed agricultural and animal products have provided incentives to attract investors.

- Iran has a four seasons climate, this has led to the best agricultural and livestock products. Given the proximity to Iraq, Afghanistan, and Gulf regional states, which lack agricultural potential, the existence of land and air transit infrastructures in Iran has enabled foreign investors to export products after processing and receive investment profits in foreign currency.
- Agricultural export have been important in non-oil sector during recent years, as raw and unprocessed products constitute the major part.
- Processing is among the industries that have a great influence on the agricultural



sector. Considering the lack of significant expansion of processing industries in agricultural sector and the policy of the Ministry of Agricultural Jihad toward the processing of agricultural products, processing and complementary industries can be considered as one of the significant investment opportunities.

• Iran is known as a unique and unrivaled producer of saffron in world markets and there are significant capacities to benefit from these conditions, but unfortunately, these products are exported traditionally with the least value added. Spain, due to advanced technologies, cultivates the product 6.5 kg per hectare, while this is 3.8 kg per hectare with less value added than its rivals due to the sale of this product in crude and unprocessed form. Therefore, applying advanced technologies and packaging as well as processing technologies can be good opportunities for foreign investors.

Investment Opportunities

Crops

- Production of hybrid maize
- Cultivation of oil seeds
- Vegetable processing and packaging
- Choline chloride Plant (Poultry Feed Supplement) from corn grain
- Project of glucose and starch from corn
- Hybrid maize seeds production
- Construction of maize seeds hybrids processing plant
- Construction of cotton gin advanced equipment production plant
- Organic production

Horticulture

- Cultivation of medicinal plants and related industrial
- Production of edible mushrooms and mushroom processing industry
- Horticultural mechanization machinery
- Pre-cooling device for grapes and strawberries
- Pistachio automatic sorting machine and pasteurization equipment

Livestock

- Furnishing and optimization of milk collection centers

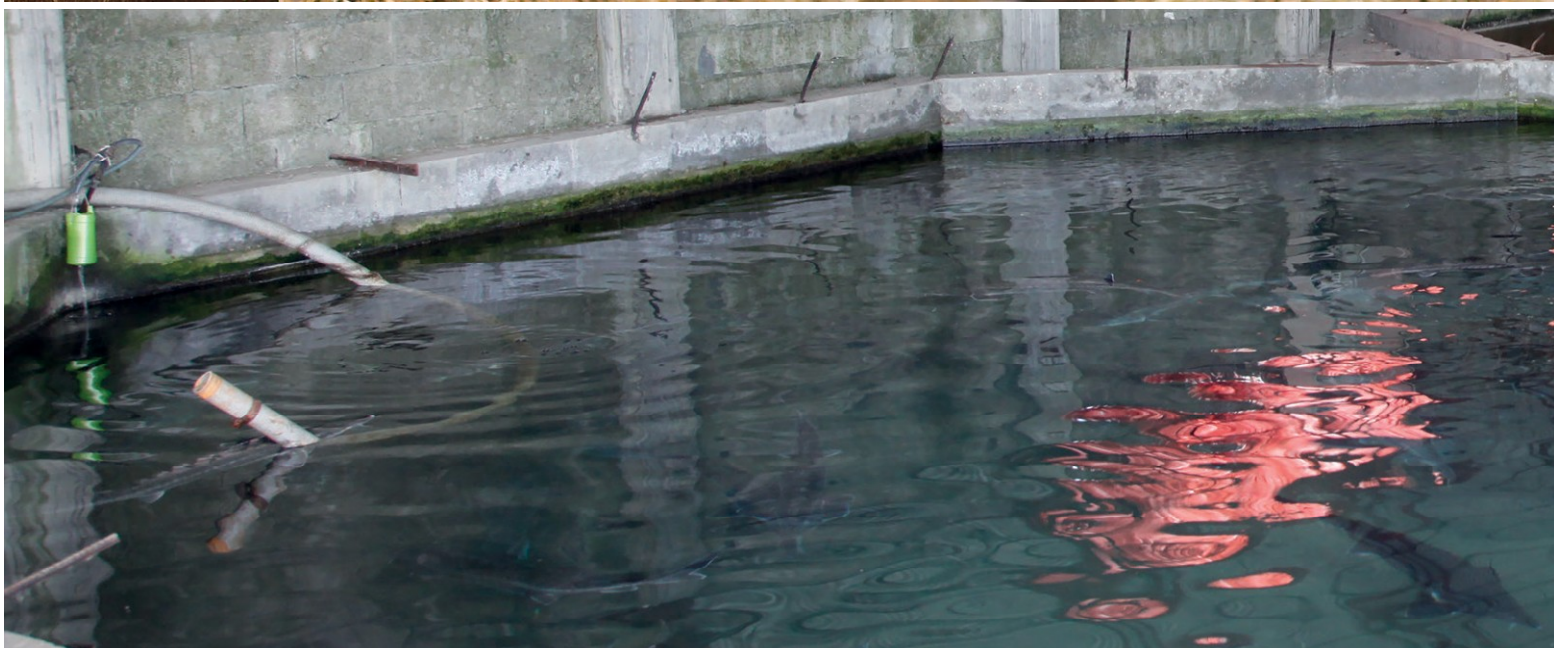
- Optimization of dairy cattle breeding equipment
- Production of milking machinery and equipment
- Laboratory analysis of milk equipment projects
- Sperm production centers projects (AI)
- The equipment to produce breeder (broilers and layers)
- Incubator equipment projects
- The slaughter of broilers equipment project
- Livestock and poultry feed equipment projects
- Dairy cattle nourishment
- Animal husbandry centers
- Production of veterinary drugs

Conversion & Processing Industries

- Rating, drying, packaging, processing, freezing, fruits dry powder
- Pasteurization and sterilization projects of Pistachio, nuts and raisin processing
- Dairy products equipment includes sterilized milk, ice cream, milk powder and cheese
- Industrial poultry and slaughterhouse livestock slaughter house projects (Advanced)
- Canned aquatic production projects with modern processing and packaging, e.g. sardines, shrimp etc.
- New technology industry of fish oil and powder projects
- Modern industry of aquatic feed processing projects
- Olive-oil projects
- Leather production
- Dairy
- Pharmaceuticals process from fish oil
- Essence and aromatic substances production by using effective medicinal plants
- Production of extracts from medicinal plants
- Sorting, grading and packaging of saffron projects
- Two-circuit cooling

Aquaculture

- Aquaculture nourishing
- Construction and equipping caviar centers for the production of meat and caviar
- The construction and equipping of marine fishery
- Aquaculture feed and its raw materials projects
- The construction of fishing ships and equipment



Chapter 5

LIVESTOCK, POULTRY & AQUATIC SECTOR



LIVESTOCK, POULTRY & AQUATIC SECTOR

Livestock

The livestock industry has grown considerably as one of the subsectors of agriculture at the global and international level, and has always been supported by governments and developed or developing countries by creating job opportunities, value added, human nutrition, health with an unmatched role in the economy.

Iran has Husbandry industry as its 2nd largest industry after oil, while enjoys the world 22nd and the Middle East 3rd in the milk production. In the red meat production, Iran owns the world 31st place. It also holds the world 7th and the Middle East 1st ranking in the chicken meat production and is ranked the world 11th in egg production.

In spite of legal support and prospects, the industry suffers the lack of infrastructure, integrated management, priority planning, and underestimating critical issues, which the activists, and investors have been confronted an ambiguity of their future business in livestock and poultry industry.

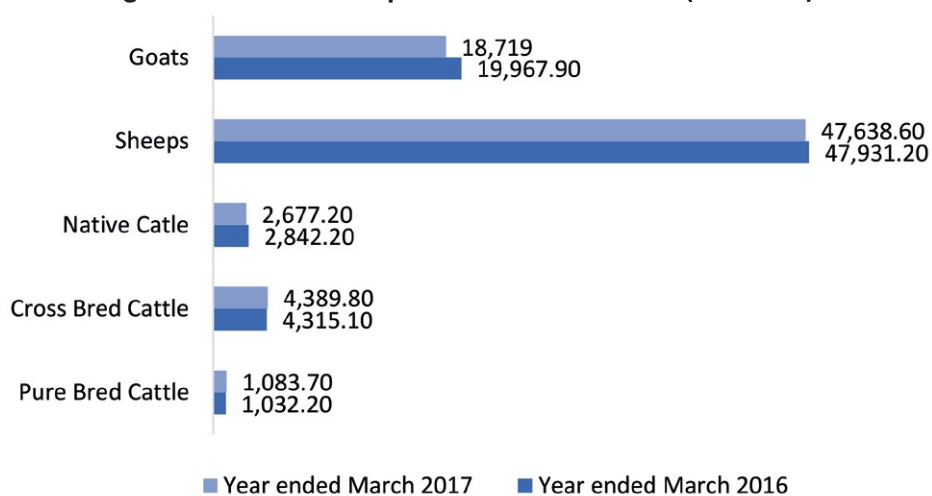
Despite the current investments, capacities, potentials and other facilities as well as reform of the infrastructures, it leads to growth of the sector with facilitating and accreditation by the government; which encourages the investors, producers and consumers to work and plan in this field.

There are three types of cattle breeding in Iran 1. Modern industrial farms, with high produced cattle of Holstein, Brown and Jersey. 2. Semi-industrial farms consisting crossbred cows with mixed foreign and Iranian cattle. 3. Native farms with Golpaygani and Sarabi cattle.

The cattle population were around 8 mn heads in Iran; in the year ended March 2017, the statistic shows that purebred cattle amounted to 1,083,700 heads by 5% growth and crossbred cattle had 4,389,800 heads by 2%. Iran's native cattle were 2,677,200 heads in the same year. Accordingly, there were 47,638,600 sheep and lamb, 18,719,000 goat and kid in the year ended March 2017.



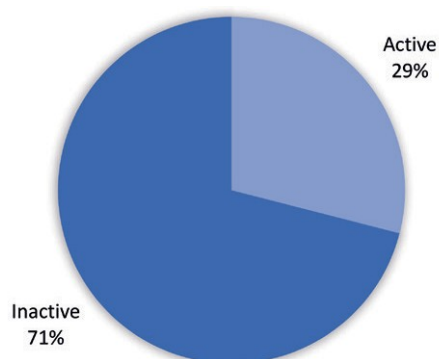
Figure 5-1. Livestock Population in 2015 & 2016 (000 head)



Source: Ministry of Agriculture Jihad

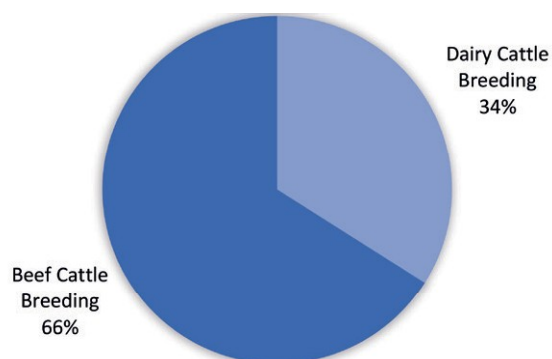
According to Iran livestock census in the year ended March 2017, there were a total of 26,061 industrial farms with a capacity of 3,619,696 heads. Of these, 17,132 units were dairy farms with 2,442,943 heads and 8,929 beef cattle farms with 1,176,753 heads related to the cattle fattening. In the year ended March 2017, active farms were 18,547 units and the rest were inactive.

Figure 5-2. Industrial Farm by Activity Status in the year ended March 2017



Source: Statistical Center of Iran

Figure 5-3. Industrial Farms by Activity in the year ended March 2017



Source: Statistical Center of Iran



Poultry

Poultry industry is one of the largest and important economic sectors in Iran. The industry has experienced significant changes, and grown by 700% as and enjoys a special place in economy by 110 bn IRR turnover, since the revolution. Poultry industry has a special nutritional position which is produced more than 2 mn tons of chicken meat by 140 bn IRR.

Broiler breeding industry works in 23,000 farms by producing 350 mn chickens and more than 2 mn tons of poultry meat. In term of production, employment and massive private sector investment, this industry is deemed very prominent. While annually, over one bn production of one-day-old chicks for 15,000 IRR indicates the industry turnover in one-day-old chicks section is estimated at 15,000 bn IRR.

In the broiler sector, Iran's producing is about 74% than that of Turkey, that is, the Iranian broiler farms losses outnumber Turkey. According to reports, mortality rates in Turkey are about 4% compared to Iran's 12%, which shows that much effort is needed in the poultry industry to reach the standard of developed countries.

Despite holding the Middle East 1st place, Iran has no significant export share in poultry production, but also having imported chicken meat in several years.

Poultry industry entails main activities as follows:

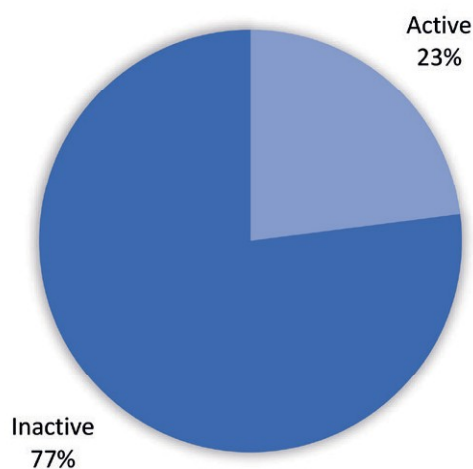
- Line breed
- Grandparent
- Breeder
- One day-old chick
- Layers

Broiler and layers production is considered the most important activity of this industry.

The poultry industry can make many business units such as hatchery, slaughterhouses, production, services, sanitary and veterinary centers to be active. There were 603 breeder units, of which 466 were active and 137 were inactive, in the year ended March 2017. Out of the total existing animal feed mills, 562 units were allocated to the broilers fertilized egg, 18 units of layers fertilized chicken's egg, and 23 units for native fertilized chicken's egg. The majority number of poultry farm belongs to the provinces of Mazandaran, West Azarbaijan and Gilan.



Figure 5-4. Poultry Feed Mills by Activity in the year ended March 2017



Source: Statistical Center of Iran

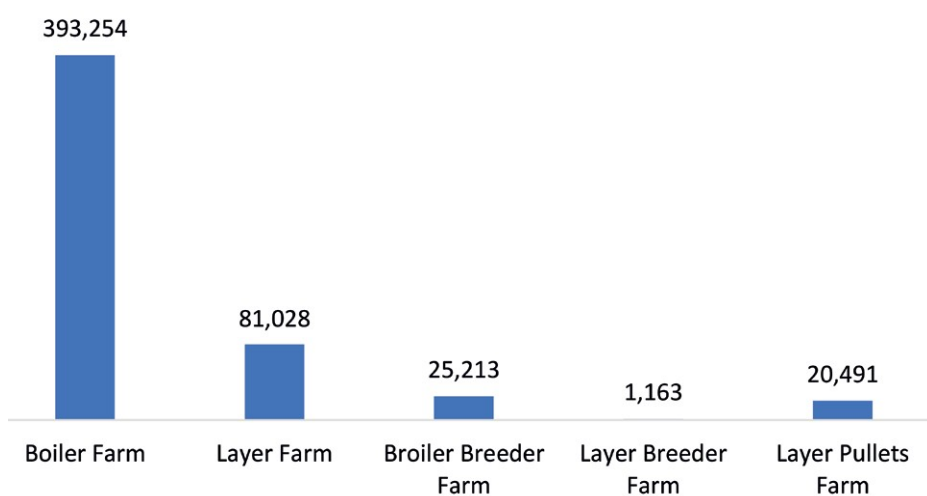
The farms had 20,886 (broilers) by capacity of 393,254, (layer feed mills) 1,603 by capacity of 81,028, (broiler breeder) 678 by capacity of 25,213, and 20 of (layer breeder) by capacity of 1,163, in the year ended March 2017.

Table 5-1. Quantity & Capacity of Aviculture in the year ended March 2017 (000 chickens)

	Units	Capacity
Broiler Farm	20,886	393,254
Layer Farm	1,603	81,028
Broiler Breeder Farm	678	25,213
Layer Breeder Farm	20	1,163
Layer Pullets Farm	251	20,491

Source: Ministry of Agriculture Jihad

Figure 5-5. The Capacity of Aviculture in the year ended March 2017 (000 chickens)



Source: Ministry of Agriculture Jihad





Aquaculture

In the year ended March 2018, the share of aquatic products is 13% of the total aquaculture production, similar to livestock and poultry and in terms of value added it is 2% of the total of agricultural production, which indicates ignoring this subdivision. Although in recent years, the nutritional value of aquatics has become more revealed for human consumption, and developed countries have been struggling to increase per capita consumption of aquatic products over the past two decades. However, the human consumption of aquatic products is still less than half in Iran of that in the global average, and the trend of consumption is increasing slowly.

Iran ranks 41st by fishing, 24th by aquaculture and 1st by breeding of shrimp in the region. In addition, Iran has share of 0.27% and 0.3% of total by fishing and aquaculture in the world production of aquatic products. According to the statistics, the share of each fisherman is 2,836 kg and the aquaculture share is 5,656 kg. Therefore, the share of the fishermen in Iran compared with the global average is relatively better, but it is less than the global average for the aquaculture holders.

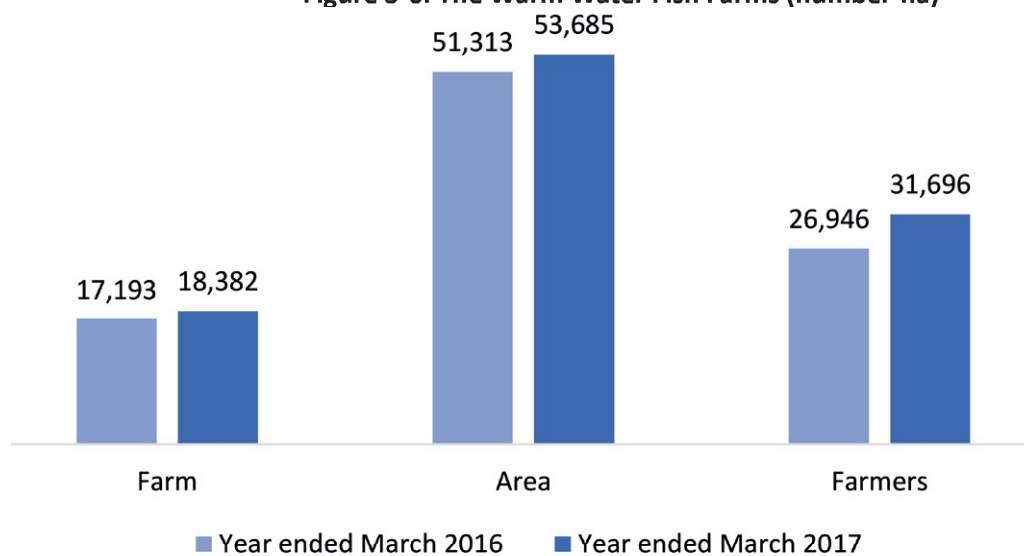
The quantity of warm-water fish farms have increased from 17,193 farms to 18,382 and had 6.9% growth in the year ended March 2017 compared with the previous year. The number of active cold water fish farms have increased from 5,124 farms to 6,136 and had 19.7% growth in the year ended March 2017 compared with the previous year. The number of shrimp farms have increased from 629 farms to 576 and had 8.4% growth in the year ended March 2017 compared with the previous year.

Table 5-2. The Fish & Shrimp Farms (number-ha)

		Year ended March 2016	Year ended March 2017
Warm Water Fish	Farms	17,193	18,382
	Area	51,313	53,685
	Farmers	26,946	31,696
Cold Water Fish	Farms	1,776	1,995
	Area	237	301
	Farmers	18,581	21,291
Shrimp	Farms	623	576
	Area	7,473	7,870.4
	Farmers	8,897	10,666

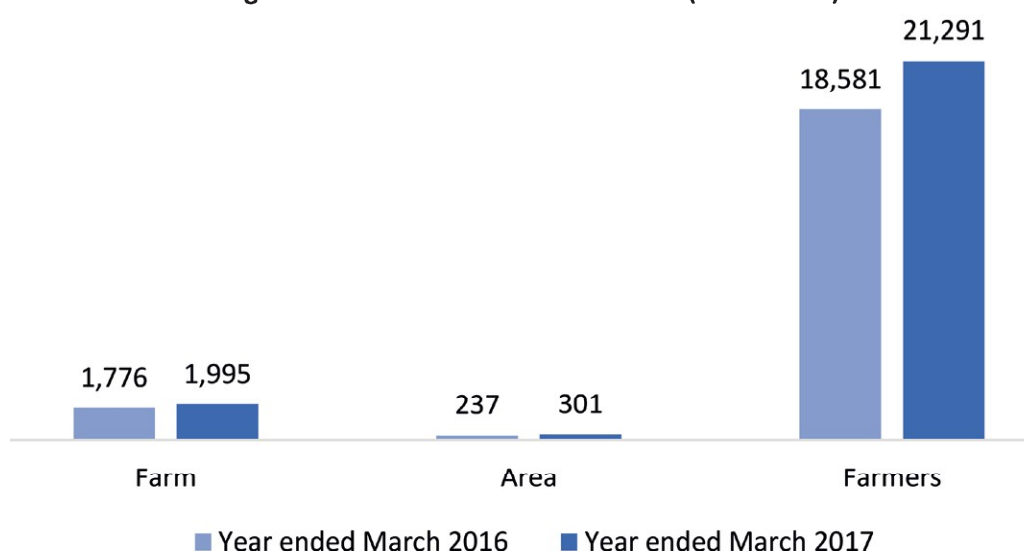
Source: Iran Fisheries Organization

Figure 5-6. The Warm Water Fish Farms (number-ha)



Source: Iran Fisheries Organization

Figure 5-7. The Cold Water Fish Farms (number-ha)

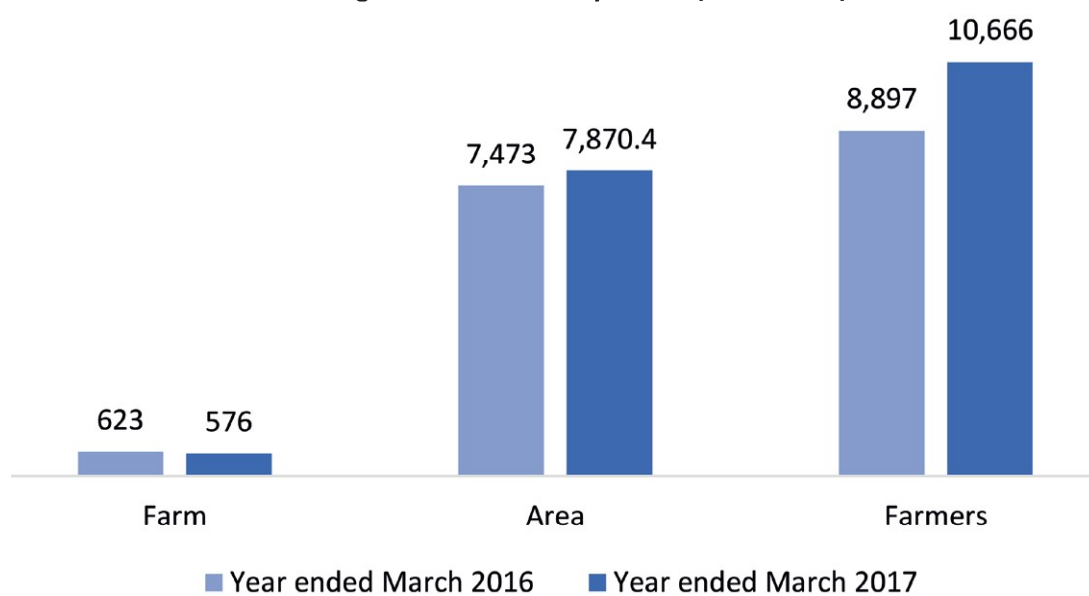


Source: Iran Fisheries Organization



Photo by: Abbas Afshar

Figure 5-8. The Shrimp Farms (number-ha)



Source: Iran Fisheries Organization



Livestock Production

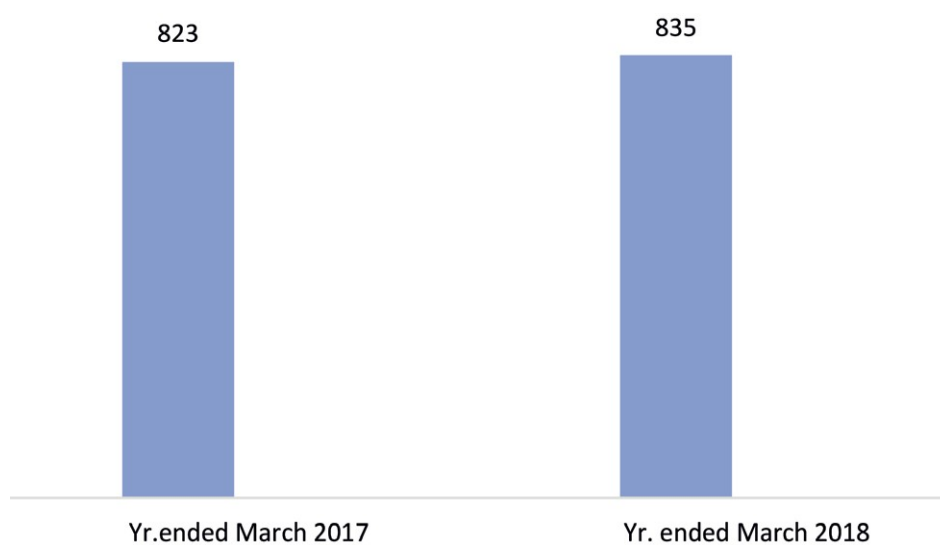
Livestock production is divided into red meat and dairy. In the year ended March 2017, the production of red meat and milk was 823,000 and 9,653,400 tons, respectively, which leads to the 19th ranking of milk production in the world. Red meat production increased by 1.5% to 835,000 tons and raw milk rose up from 5.5% to 10,184,000 tons, in the year ended March 2018. The 1st ranking of red meat and milk production were dedicated to the East Azerbaijan with 50,000 tons and Isfahan with 1,182,200 tons, in the year ended March 2017.

Table 5-3. Red Meat Production (000 tons)

	Yr. ended March 2017	Yr. ended March 2018
Meat	823	835

Source: Ministry of Agriculture Jihad

Figure 5-9. Red Meat Production (000 tons)



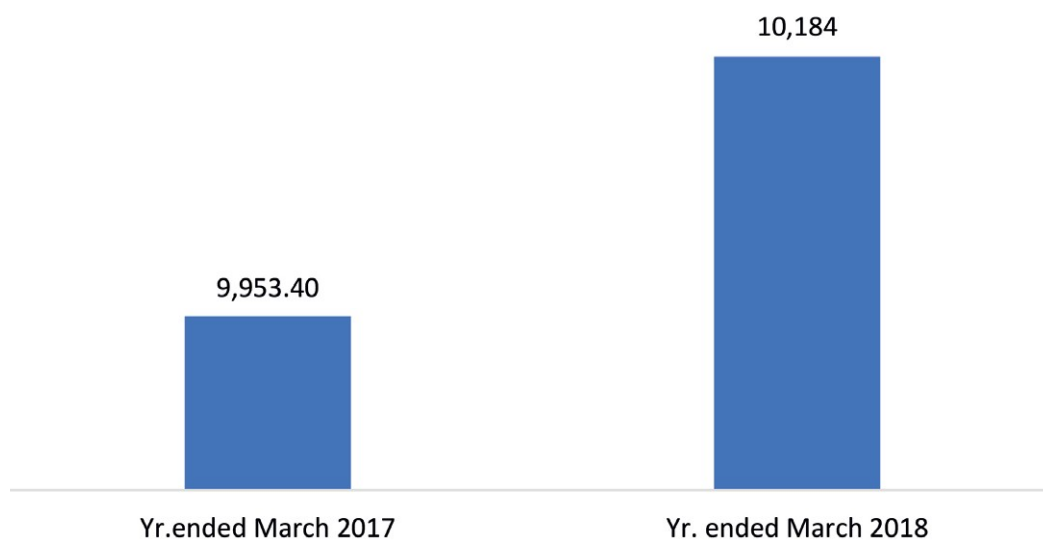
Source: Ministry of Agriculture Jihad

Table 5-4. Milk Production (000 tons)

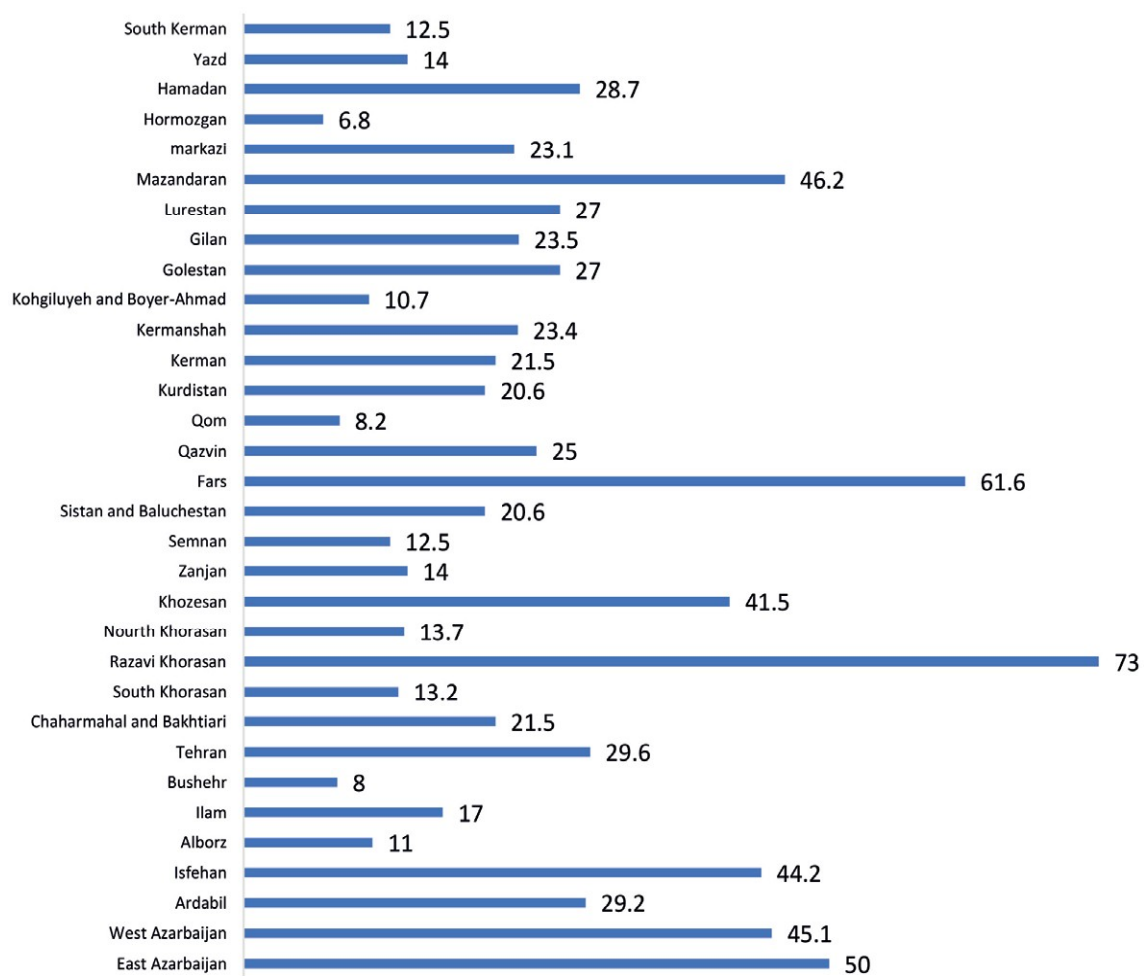
	Yr. ended March 2017	Yr. ended March 2018
Milk	9,953.40	10,184

Source: Ministry of Agriculture Jihad



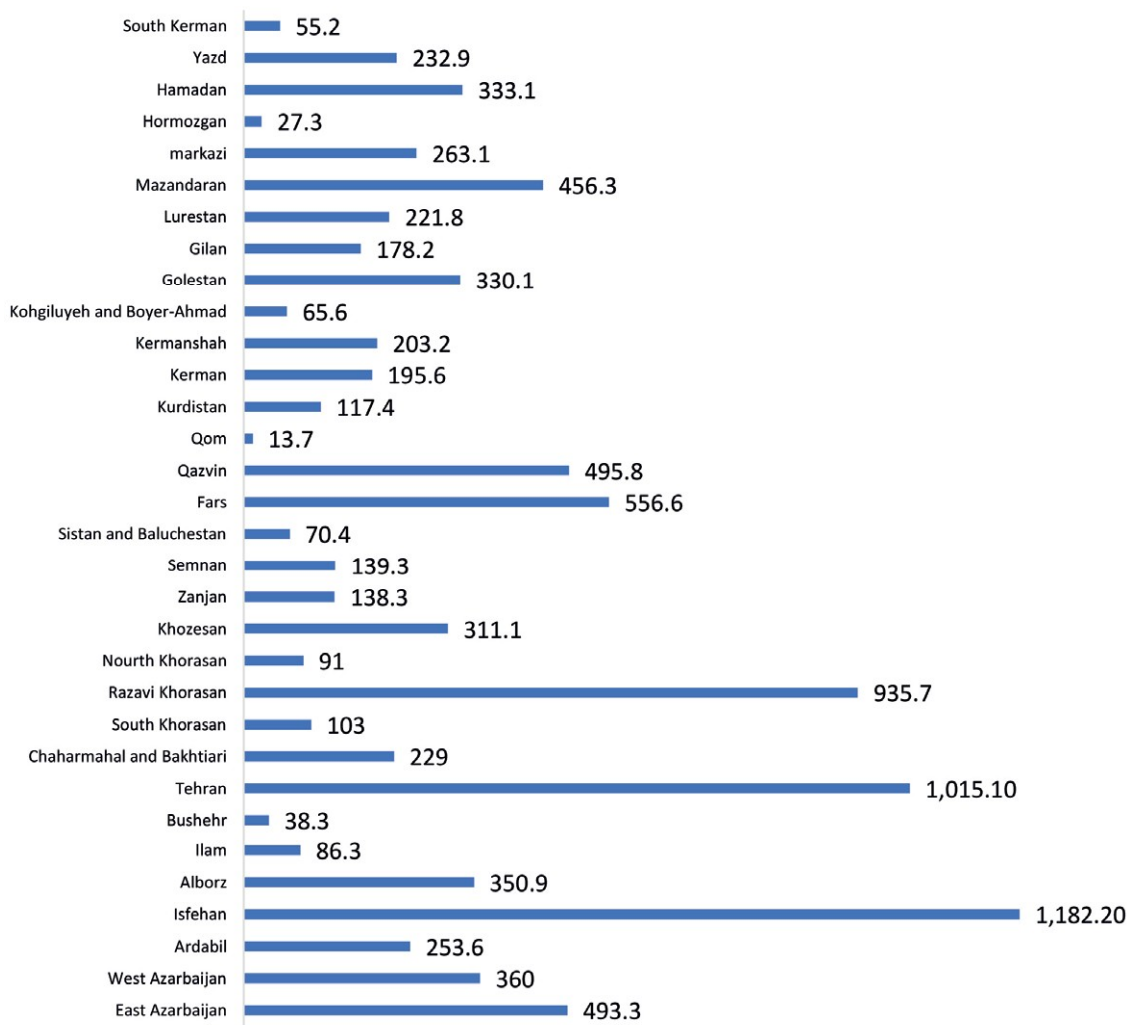
Figure 5-10. Milk Production (000 tons)

Source: Ministry of Agriculture Jihad

Figure 5-11. Red Meat Production by Province in the year ended March 2017(000 tons)

Source: Ministry of Agriculture Jihad

Figure 5-12. Milk Production by Province in the year ended March 2017 (000 tons)



Source: Ministry of Agriculture Jihad



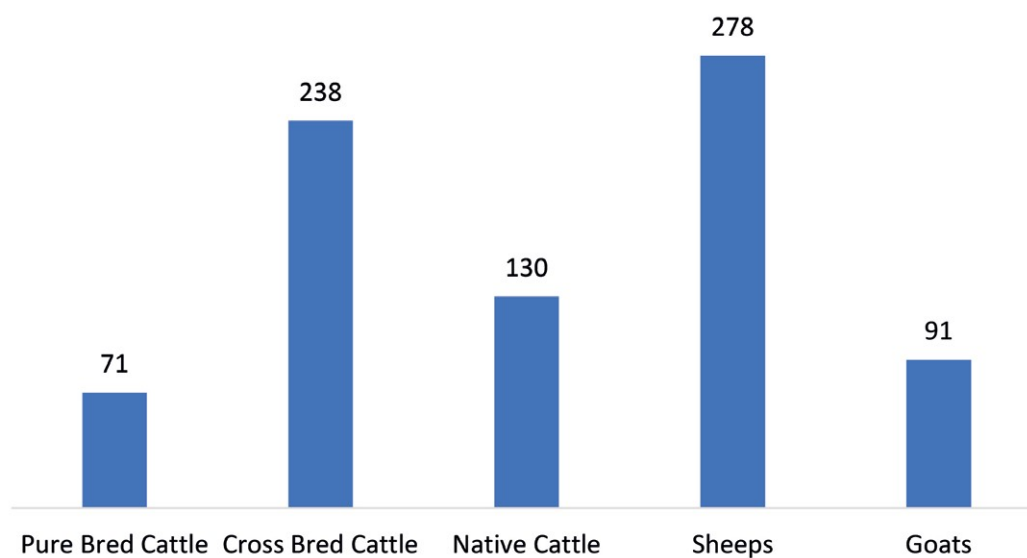
In the year ended March 2017, the production of red meat have been included mutton 278,000 tons, crossbred beef 238,000 tons, native beef 130,000 tons, chevon 91,000 tons and purebred beef 71,000 tons, of which 53% is allocated to beef and 45% belongs to goat and sheep, and the remaining 2% is related to camel and buffalo meat. The major production of livestock meat is dedicated to the native and crossbred cattle.

Table 5-5. Red Meat Production by Type of Livestock in the year ended March 2017 (000 tons)

	Production
Pure bred Cattle	71
Cross bred Cattle	238
Native Cattle	130
Sheep	278
Goat	91

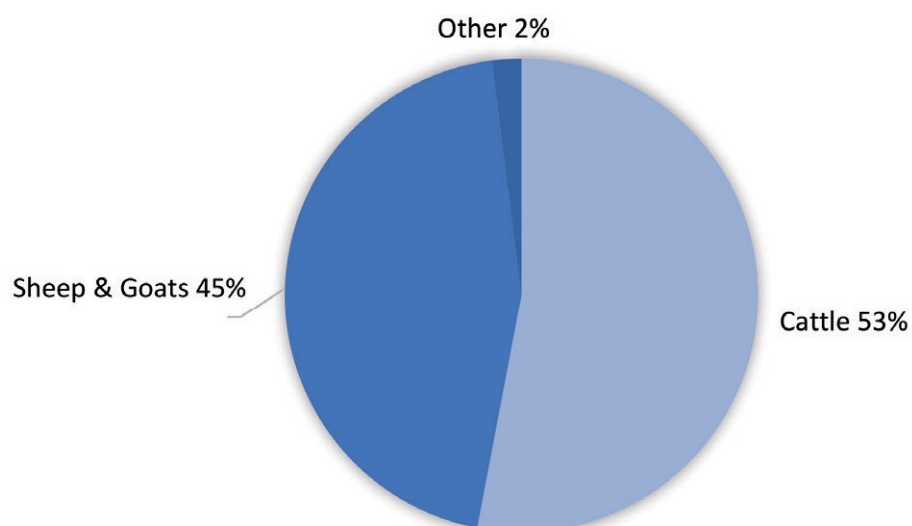
Source: Ministry of Agriculture Jihad

Figure 5-13. Red Meat Production by Type of Livestock in the year ended March 2017(000 tons)

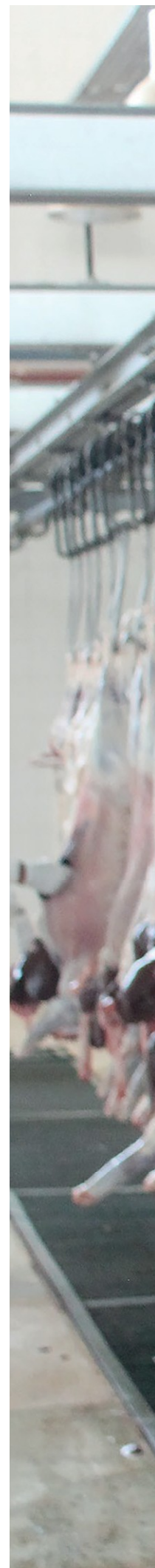


Source: Ministry of Agriculture Jihad

Figure 5-14. Percentage of Red Meat Production by Type of livestock in the year ended March 2017



Source: Ministry of Agriculture Jihad





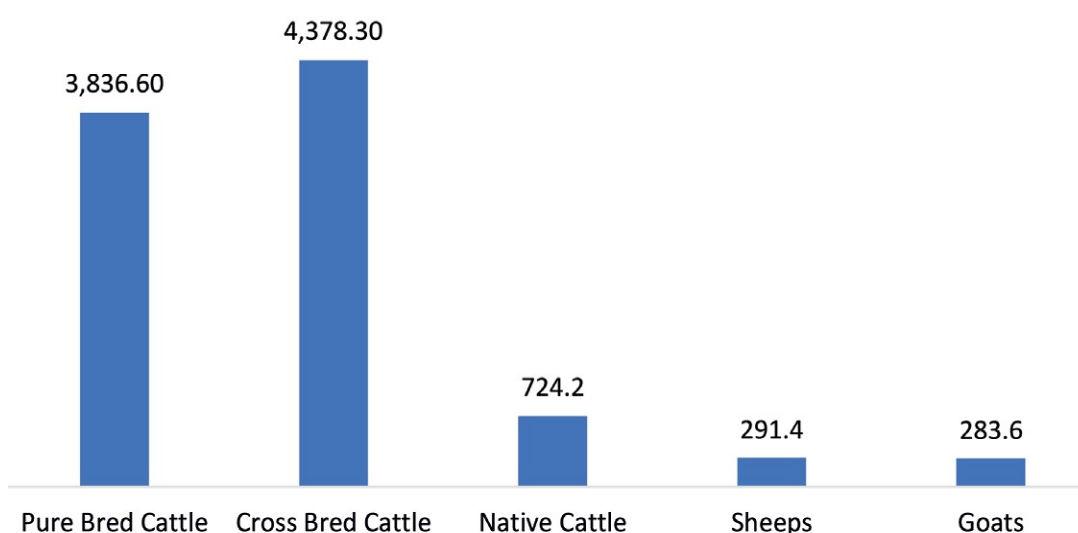
The milk based on the type of livestock has been produced include crossbred cattle by 4,378,300 tons, purebred cattle 3,836,600 tons, native cattle 724,200 tons, sheep 291,400 tons and goat 283,600 in the year ended March 2017. Of this, 93% belongs to the cow, 6% belongs to the sheep and goat, and the remaining 2% is related to the buffalo. The largest produced milk share is owned to purebred and crossbred dairy cows.

Table 5-6. Red Meat Production by Type of Livestock in the year ended March 2017(000 tons)

	Production
Pure bred Cattle	3,836.60
Cross bred Cattle	4,378.30
Native Cattle	724.20
Sheep	291.40
Goat	283.60

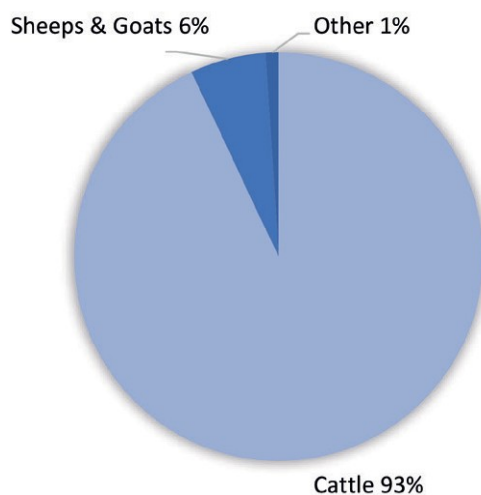
Source: Ministry of Agriculture Jihad

Figure 5-15. Milk Production by Type of Livestock in the year ended March 2017(000 tons)



Source: Ministry of Agriculture Jihad

Figure 5-16. Percentage of Milk Production by Type of Livestock in the year ended March 2017



Source: Ministry of Agriculture Jihad

Poultry Production

Iran is ranked 7th and 11th in the poultry and egg production, respectively. The chicken meat production was 2,069,200 tons, in the year ended March 2017, which increased by 8.1% to 2,237,000 tons in the year ended March 2018.

Iran egg production is 900,000 tons, which accounting 1.3% of the total 70 mn of egg produced in the world. In the year ended March 2018, the egg production was predicted to be 950,000 tons, but since avian flu prevalence, egg production decreased by 5.6% to 888,000 tons.

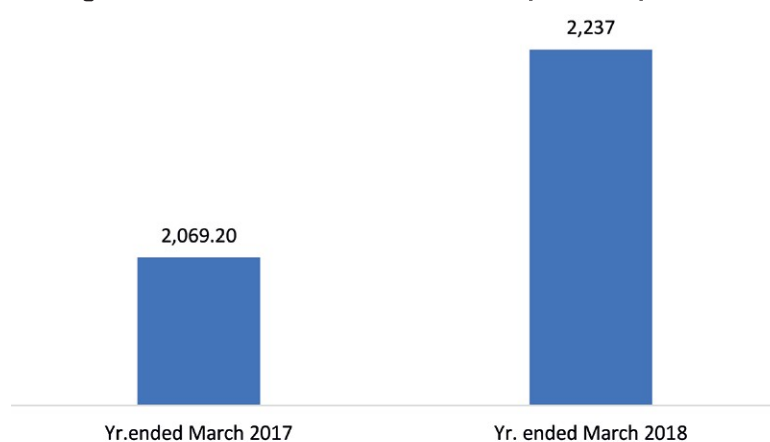
Mazandaran and Tehran had the 1st place in meat and egg production, respectively by 212,300 tons of chicken meat and 150,000 tons of egg, in year ended March 2017.

Table 5-7. Chicken Meat Production (000 tons)

	Yr. ended March 2017	Yr. ended March 2018
Poultry	2,069.20	2,237

Source: Ministry of Agriculture Jihad

Figure 5-17. Chicken Meat Production (000 tons)



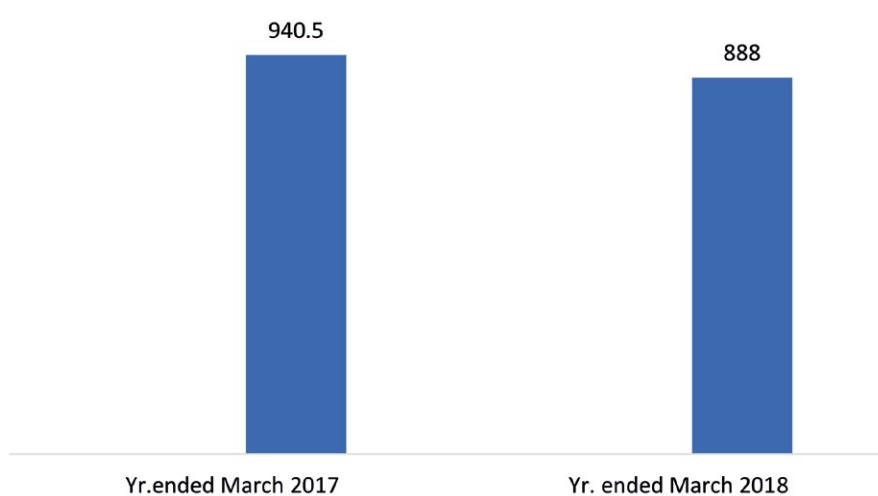
Source: Ministry of Agriculture Jihad

Table 5-8. Egg Production (000 tons)

	Yr. ended March 2017	Yr. ended March 2018
Egg	940.50	888

Source: Ministry of Agriculture Jihad

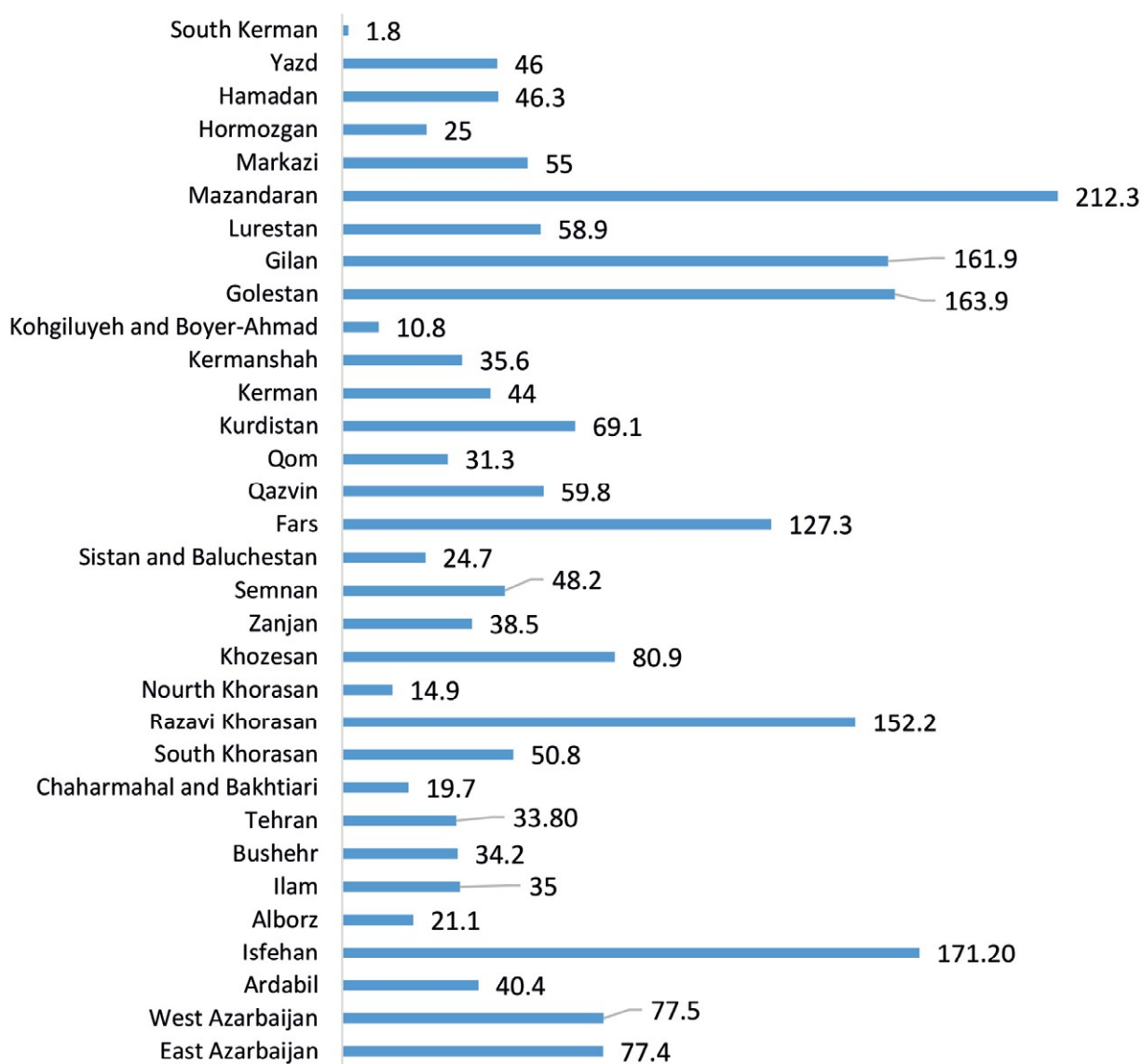
Figure 5-18. Egg Production (000 tons)



Source: Ministry of Agriculture Jihad

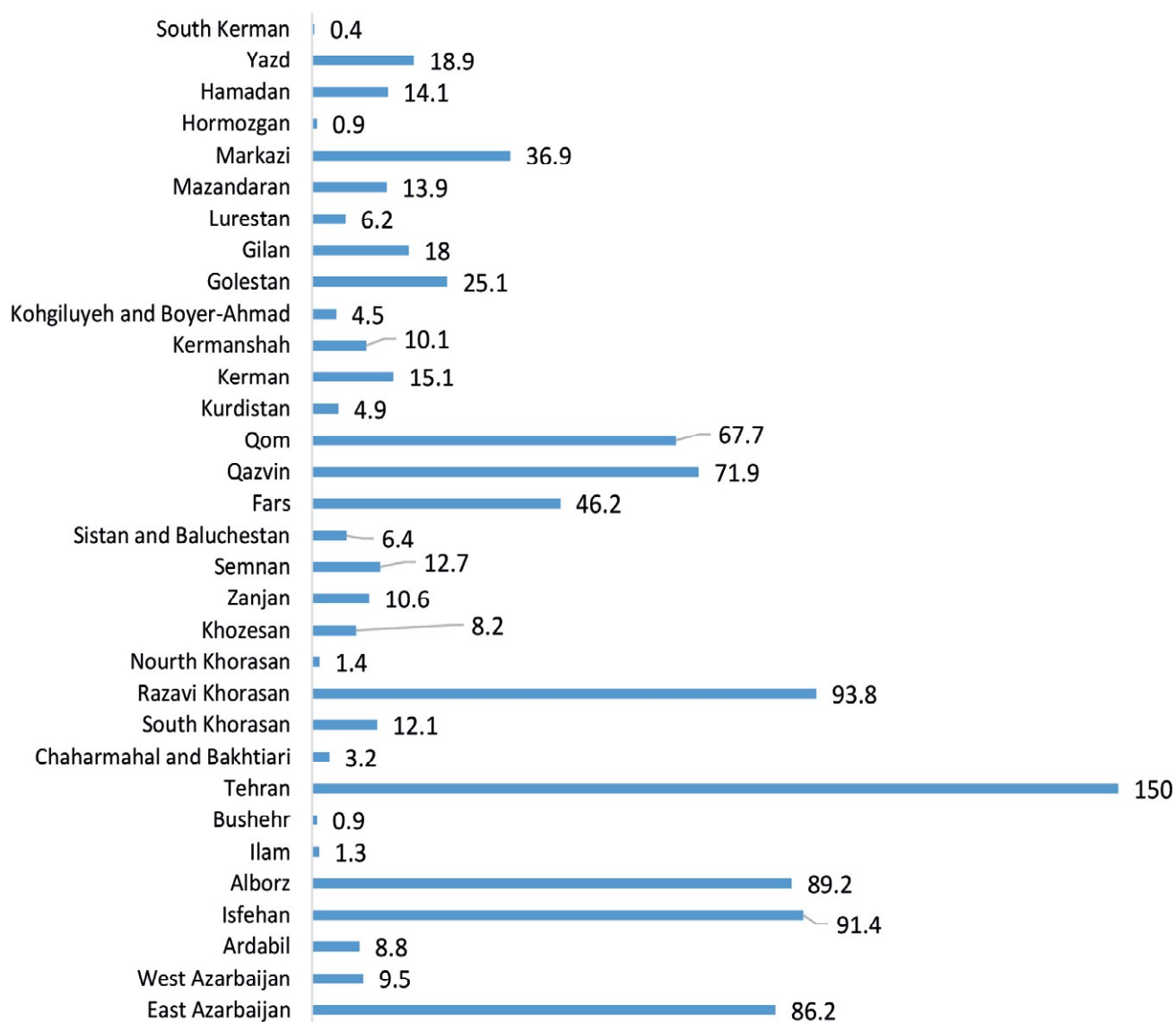


Figure 5-19. Chicken Meat Production by Province in the year ended March 2017(000 tons)



Source: Ministry of Agriculture Jihad

Figure 5-20. Egg Production by Province in the year ended March 2017 (000 tons)



Source: Ministry of Agriculture Jihad

Aquaculture Production

Iran is ranked first in Central Asia, the Caucasus and the Middle East because of production by 1.062 tons of fish. Production of warm water farms are increased about 184,000 tons to 201,000 tons in the year ended March 2017 compare to the year ended March 2016.

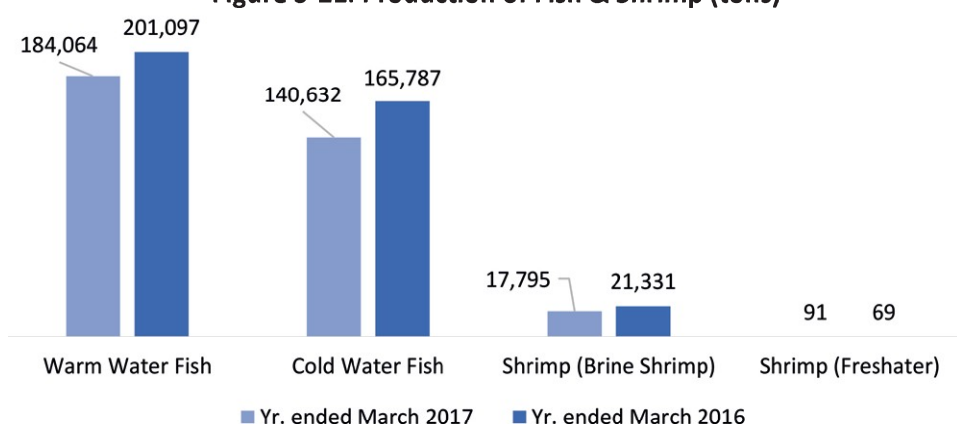
In addition, the production of cold water farms are increased from 140,000 tons to 165,800 tons by 9.2% growth in the year ended March 2017 comparison to the last year.

Table 5-9. Production of Fish & Shrimp (tons)

	Year ended March 2016	Year ended March 2017
Warm Water Fish	184,064	201,097
Cold Water Fish	140,632	165,787
Shrimp (brine shrimp)	17,795	21,331
Shrimp (freshwater)	91	69

Source: Iran Fisheries Organization

Figure 5-21. Production of Fish & Shrimp (tons)



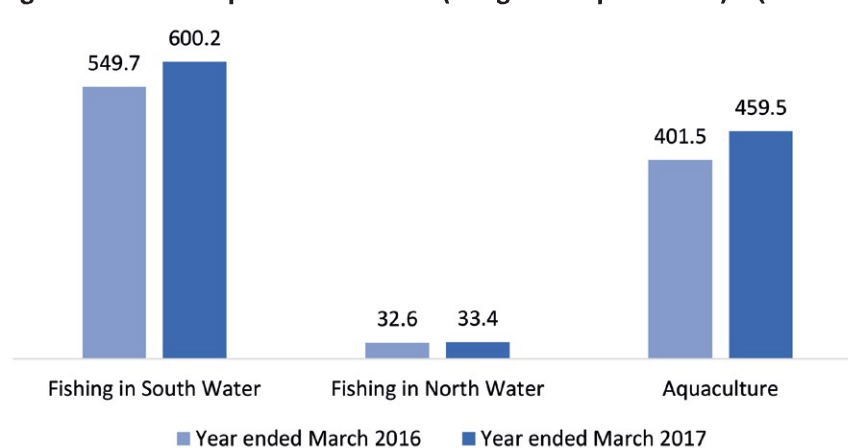
Source: Iran Fisheries Organization

Table 5-10. The Aquatic Production (Caught & Aquaculture) – (000 tons)

	Year ended March 2016	Year ended March 2017
Fishing in the Southern Waters	549.7	600.2
Fishing in the Northern Waters	32.6	33.4
Aquaculture	401.5	459.5

Source: Iran Fisheries Organization

Figure 5-22. The Aquatic Production (Caught & Aquaculture) – (000 ton)



Source: Iran Fisheries Organization



Photo by: Abbas Afshar



Photo by: Abbas Afshar

Production of Fish & Shrimp

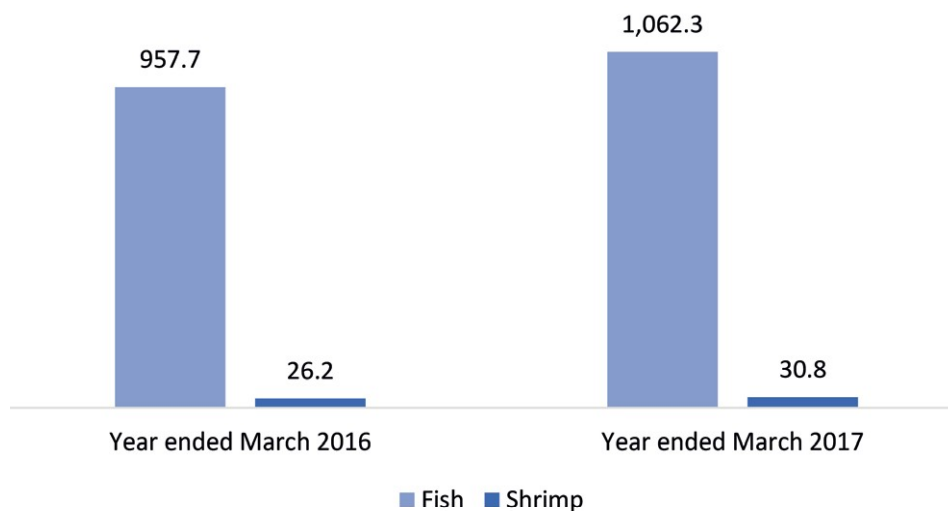
The production of meat the fish is increased from 957,670 tons to 1,062,300 tons by 10.9% growth in the year ended March 2017 compare to the previous year. The production of shrimp is increased by 17.3% from 26,200 to 30,750 tons in the year ended March 2017.

Table 5-11. The Fish & Shrimp Production – (000 tons)

	Year ended March 2016	Year ended March 2017
Fish	957.7	1,062.3
Shrimp	26.2	30.8

Source: Iran Fisheries Organization

Figure 5-23. The Fish & Shrimp Production – (000 tons)



Source: Iran Fisheries Organization

Trade

Import & Stock of Red Meat

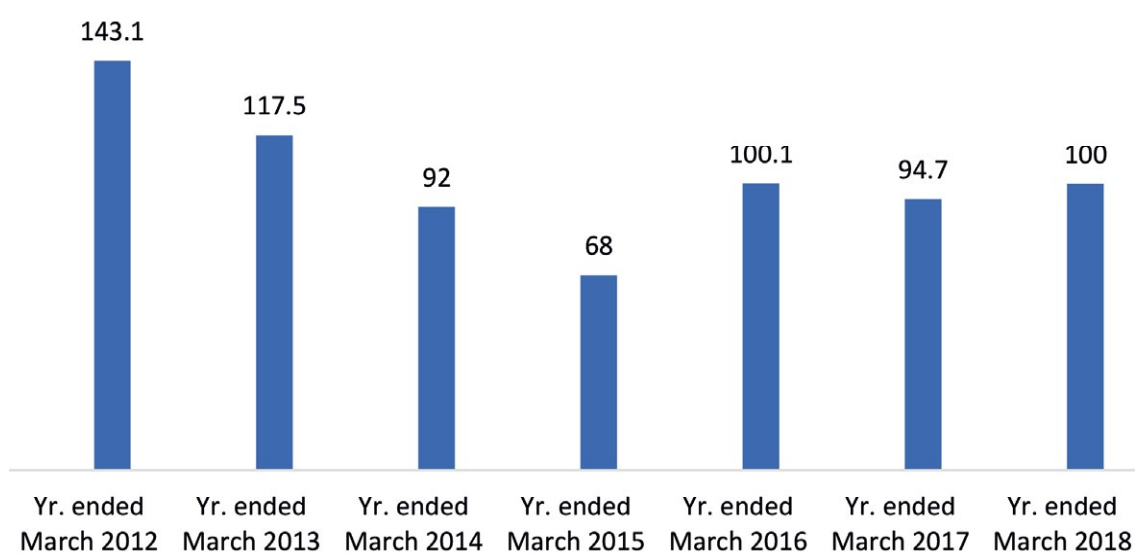
To provide the demand of red meat about 900,000 tons are needed annually, of which 830,000 tons equivalent to 90% are supplied domestically and the remaining is provided of other countries. The red meat import shows an unstable trend, which increased in the 2000s, and decreased from 2011 to 2014 and is reaching the lowest level of 68,000 tons in the year ended March 2015, then showed an uptrend until the year ended March 2018.

Table 5-12. Import of Red Meat (000 tons)

	Yr. ended March 2012	Yr. ended March 2013	Yr. ended March 2014	Yr. ended March 2015	Yr. ended March 2016	Yr. ended March 2017	Yr. ended March 2018
Import	143.1	117.5	92	68	100.1	94.7	100

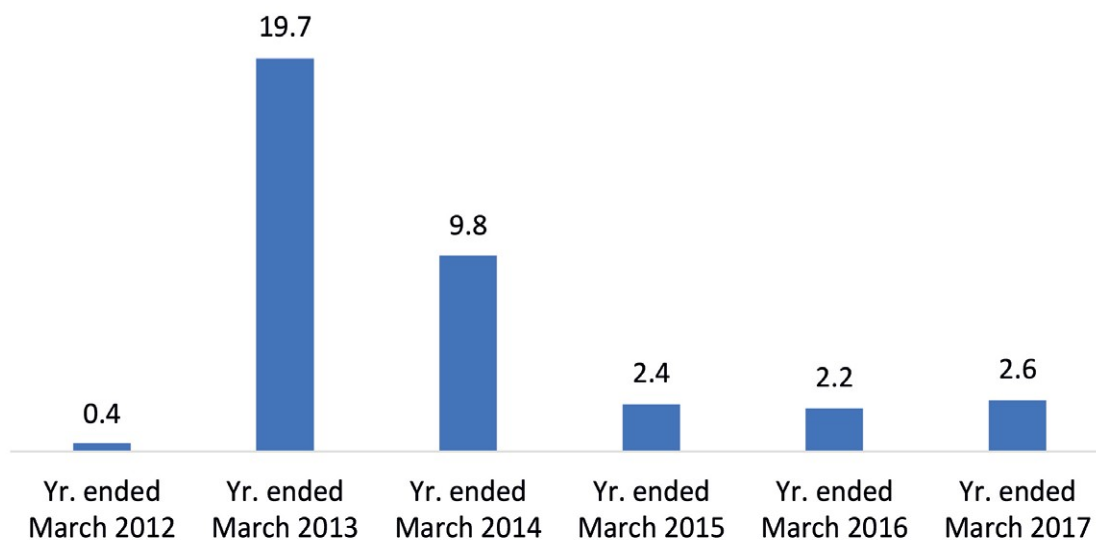
Source: Islamic Republic of Iran Customs Administration

Figure 5-24. Import of Red Meat (000 tons)



Source: Islamic Republic of Iran Customs Administration

Figure 5-25. Stock of Red Meat (000 tons)



Source: CBI

Export of Red Meat

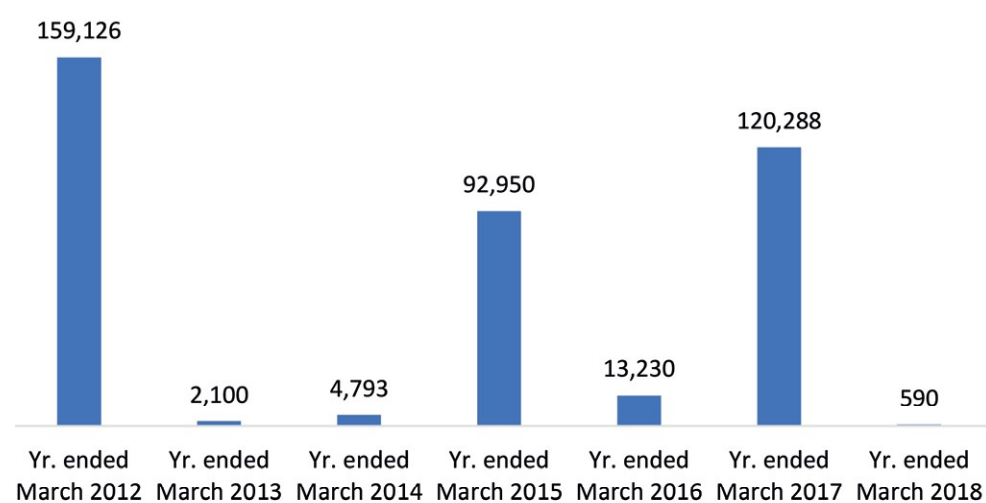
The red meat export has fluctuated a lot and an unbalanced trend. The export of red meat was mostly low in the 2000s, except 2011, 2014 and 2016, which the trend was upward.

Figure 5-13. Export of Red Meat (kg)

	Yr. ended March 2012	Yr. ended March 2013	Yr. ended March 2014	Yr. ended March 2015	Yr. ended March 2016	Yr. ended March 2017	Yr. ended March 2018
Export	159,126	2,100	4,793	92,950	13,230	120,288	590

Source: CBI

Figure 5-26. Export of Red Meat (kg)



Source: CBI





Export of Chicken Meat

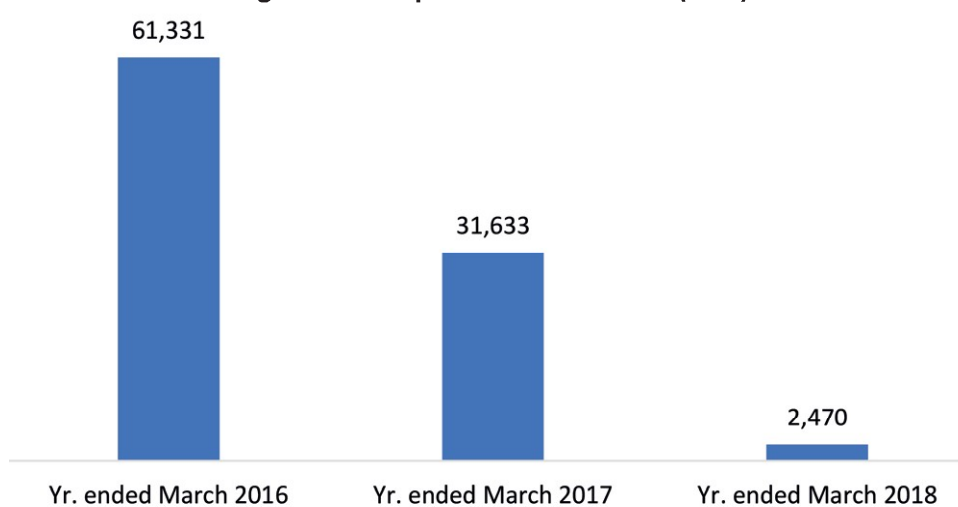
Despite of Iran is a superior producer of chicken meat in the Middle East, but the export of this product has had a negative trend in recent years. According to the Islamic Republic of Iran Customs Administration, the chicken meat export was to the countries such as Hong Kong and Vietnam in the year ended March 2018. The chicken meat was exported by 61,331 tons in the year ended March 2016, and was reached to 31,633 tons with negative growth of 48.6% in the year ended March 2017, and in the year ended March 2018, the export of poultry was about 2,470 tons, which has a negative growth of 92% compare to the year ended March 2017.

Figure 5-14. Export of Chicken Meat (kg)

	Yr. ended March 2016	Yr. ended March 2017	Yr. ended March 2018
Export	61,331	31,633	2,470

Source: CBI

Figure 5-27. Export of Chicken Meat (tons)



Source: CBI

Export of Aquatic

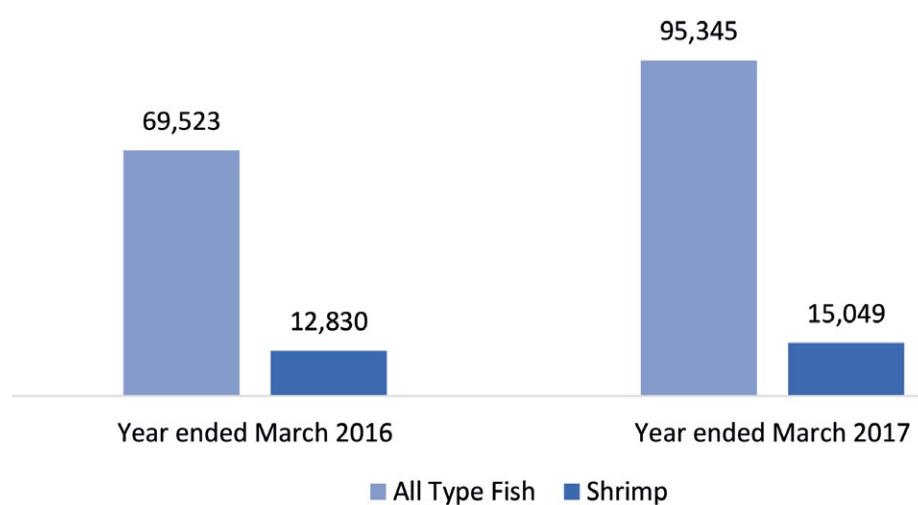
Most of fishery products include warm fish are exported to Iraq, and Iranian shrimp is exported to European countries, in particular Spain and France.

Table 5-15. Export of Aquatic Products (tons)

	Yr. ended March 2016	Yr. ended March 2017
All Type Fish	69,523	95,345
Shrimp	12,830	15,049

Source: Iran Fisheries Organization

Table 5-28. Export of Aquatic Products (tons)



Source: Iran Fisheries Organization



Photo by: Abbas Afshar

The Consumption & Share of Meat, Dairy & Eggs in Household Expenditure

According to the CBI, share of all type of meat in household expenditure has fallen from 6.1% to 5.3%, since the year ended March 2007 to the year ended March 2017, while the per capita consumption of red meat has fluctuated and is reached to 11.47 kg in the same year; that 3.1% share of household budget, in the year ended March 2017. According to the CBI, the per capita consumption of red meat in urban households has dropped more than 25% over the past decade.

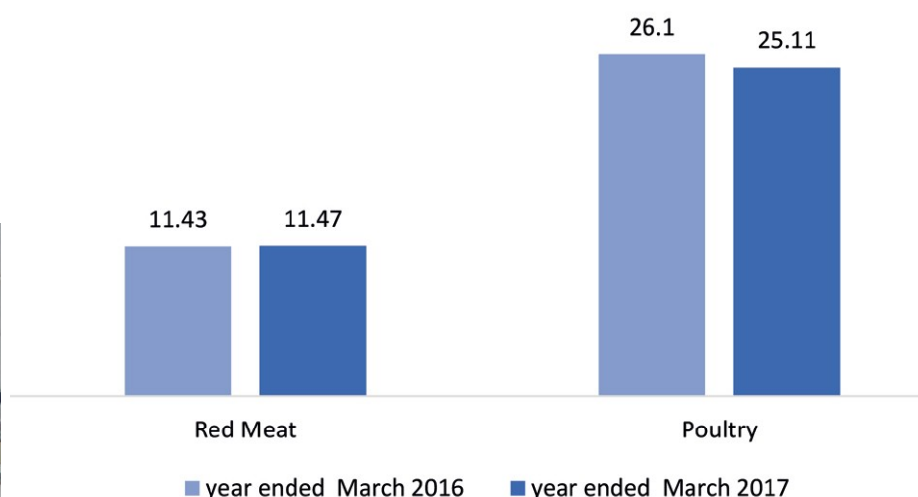
Iran per capita consumption of chicken meat is 2 times over the global. According to CBI, the per capita consumption of chicken meat has been 25 kg, while the global consumption is 11.5 kg, which accounting 1.5% of total household budget in the year ended March 2017.

Table 5-16. Meat Consumption per capita (kg)

Consumption	Yr. ended March 2016	Yr. ended March 2017
Red Meat	11.43	11.47
Poultry	26.10	25.11

Source: CBI

Figure 5-29. Meat Consumption per capita (kg)



Source: CBI

Although the growth in the current and fixed household expenditure of food and beverage, the fixed expenditure of livestock and poultry meat (according to consumer price index) has been decreased. In spite of the smaller household size from 3.38 to 3.33, meat consumption has also been decreased in each household in the years ended March 2016- 2017.

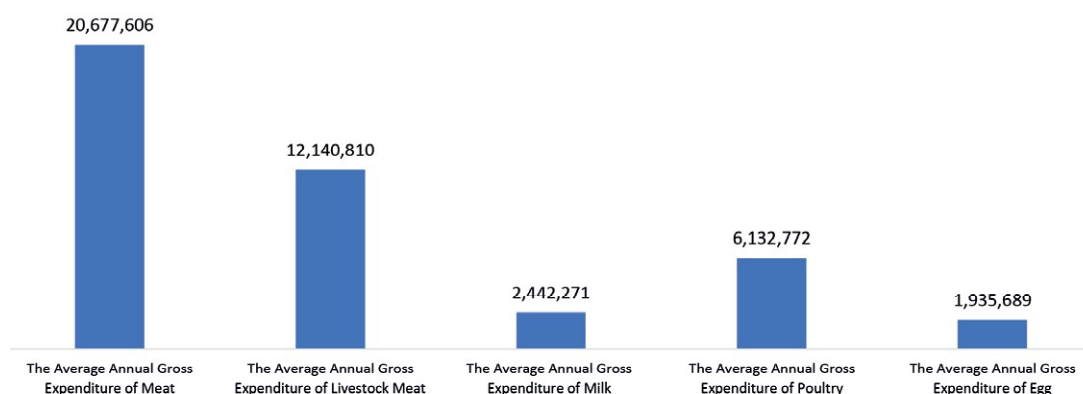
The average gross annual expenditure of household was about 393,006,000 IRR (about 32,750,000 IRR monthly), in the year ended March 2017, which increased by 11.4% year-on-year. Of this, food and beverage expenditures own 22.9% (about 89,976,000 IRR), which increased by 0.8% compared to in the year ended March 2016. Among the food and beverage group, the meat expenditure holds the largest share of total gross by 5.3%. Milk, dairy products and eggs had the largest share with 2.6%, after fresh fruits.



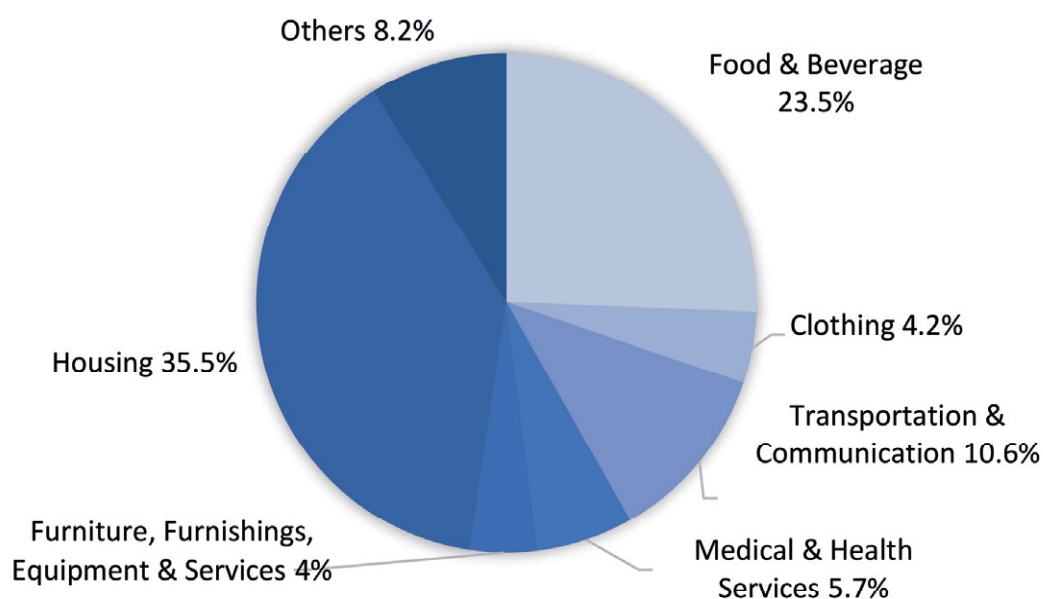
Table 5-17. Average of Household Expenditure in the year ended March 2017

	Yr. ended March 2017	Change (%)
Annual Average of Gross Household Expenditure	393,005,874	-
Annual Average of Gross Household Expenditure of Food & Beverage	89,975,597	22.9
Annual Average of Net Household Expenditure	382,756,446	-
Annual Average of net household expenditure of food & beverage	88,975,597	23.5
Annual Average of Gross Expenditure of Meat	20,677,606	5.3
Annual Average of Gross Expenditure of Livestock Meat	12,140,810	3.1
Annual Average of Gross Expenditure of Milk	2,442,271	0.6
Annual Average of Gross Expenditure of Poultry	6,132,772	1.5
Annual Average of Gross Expenditure of Eggs	1,935,689	0.5
Annual Average of Household Consumption of Red Meat/ kg	41	2.5
Annual Average of Household Consumption of Milk/ kg	86	4.44

Source: CBI

Figure 5-30. Average Household Expenditure in the year ended March 2017

Source: CBI

Figure 5-31. Percentage of Household Expenditure in the year ended March 2018

Source: CBI

In the year ended March 2018, the price index of meat group increased by 11.7%, which had more growth compared to the previous year (10.1%). In addition, the price index of livestock meat increased by 9.8%, in the year ended March 2017, which had more growth compared to the previous year (8.5 %).

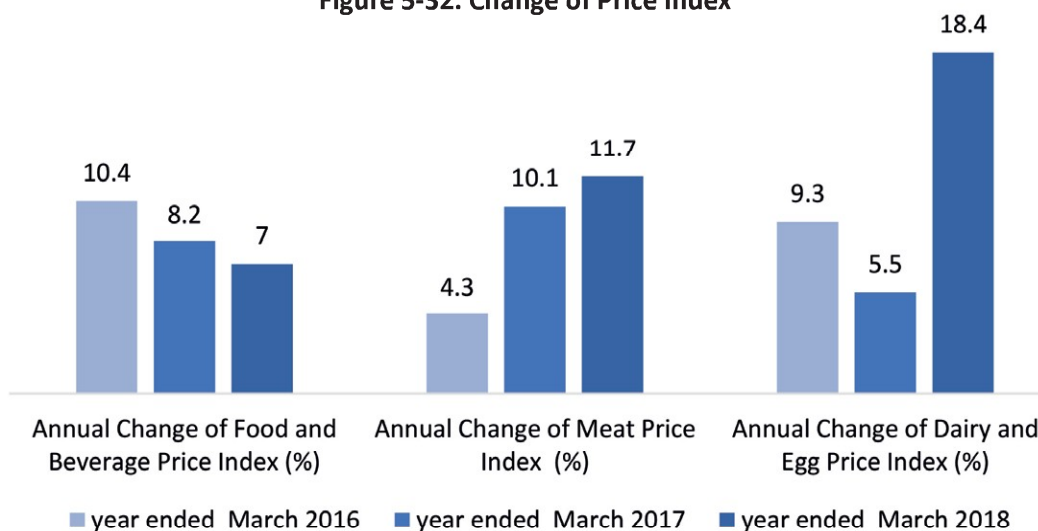
The annual increase in mutton and fresh beef price were 13.7% and 5.4%, respectively, in the meat group. Meanwhile, 0.74% of index growth was related to the annual growth of mutton price. The poultry price index increased by 7.7%, in the year ended March 2018, which had more growth than 4.7% compared to the previous year. The annual average of price index for dairy and egg groups has been increased by 18.4%, in the year ended March 2018, which indicates a growth of 5.5%, in comparison to the previous year.

Table 5-18. Change of Price Index

	Yr. ended March 2016	Yr. ended March 2017	Yr. ended March 2018
CPI change (inflation rate %)	11.9	9	9.6
Annual change of food & beverage price index (%)	10.4	8.2	7
Annual Change of meat price index (%)	4.3	10.1	11.7
Annual Dairy & Egg price index (%)	9.3	5.5	18.4

Source: CBI

Figure 5-32. Change of Price Index

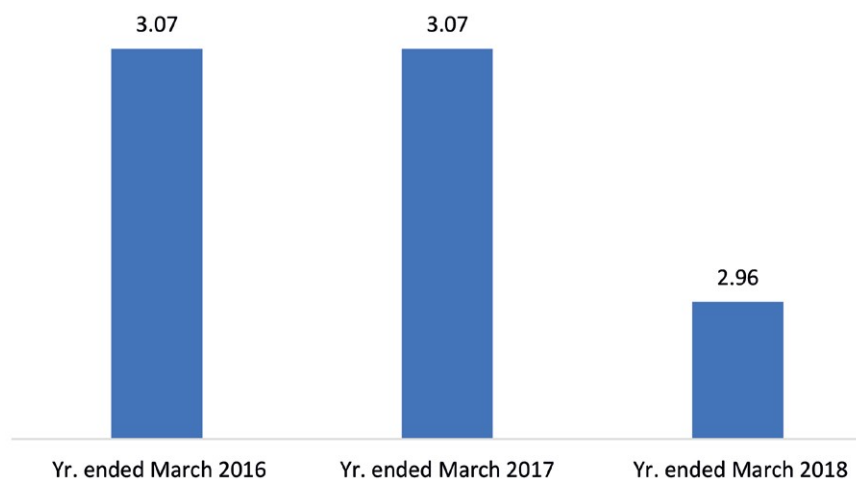


Source: CBI



Table 5-19. Importance Coefficient of Meat, Dairy & Egg in CPI Index

	Yr. ended March 2016	Yr. ended March 2017	Yr. ended March 2018
Importance Coefficient Food & Beverage	27.38	27.38	25.51
Importance Coefficient of Meat	6.12	6.12	5.31
Importance Coefficient Of Dairy and Eggs	3.07	3.07	2.96

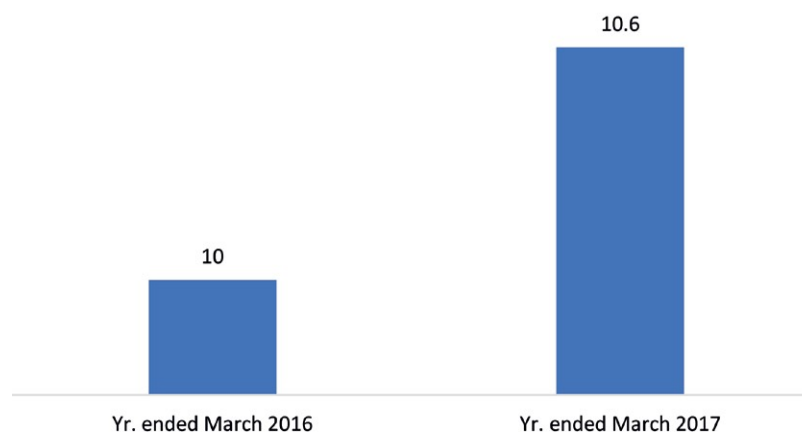
Source: CBI**Figure 5-33. Importance Coefficient of Meat, Dairy & Egg in CPI Index****Source: CBI**

Consumption & Share of Aquatics in Household Expenditure

Aquatic consumption, especially fish has a special place in the food basket in world, but in Iranian households food basket has not yet found its place. In Iran, per capita consumption of fish is 10 kg, while in the world, per capita consumption is 20 kg. In addition, according to CBI, the share of fish of the household expenditure was 0.5% in the year ended March 2017.

Table 5-20. Per Capita Consumption of Fish (kg)

Consumption	Year ended March 2016	Year ended March 2017
Fish	10	10.6

Source: Iran Fisheries Organization**Figure 5-34. Per Capita Consumption of Fish (Kg)****Source: Iran Fisheries Organization**



According to CBI, the share of fish in the household expenditure was decreased from 0.7% to 0.5% in the year ended March 2017 compare to the year ended March 2006. In recent per capita consumption of fish varieties has fluctuated and reached 10.6 kg in the year ended March 2017, which has a share of 0.5% of the household budget.

The current and fixed household expenditure of food and beverage are grown while the consumption expenditure of various types of fish (calculated based on the consumer price index) have been increased, which shows that the household size has been smaller 3.38 to 3.33 in the year ended March 2017, the consumption of fish has remained constant for each household.

Table 5-21. Average of Household Expenditure in the year ended March 2017

	Yr. ended March 2017	Change (%)
Annual Average of Gross Expenditure of All Type of Fish	1,851,778	4.9
Annual Average of Household Consumption of Fish/ kg	35.3	4.4

Source: CBI

In the year ended March 2018, the price index of fish and marine animals increased by 8.9%, which was grew less than the increase in the year ended March 2017 (10.3%). In the group, the annual increase in the price of various types of southern waters fish and the northern waters fish are 17%, and 34.1% and the canned fish 4.2%, and the price index of the internal waters fish is decreased 4.5%.

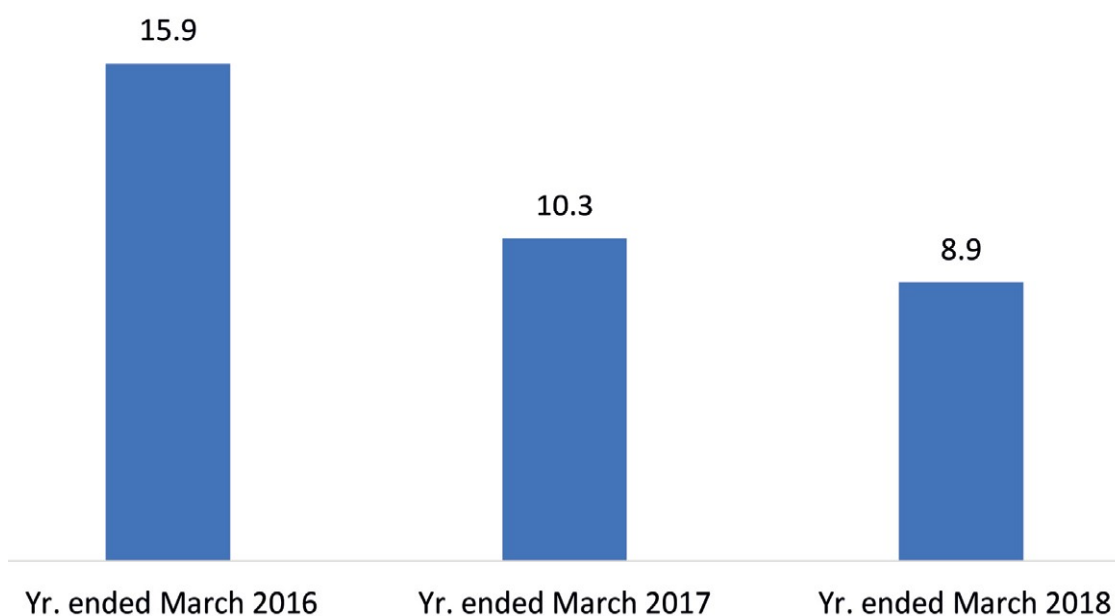
Table 5-22. Change of Price Index

	Yr. ended March 2016	Yr. ended March 2017	Yr. ended March 2018
CPI Change (Inflation Rate %)	11.9	9	9.6
Annual Fish & Marine Animals Price Index (%)	15.9	10.3	8.9

Source: CBI



Figure 5-35. Change of Price Index



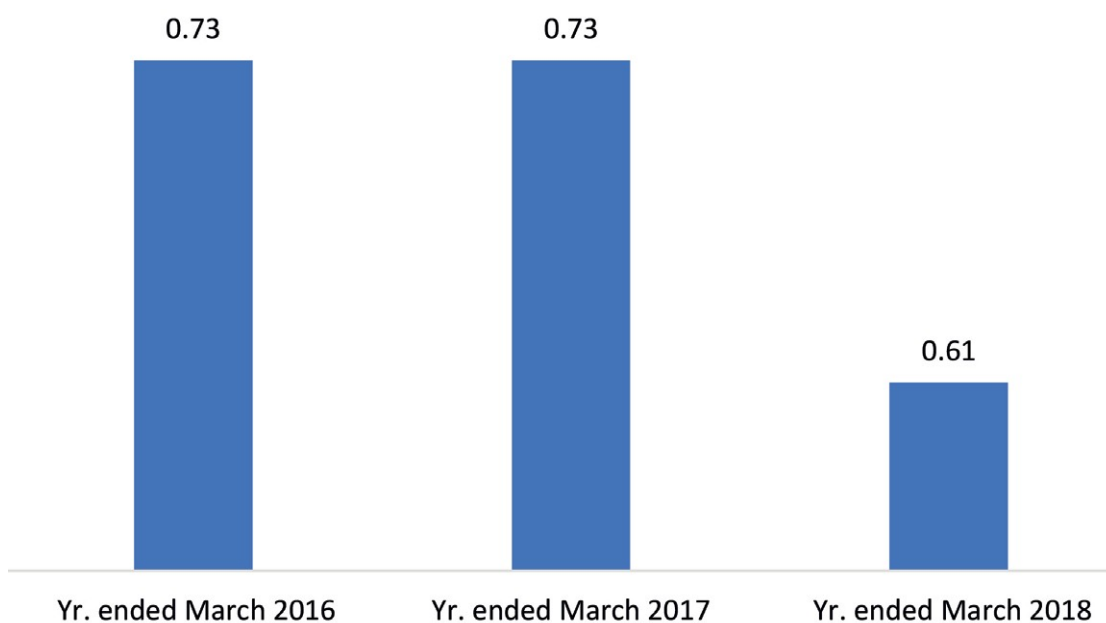
Source: CBI

Table 5-23. Importance Coefficient of Fish in CPI Index

	Yr. ended March 2016	Yr. ended March 2017	Yr. ended March 2018
Importance Coefficient Food & Beverage	27.38	27.38	25.51
Importance Coefficient Of Fish & Marine Animals	0.73	0.73	0.61

Source: CBI

Figure 5-36. Importance Coefficient of Fish in CPI Index



Source: CBI

Production & Licensed Livestock & Poultry Units

In the year ended March 2017, the authorization holders were 3,121 in the livestock and poultry group, with capital and production capacity of 66,876 bn IRR and 19,537,000 tons, respectively of which 1,267 were produced by capital of 23,019 bn IRR. The production units received 10,830,000 tons of raw materials annually.

Table 5-24. Licensed Units

	Yr. ended March 2017
Establishment Licensed (number)	3,121
Capital (bn IRR)	66,876
Jobs Created (persons)	64,514
Capacity (000 tons)	19,537
Raw Material Utilized (000 tons)	23,355

Source: Ministry of Agriculture Jihad

Table 5-25. Production Units

	Yr. ended March 2017
Production Units (number)	1,267
Capital (bn IRR)	23,019
Jobs Created (persons)	29,576
Capacity (000 tons)	9,518
Raw Material Utilized (000 tons)	10,830

Source: Ministry of Agriculture Jihad

Production & Licensed Aquaculture Units

In the year ended March 2017, about 651 licensed units were in the fisheries group that has capital of 2,490 bn IRR, and production capacity of 243,000 tons, of which 67 units were produced with a capital of 359.4 bn IRR. The capacity and absorption rate of raw materials in production units were 42,000 and 55,400 tons, respectively.

Table 5-26. Licensed Units

	Yr. ended March 2017
Establishment Licensed (number)	65
Capital (bn IRR)	2,490
Jobs Created (persons)	1,368
Capacity (000 tons)	243
Raw Material Utilized (000 tons)	296

Source: Ministry of Agriculture Jihad

Table 5-27. Production Units

	Yr. ended March 2017
Production Units (number)	12
Capital (bn IRR)	395.4
Jobs Created (persons)	333
Capacity (000 tons)	42
Raw Material Utilized (000 tons)	55.4

Source: Ministry of Agriculture Jihad

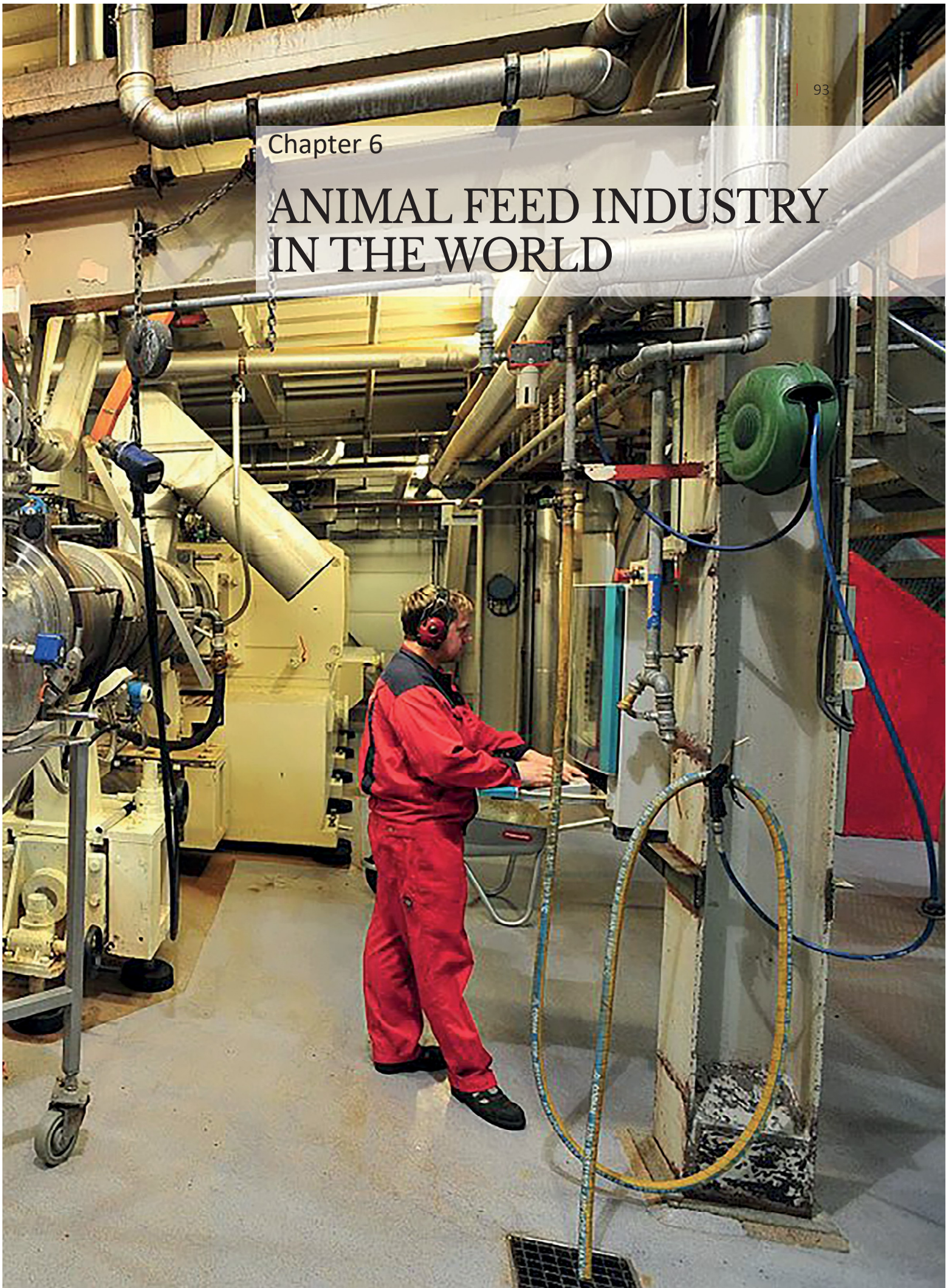






Chapter 6

ANIMAL FEED INDUSTRY IN THE WORLD



ANIMAL FEED INDUSTRY IN THE WORLD

Overview

Animal feeds are generally referred to as foods that are used to feed farm animals. However, in technical terms animal feed may be explained as high nutritious food components, which are specially prepared for animals and can be fed to them as a sole source of ration for their proper growth and development in order to enhance their productivity. Animal feeds play a leading role in the global food industry, allowing economic production of animal proteins throughout the world. Feed is the largest and most important component to ensuring safe, abundant and affordable animal proteins. The main factors determining the composition of animal feed are prices of raw material, nutritional value of the components, nutritional requirement of the specific animal as well as rules and regulation of the government.

The South African feed industry is about 86 years old. The industry came into existence after severe droughts and depression that transpired during the 1930's. The industry produces a variety of feed for various segments including poultry (layer and broiler breeders), dairy, beef and sheep and pigs. The quality standards of South African feeds are high and up to international levels. Raw materials for animal feed to some extent are adequately available in South Africa particularly maize, the major ingredient in many of the manufacture animal feeds. The industry's production on average is about 3.5 mn tons per annum. South African animal feed industry is dominated by major role players, which mainly use modern computerized plants and latest equipment for analytical procedures and least cost formulation and use the latest manufacturing technology. Based on Animal Feed Manufacturers Association (AFMA) member's raw material usage and inclusion rates from 2009-10 to 2014-15, on average the inclusion rates for maize was 52.1% of

total feed sales. The average inclusion rate for soya bean meal and sunflower seed and oilcake was about 13.6% and 4.4% respectively while that of the fish meal was about 0.2%. It is important to note that there are also other various raw materials, which are minimally included in feed formulation. Similar to those that are significantly used their inclusion rates vary from formulation to formulation, as well as between different species. Globally, poultry feed accounts for largest share in the overall animal feed consumption of 47%. This is because of a rapid and constant rise in the demand for primary poultry products (meat and eggs). This reflects consumption of high-quality products with relatively low price because of efficiency of production.

Poultry feed is followed by pig and ruminants (comprising dairy, beef and small ruminants) both acquiring 26% and 20% of the total animal feed consumption respectively. The trends recorded by the Food and Agriculture Organization (FAO) of the United Nations suggest that the total global consumption of aquaculture products is increasing, and farmed fish and shellfish now exceeds beef on a weight basis, hence aquaculture feed contributes 4% to the overall animal feed production globally. Pet and equine feed have shares of 2% and 1% respectively.

Animal Feed Production in the World

Today, large amounts of animal feed are produced by using technology in the world. The feed produced in these centers are supervised by specialists and nutrition experts, as well as under the strict care of the veterinarian, and the product is formulated in accordance with the standards, based on the animal actual needs, which will improve the nutritional the animal feed efficiency as well as increase the yield and reduce the cost.



In Global Feed Survey, Alltech Global Feed Survey crossed the threshold of one billion metric tons of feed produced globally for the first time. Fielding data from 144 countries and over 30,000 animal feed mills, the Alltech Global Feed Survey found that 1.07 billion tn of feed was produced in 2017, representing a 2.75% jump over Alltech's figures for 2016. During the past five years, the world's feed industry, valued at 430\$ has grown by 13% at an average annual growth rate of 2.49% per annum. The results show that China and the U.S. remain the top two countries, producing one-third of all animal feed, and that predominant growth came from the pig, broiler and dairy feed sectors as well as the European and Asia-Pacific regions.

In the poultry industry, broiler feed production increased across all regions, with the largest growth found in Africa with 10% and Europe with 7%. Romania, Russia and Ukraine all reported steady growth, contributing to Europe's overall production, while Africa's growth came primarily from Egypt, Uganda and Mozambique.

Global leaders in pork production, China and Russia, led the way in pig feed production in 2017. Many smaller African countries, particularly Kenya, Tanzania, Mozambique, Uganda and Namibia, also showed increases.

Global dairy feed production saw growth across all regions. Europe, a global leader in dairy production, grew on average by approximately 2%. Africa as a region saw the largest dairy feed production increase by 10%, with countries such as South Africa, Morocco and Zimbabwe showing significant increases from their reported 2017 dairy feed production.

Beef feed production reported an overall global decline of approximately 1%, primarily in regions such as Latin America, Africa and Europe. This global downward trend has generally been felt by the industry for some time as more consumers turn to "white" meats such as chicken, pork and fish.

Overall aquaculture feeds showed a slight increase, particularly in the European and Asia-Pacific regions. China reported a decline of 5% this year and in 2016, which could be linked to government controls on feeding practices and food safety, such as the administration of antibiotics. Brazil, Chile and Peru led the increase in

production in Latin America, as did Iran in the Middle East. Carp leads the production of aquaculture feed, followed by shrimp/prawn and tilapia. Catfish, salmon and trout also ranked on the species feed indicator, though to lesser degrees.

Top Producing Countries of Animal Feed

The top seven animal feed-producing countries, which account for a significant percentage of the total global animal feed production.

The top seven feed-producing countries are China, U.S., Brazil, Russia, Mexico, India and Spain. While China's production shrunk 0.4 percent from the previous year, it still produced more animal feed than any other country, at 186.9 mn metric tons. All of the other top producers saw growth in the past year.

The U.S. produced 173.0 mmt, up 2 percent from the previous year; Brazil produced 69.9 mmt, up 1 percent; Russia produced 37.6 mmt, up 19 percent; Mexico produced 34.4 mmt, up 2 percent; India produced 34.2 mmt, up 7 percent; and Spain produced 33.0 mmt, up 2 percent.

With 19 percent growth in the past year, Russia jumped from the seventh largest feed-producing region a year ago to the fourth in 2017.

Russia has been the story for us this year. There is a desire, clearly, from President Putin to focus increasingly on self-sufficiency and he wants to see that in broilers, eggs, milk and pork, and to replace imports with more and more local production. Russia has 569 animal feed mills that produced 37.6 mn metric tons of animal feed in 2017. Russia's feed production for all major animal species was up. Russian growth was from all species, but in particular, we saw very large growth in the production of feed for pigs and for dairy.

Put together, the top seven feed-producing countries produced a large percentage of the total global production across several species:

- Aqua, 53 percent
- Broilers, 58 percent
- Layers, 47 percent
- Beef, 51 percent
- Dairy, 45 percent
- Pigs, 61 percent



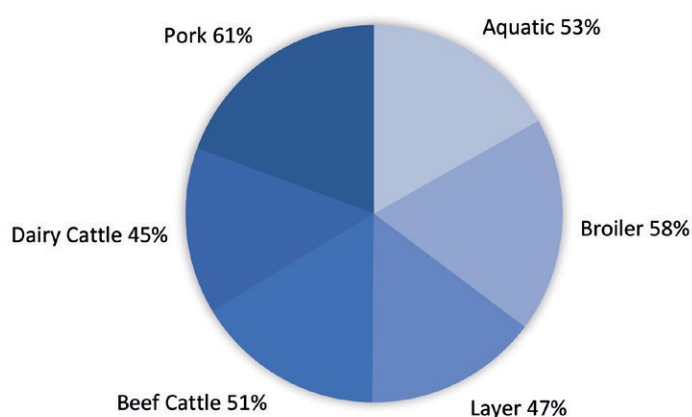


Table 6-1. Top 7 Animal Feed Producing Countries of 2017

Country	Production (mmt)	Of Feed Mills	Growth%
China	186.9	6,000	-0.4
US	173.0	6,241	+2
Brazil	69.9	1,572	+1
Russia	37.6	569	+19
Mexico	34.4	501	+2
India	34.2	1,201	+7
Spain	33.0	845	+2

Source: Alttech's 7th Annual Global Feed Survey

Figure 6-1. Percentage of Global Production 2017



Source: Alttech's 7th Annual Global Feed Survey

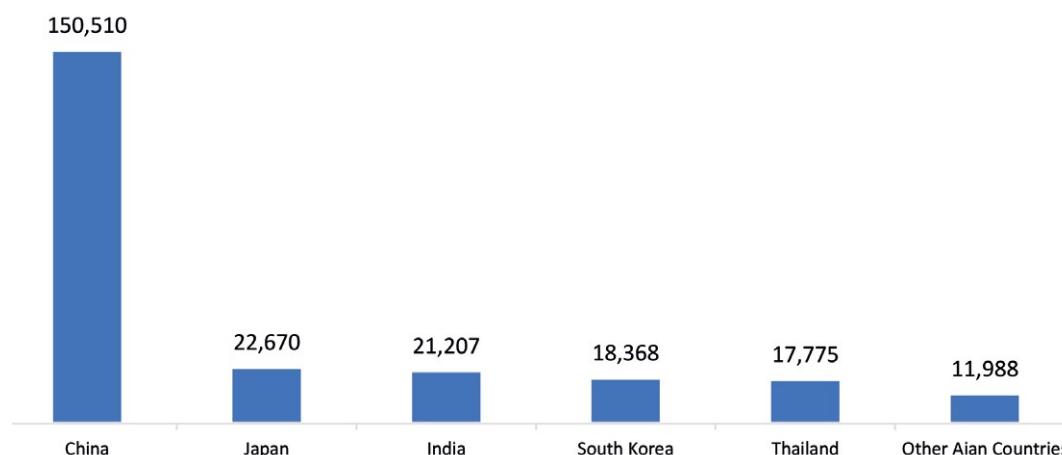
Top Asian Producing Countries of Animal Feed

According to statistics, the five countries of China, Japan, India, South Korea, and Thailand are the best and largest producers of animal feed. China with more than 150 mn tons ranked first in Asia and the world, followed by the Japan with about 23 mn tons as Asia's 2nd rank and India in the 3rd place with 21 mn tons. Thus, about 37% of the world's animal feed is produced in Asia. These five countries produce about 65% of Asia's animal feed. Four countries (China, Vietnam, Indonesia and India) of 5 largest Aquatic feed producer are in Asia. The table below shows the animal feed production.

Table 6-2. Top Asian Feed Producers – (000 tons)

Country	Production
China	150,510
Japan	22,670
India	21,207
South Korea	18,368
Thailand	17,775
Other Asian Country	11,988

Source: Alttech's 7th Annual Global Feed Survey

Figure 6-2. Top Asian Animal Feed Producers – (000 tons)

Source: Alttech's 7th Annual Global Feed Survey

Production Trend of Animal Feed in the World

The top seven feed-producing countries in 2017, in order of production output importance, were China, the U.S., Brazil, Russia, Mexico, India and Spain. These countries contain approximately 54 percent of the world's feed mills and account for 53 percent of total production. These countries can be viewed as an indicator of the trends in agriculture.

Regional Production

North America: The U.S. remains the second-largest feed-producing country globally, behind China. North America produces a third of the beef feed, five times that of the next-largest producer. The U.S. and Canada are two of the top horse feed producing countries. Feed prices in North America are lower than when compared to other regions.

Latin America: Brazil remained the leader in feed production for the region and third overall globally. Brazil, Mexico and Argentina account for almost 75 percent of regional feed production. Mexico leads the region in beef and layer feed production. Latin America as a region has had the third-highest growth rate over five years, seen primarily in aqua, horses and pets.

Europe: Tied with Asia-Pacific for the fastest-growing regions, Europe saw a 3 percent feed tonnage growth, resulting from increases in pig, boiler and aqua feed production. The region was led by Russia with 37.6 mn tons produced in 2017, moving up in the country rankings from number seven to number four. Russia increased its estimated pig feed, including more production is private. Russian broiler feed production also increased by 3 percent, while Ukraine, Romania, the U.K. and Belgium also reported higher numbers, supporting growth in the European region. Europe is the top pet food-producing region.

Asia-Pacific: The Asia-Pacific region accounts for more than 35 percent of the world's feed tonnage. China remained the top feed-producing country in the world with 186.86 mn metric tons, a slight decline in overall feed production compared to last year. Asia-Pacific increased by 3 percent over the 2017 survey results, primarily due to increases in pig and pet food production. Increased production for Asia-Pacific also came from India with 7 percent and Thailand with 8 percent growth. Vietnam has been grew 4% and is the second-highest producer of pig and aqua feed in the Asia-Pacific region, over the past year. Seventy percent of all aqua feed and 44 percent of all layer feed is produced in Asia-Pacific countries.

Africa: Africa remains the fastest growing region in the world for dairy and broiler feeds. With a regional average growth rate of nearly 30 percent over the last five years, it did not show growth in 2017. Pig, dairy, layer and boiler feed production increased, while decreases occurred in beef and aquaculture. In addition, on average, Africa is the most expensive region for feeding pigs, layers and broilers. Smaller countries such as Botswana and Mozambique led the growth for pig, dairy, layer and broiler feeds. Beef feed production decreases were reflected in countries such as Zambia and Morocco. While many African nations showed a small increase in aquaculture feed production, the region as a whole was down primarily because of lower reported feed production in Egypt, which has now been surpassed by Nigeria.

Notable Species

In the poultry industry, broiler feed production increased across all regions, with the largest growth found in Africa with 10 percent and Europe with 7 percent. Romania, Russia and Ukraine all reported steady growth, contributing to Europe's overall production, while Africa's growth came primarily from Egypt, Uganda and Mozambique.

Global leaders in pork production, China and Russia, led the way in pig feed production in 2017. Many smaller African countries, particularly Kenya, Tanzania, Mozambique, Uganda and Namibia, also showed increases.

Global dairy feed production saw growth across all regions. Europe, a global leader in dairy production, grew on average by approximately 2 percent. Africa as a region saw the largest dairy feed production increase by 10 percent, with countries such as South Africa, Morocco and Zimbabwe showing significant increases from their reported 2017 dairy feed production.

Beef feed production reported an overall global decline of approximately 1 percent, primarily in regions such as Latin America, Africa and Europe.

This global downward trend has generally been felt by the industry for some time as more consumers turn to "white" meats such as chicken, pork and fish.

Overall aquaculture feeds showed a slight increase, particularly in the European region. China reported a decline of 5 percent this year and in 2016, which could be linked to government controls on feeding practices and food safety, such as the administration of antibiotics. Brazil, Chile and Peru led the increase in production in Latin America, as did Iran in the Middle East. Carp leads the production of aquaculture feed, followed by shrimp/prawn and tilapia. Catfish, salmon and trout also ranked on the species feed indicator, though to lesser degrees.

The pet food sector had a strong year across all regions. Asia-Pacific's pet food production increased by 13 percent, with China, Thailand and Taiwan as the primary contributors to the increase. Europe increased by 17 percent with Russia, the Czech Republic, Romania, Poland and Hungary producing over 580,000 metric tons of additional pet food. Uruguay, Ecuador, El Salvador, Chile and Argentina represent almost all of the pet food production growth in Latin America, combining for 725,000 more tons.

Figure 6-3. Total Asian Compound Feed Production during 2013-2017

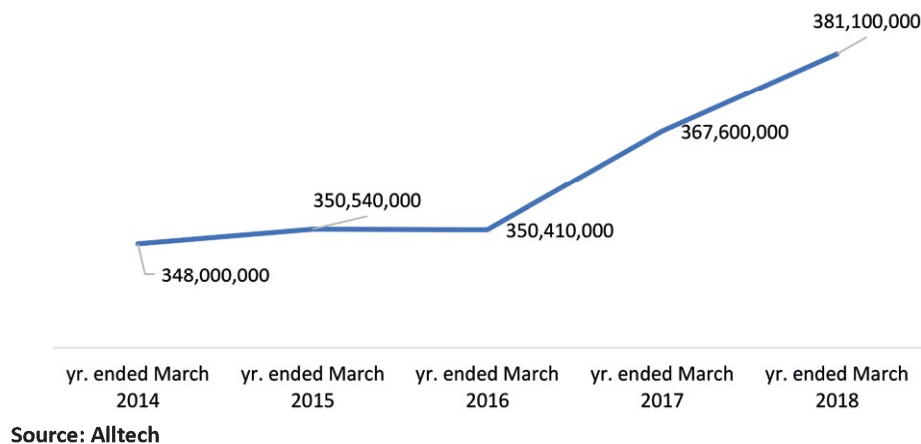
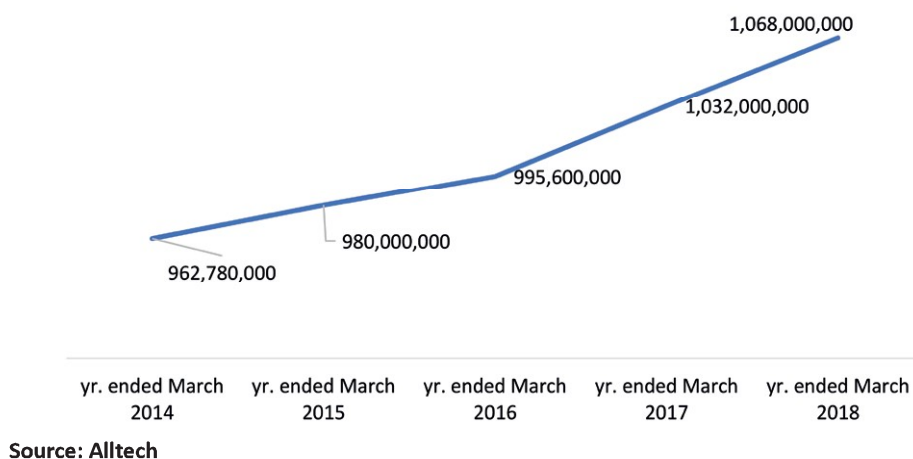


Figure 6-4. Total World Compound Feed Production during 2013-2017





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CEO

Undoubtedly, Iran is one of the most important countries in MENA area: 2nd largest economy after Saudi Arabia, 2nd largest population after Egypt, 2nd in the world in Natural Gas reserves, and 4th in the world in crude oil reserves. 1.5% of global GDP, and 18% of MENA GDP is created in Iran. Iran also enjoys one of the biggest population with Higher Education in this area.

With this big population, and relatively strong economy, it can be expected that total consumption of protein products to be high. Animal Husbandry, in general, and Poultry Industry, in particular, are important sections in Iran Economy. Iran is the biggest producer of poultry meat and eggs in MENA.

Despite the considerable number of farms, feed mills and premix plants, the Industry suffers from many technical and technological problems. Mortality and FCR has been improved in the last decade, but still high in average. One main reason lies in the fact that small and medium size farms have significant roles in this industry.

There have been notable efforts to improve the situation: 32 integrations have been established in the last 10 years, and there are many others in the process of registration. Academic centers and private sector have created more scientific communications with farms, feed millers and premixers, and as a result, we can observe more nutrition sophistication. As an example, thanks to suppliers' technical approach, Phytase, once considered as a luxury additive, is now used in almost all diets. Another example is promotion of Threonine in poultry feed. Few years ago, no threonine was used in feed. By technical approaches of major suppliers, many farmers request for this amino acid nowadays.

Arona Co., as the leading company in supplying feed additives to the Iranian market, with 32 years of experience and a strong technical team, and as the agent of **Adisseo**, **ADM Specialty Products** and **Kemin** (dairy products) has had a key role in this respect: NSP Enzymes used to be consumed only on wheat-based diets. Few years ago, in cooperation with academic and research centers, **Arona** performed several farm trials to show the effectiveness of **Rovabio Excel AP** on Corn-based diets, both in broilers' and layers' feed. Thanks to positive result of the trials, and technical approach of

Arona's team, significant quantity of NSP enzymes is used in corn-based feed nowadays.

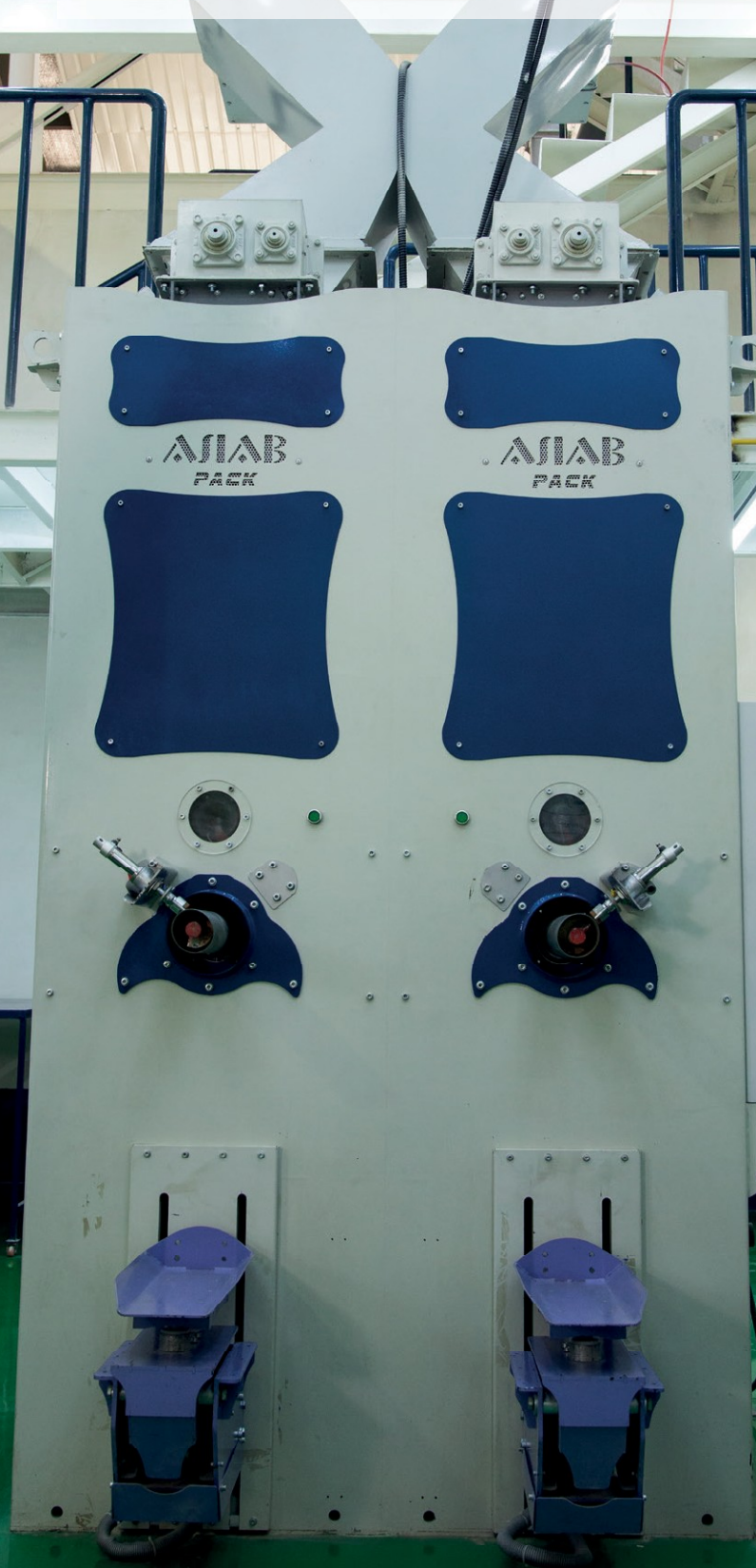
Another crucial point regarding consumption of NSP Enzymes is "on top" application. **Adisseo's** "Rovabio Predictor Software" is now used by many nutritionists to apply NSP Enzymes on Matrix Value basis; **Arona's** NIR Service is used for Precise Nutrition Evaluation (PNE) of raw materials. Based on the data obtained from "Predictor" and PNE, our Technical team, all over the country, help the farmers and nutritionists to reformulate their rations. All above will certainly help farmers to reduce their production costs, as well as better performance of the birds.

Optimum applications of Amino Acids have been also improved considerably by using our NIR Service, which also helps to enhance uptake of apparent metabolizable energy. Consumption of liquid additives has not been so common in our feed industry, due to lack of appropriate technology. However, by introducing our liquid methionine (**Rhodimet AT88**) to the Iranian market, and our feed technological supports, the attitudes of feed millers are being changed.

We strongly believe that no business on feed additives will sustain in long term, if it is not supported by technical and scientific contribution of suppliers and agents. **We consider this fact as our business value in Arona.**

Chapter 7

ANIMAL FEED INDUSTRY IN IRAN



ANIMAL FEED INDUSTRY IN IRAN

Overview

In order to increase the productivity and healthy livestock products regarding several factors have increased, including improving the development of animal feed. The growth of the animal market and the growing demand of consumers for high quality products have led feed mills to look for more efficient processes. On the one hand, the quality of these products leads to the production of high quality, healthy and hygienic animal products and, on the other hand ensures the health of the community, which is affected by the quality of protein and dairy products. The most important point in providing food security and its management is to create productivity in agricultural processing sector. All experts believe that horizontal development in agricultural production is outdated and vertical development (raising the productivity of agricultural production) is a key approach in the world food security management. The United Nations Food and Agriculture Organization (FAO) estimates that demand for food will grow by 60% by 2050, and animal protein production is expected to be grown by about 1.7% per year between 2010 and 2050.

According to global statistics, world-wide consumption of cereals in human nutrition is equivalent to 45% and its consumption rate increases by 60% from 1996 to 2030. Approximately 70% of the milk, meat and egg producing expenditure are related to livestock feed. This shows the importance and role of feed economic supply and quality. Four countries produced over 60% of the world's compound and industrial feed include China 19%, Europe 16%, America 17%, Brazil 7%, and the rest 41% of the world's consumption.

The global animal feed market was allocated an average of 45% to poultry, 20% to livestock and 4% to fish in the previous year.

Iran has produced about 1% of the world's livestock feed and placed in the 21st rank in the world as largest animal feed producer. Iran can be among top 10 countries in the world's livestock feed producers, if animal feed units produce the entire capacity. In the region, Turkey ranked 15th and is a rival of Iran, with 15.5 mn metric tons of industrial animal feed. Argentina, the Philippines, South Africa, the United Kingdom and Italy are also our next rivals in this global ranking.

According to Article 30 of the Law on Increasing Productivity, the Ministry of Agricultural Jihad is obliged to increase productivity in the livestock production sector and is required to influence in increasing and improving efficiency, value added and the quality of livestock products by conducting and monitoring the private sector.

History of Iran Animal Feed Production

Iran animal feed industry began its activities with over 60 years at the same time of industrialization of animal husbandry in Iran. Currently, 3 generations of technology are active, despite the high depreciation.

The growth of the industry has been positive for investment in a completely free and competitive market over the last decade, which accordingly production units have been around 300 with a nominal capacity of 8 mn tons in 2001. In the year ended March 2016, after 15 years working in this field, animal feed mills have reached to 645 units, with a capacity of about 21 mn tons, and about 644 units and a capacity of 19 mn tons in the following year. Therefore, on average 23 production units and 860,000 tons were added to the production capacity each year. In addition, over the past 15 years, most of the newly established units have been started their operations with a capacity of over 30,000 tons and considering the high productivity and two shift works.

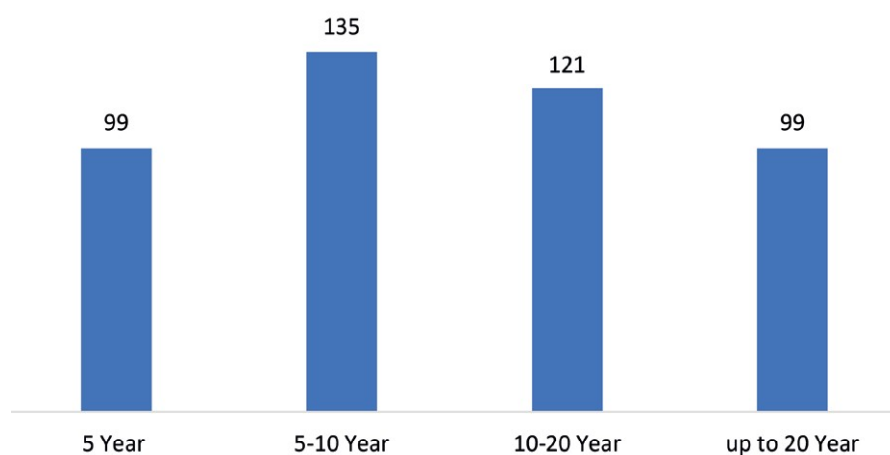


The production of animal feed mills includes livestock feed by 2.5 bn USD, poultry feed by 2.1 bn USD, and aquatic feed by 1.4 mn USD.

Livestock, poultry & Aquatic Feed Mills

In Iran, about 650 animal feed mills are registered, of which 642 are active of which 99 active animal feed mills having over the 20 years of experience and 121 feed mills having 10-20 years of experience.

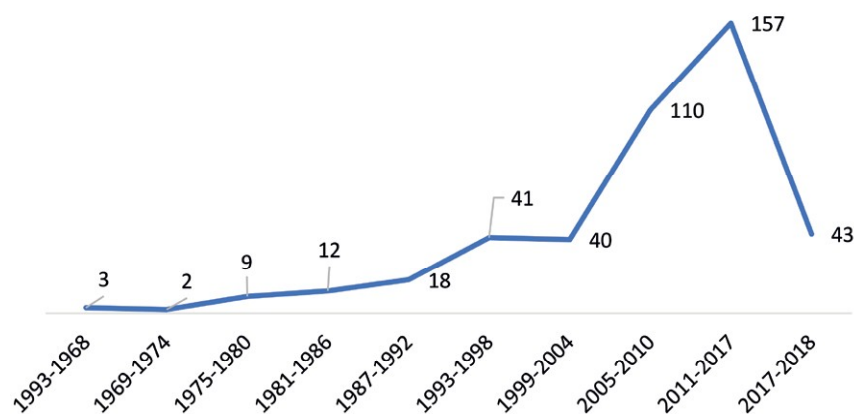
Figure 7-1. The Experience of Animal Feed Mills



Source: IFIA

The inaugurated animal feed mills has risen during the year ended March 1963-2017, and about 157 animal feed mills has inaugurated in the period of 2010 -2016, but they have fallen to 43 in the year ended March 2018.

Figure 7-2. The Inaugurated Animal Feed Mills during 1963-2018

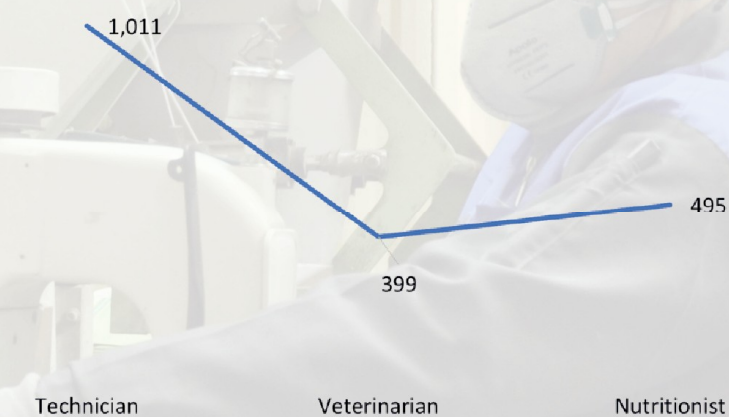


Source: IFIA



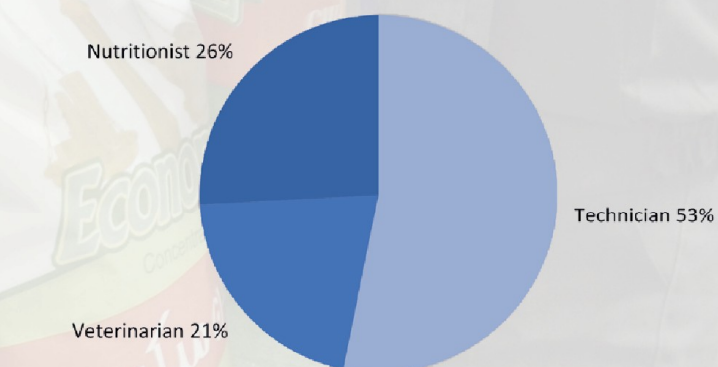
In active animal feed mills, 1,011 technicians, 399 veterinarians and 495 nutritionists are working, which the share of technicians are 53% of total employees.

Figure 7-3. The Experts of Animal Feed Mills



Source: IFIA

Figure 7-4. Percentage of Animal Feed Experts



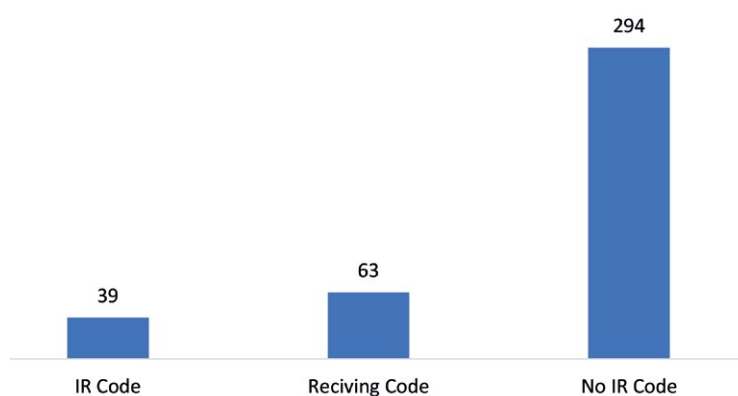
Source: IFIA



Just 39 of total active animal feed mills have IR code and 63 feed mills are receiving the sanitary code. The share of IR-equipped feed mills is 8.44%, the share of the feed mills that are receiving the IR code is 13.64%, and other feed mills do not have sanitary code.

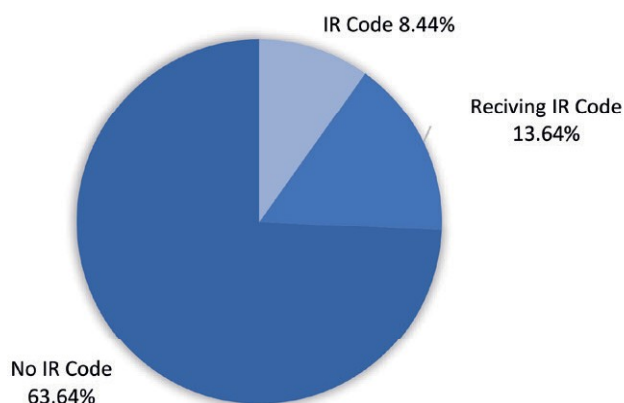
An IR code is issued to animal feed mills that have installed GMP, HACCP or ISO 22,000 in units, and after implementing official audit by Directorate of Supervision Public Health and the appointing the management of veterinary Occupational Health. The sanitary license is accelerated the export of animal feed.

Figure 7-5. The Animal Feed Mills with IR code



Source: IFIA

Figure 7-6. Percentage of Animal Feed Mills with IR code

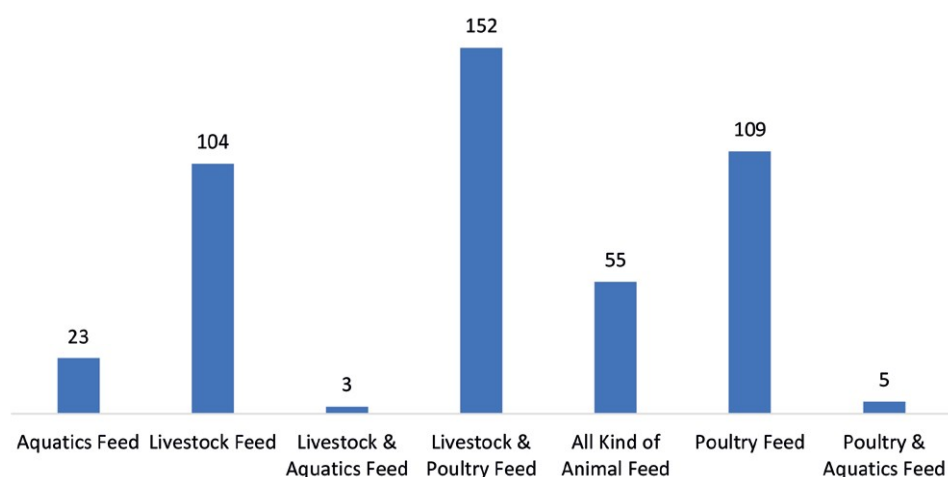


Source: IFIA

About 152 livestock and poultry feed mills, 109 poultry feed mills, 104 livestock feed mills, and 55 all type animal feed mills produce animal feed, among total active animal feed mills. Livestock and poultry feed mills have share of 32.9%, poultry feed mills have share of 23.59%, which have the largest share in livestock and poultry feed production, and only 23 mills are activated by share of 4.98% in aquatic feed products.

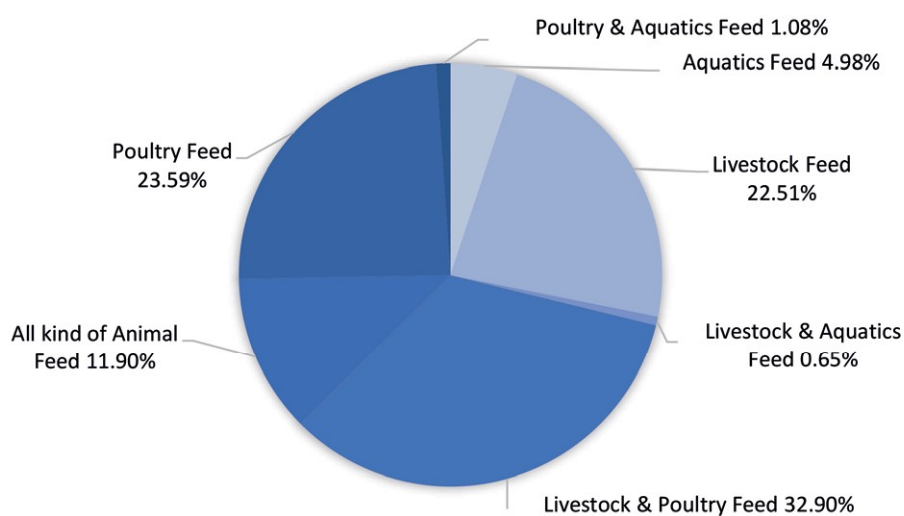


Figure 7-7. Animal Feed Mills by Number



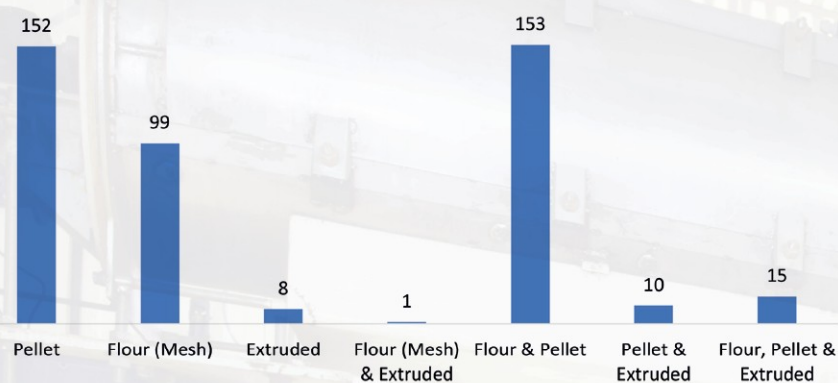
Source: IFIA

Figure 7-8. Percentage of Animal Feed Mills

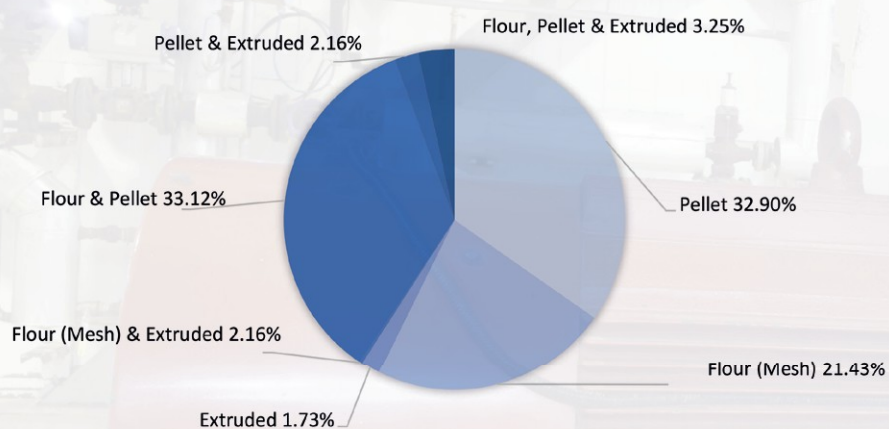


Source: IFIA

The products of animal feed mills including pellets, flour (mesh), and extruded, of which 153 active feed mills produce flour and pellets with a share of 33.12% of the animal feed market. In addition, 152 feed mills produce pellets, which accounting 32.90% of the total animal feed market. About 99 and 8 feed mills are produced flour and extruded respectively, which accounting share of 21.43% and 1.73% of the animal feed market.

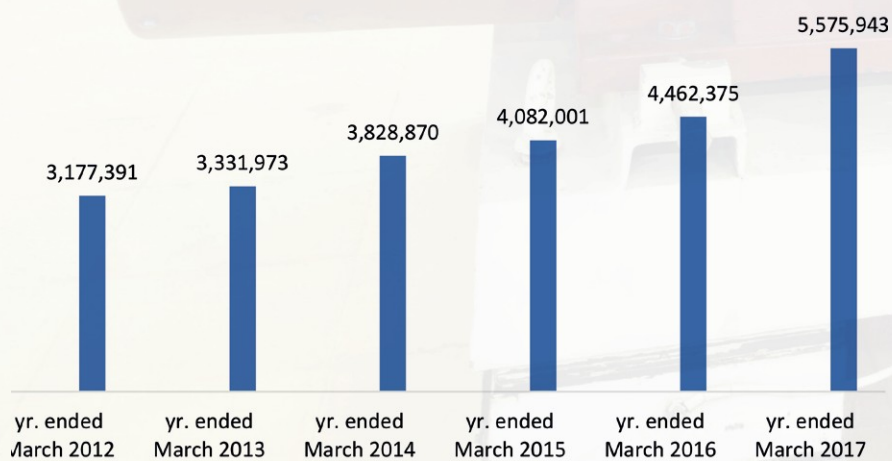
Figure 7-9. Products of Animal Feed Mills

Source: IFIA

Figure 7-10. Percentage Products of Animal Feed Mills

Source: IFIA

The production of animal feed mills have risen from 3,177,391 tons during 2012-2016, with an average annual growth of 75.5% to 5,575,943 tons in the year ended March 2016.

Figure 7-11. Production of Animal Feed Mills (tons)

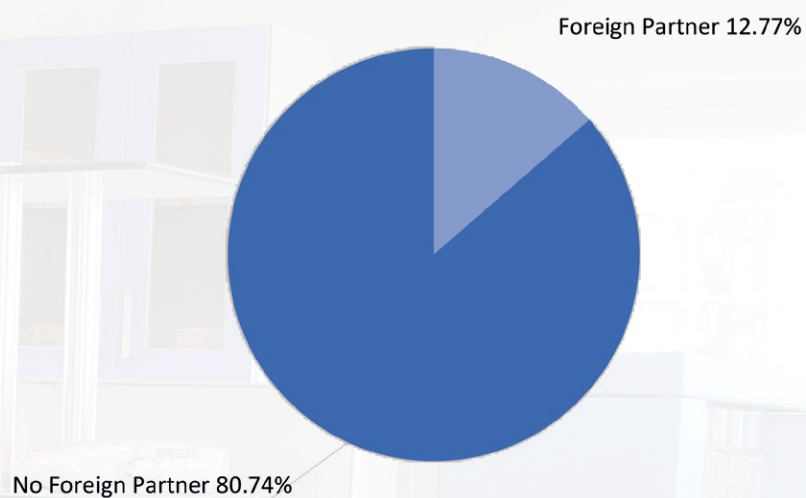
Source: IFIA





Only 12.77% of the active feed mills have foreign partner and only 51 feed mills, which have 11.4 % share of animal feed export.

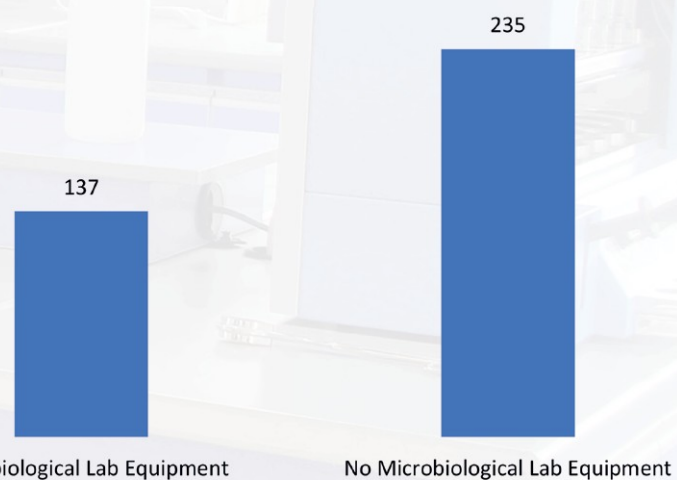
Figure 7-12. Percentage Animal Feed Mills with Foreign Partner



Source: IFIA

About 137 of total animal feed mills have a microbial laboratory which accounts 29.65%.

Figure 7-13. Microbial Lab



Source: IFIA



Animal Feed Production

In the year ended March 2018, animal feeds production capacity was 19 mn tons of which has been used 931,000 tons in egg production, 806,000 tons in meat production, 400 tons in fish production, 9,140,000 tons in milk production, 2,122,000 tons in chicken meat production.

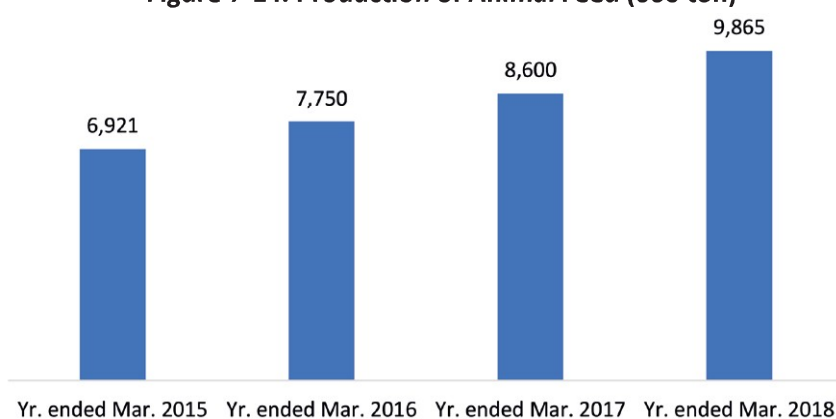
According to the capacity, the animal feed production have reached from 6,921,000 tons to 9,865,000 tons with an average annual growth of 42.5%, in the years ended March 2015 and 2018. The livestock, poultry and aquatic feed production was 5,645,000, 3,960,000 and 921,000 tons, respectively and value of total production was 8.5 mn USD in the year ended March 2018.

Table 7-1. Production of Animal Feed (000 tons)

	Yr. ended Mar. 2015	Yr. ended Mar. 2016	Yr. ended Mar. 2017	Yr. ended Mar. 2018
Production	6,921	7,750	8,600	9,865

Source: IFIA

Figure 7-14. Production of Animal Feed (000 ton)



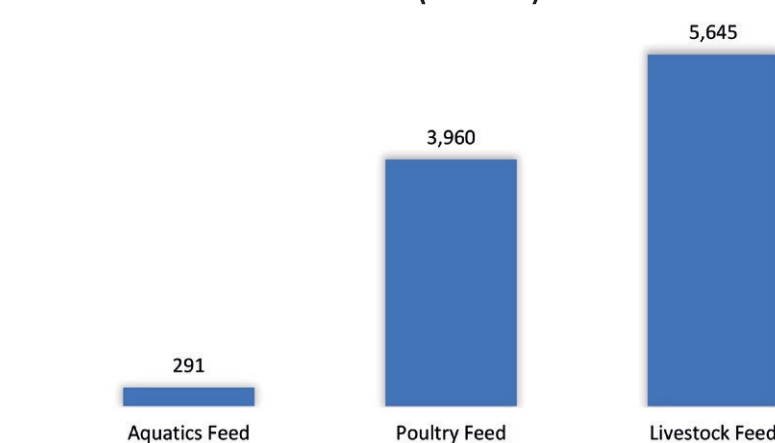
Source: IFIA

Table 7-2. Production of Animal Feed by Type in the year ended March 2018- (000 tons)

	Livestock Feed	Poultry Feed	Aquatics Feed
Production	5,645	3,960	291

Source: IFIA

Figure 7-15. Production of Animal Feed by Type in the year ended March 2018- (000 tons)



Source: IFIA

Additives, Concentrates & Premixes Production

Iran poultry concentrate market is very less developed. The most common concentrates sold and used are 2.5% and 5%. Total market required of concentrates is 300,000 tones, which are produced in Iranian feed mills 30,000 tones. Poultry premixes are known as mineral and vitamin supplements in the Iranian market. Farmers prefer to buy mineral and vitamin supplements separately then mix it on farm.

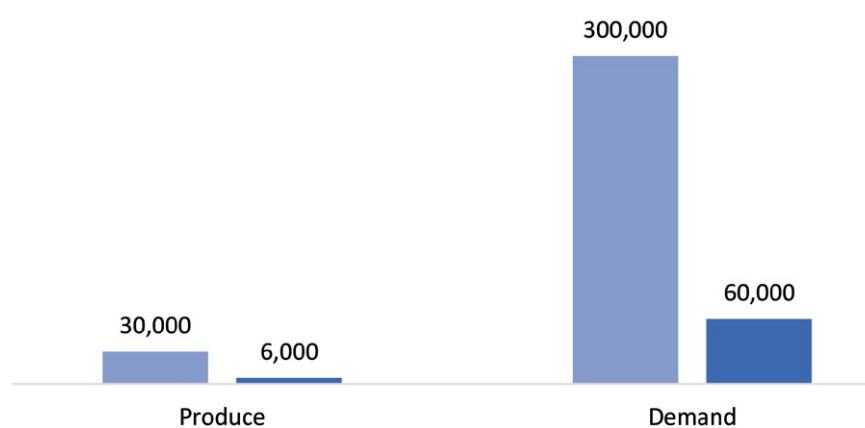
There is a considerable potential in the market for concentrates. Ruminants market is needed total amount of premix by 60,000 tons that of less than 10% (6,000 tones) is produced by industrial feed mills. Concentrate for ruminants is not common in Iran, other products are used milk instead, which is imported.

Table 7-3. Additives, Concentrates and Premixes

	Produce	Demand
Concentrates	30,000	300,000
Premixes	6,000	60,000

Source: IFIA

Figure 7-16. Additives, Concentrates & Premixes



Source: IFIA

■ Concentrates ■ Premixes



Animal Feed Production by Provinces

Iran's active feed mills have 19 mn tons capacity and producing 9.8 mn tons of animal feed. Major animal feed mills are in Razavi Khorasan, South Khorasan, Mazandaran, Fars, Isfahan, Kermanshah, East and west Azarbaijan provinces. In the year ended March 2018, animal feed was consumed more than 13 mn tons; 9.2 mn tons are produced in feed mills, and about 4 mn tons is used from agricultural and horticultural waste.

Table 7-4-. Average Nominal Capacity & Production of Animal Feed Mills

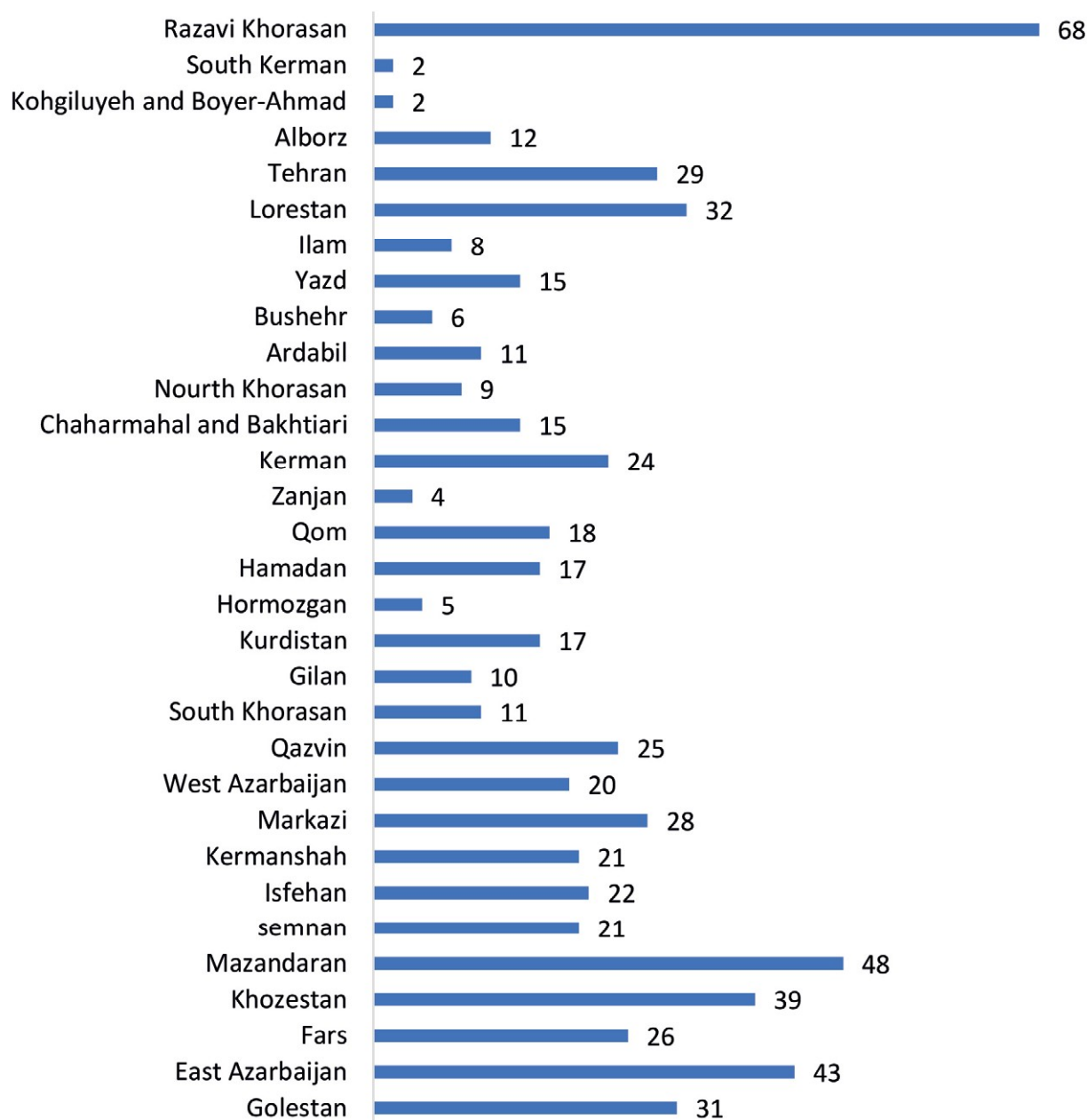
Province	Factory	Nominal Capacity (000 tons)	Capacity Based on Nominal Capacity (%)	Coefficient Based on Value of Production (%)
Golestan	31	1,120	6.80	3.55
North Korasan	9	270	1.47	1.51
Semnan	21	430	1.63	1.73
Isfahan	22	530	7.26	7.12
Razavi Khorasan	68	3,200	14.27	6.58
Yazd	15	230	1.40	2.09
South Khorasan	11	700	5.60	1.92
Kerman	24	430	1.58	2.45
Sistan and Baluchestan	13	360	1.68	1.83
Hormozgan	5	120	0.53	1.27
Fars	26	950	5.33	6.53
Qom	18	530	2.61	2.11
Bushehr	6	250	1.08	1.06
Kohgiluyeh and Boyer-Ahmad	2	60	0.26	1.06
Chaharmahal and Bakhtiari	15	270	1.59	2.21
South Kerman	2	40	0.17	1.06
Mazandaran	48	2,000	7.38	6.05
Tehran	29	750	3.35	5.54
Alborz	12	600	2.45	2.51
Qazvin	25	940	2.31	4.07
Gilan	10	250	1.39	3.13
West Azarbaijan	20	850	4.96	4.39
East Azarbaijan	43	980	3.72	6.02
Ardabil	11	270	1.42	3.02
Zanjan	4	110	0.60	1.76
KUrdistan	17	400	3.75	2.07
Kermanshah	21	900	4.93	2.54
Hamadan	17	200	1.40	3.59
Lorestan	32	370	1.95	3.17
Markazi	28	700	2.37	3.06
Ilam	8	200	0.91	1.24
Khozestan	39	700	3.86	3.75

Source: IFIA

The most of animal feed mills are located in Razavi Khorasan province with 68 units, which is about 10.88% of the total feed mills, and the least number is allocated to Lorestan and South of Kerman with only two production units.





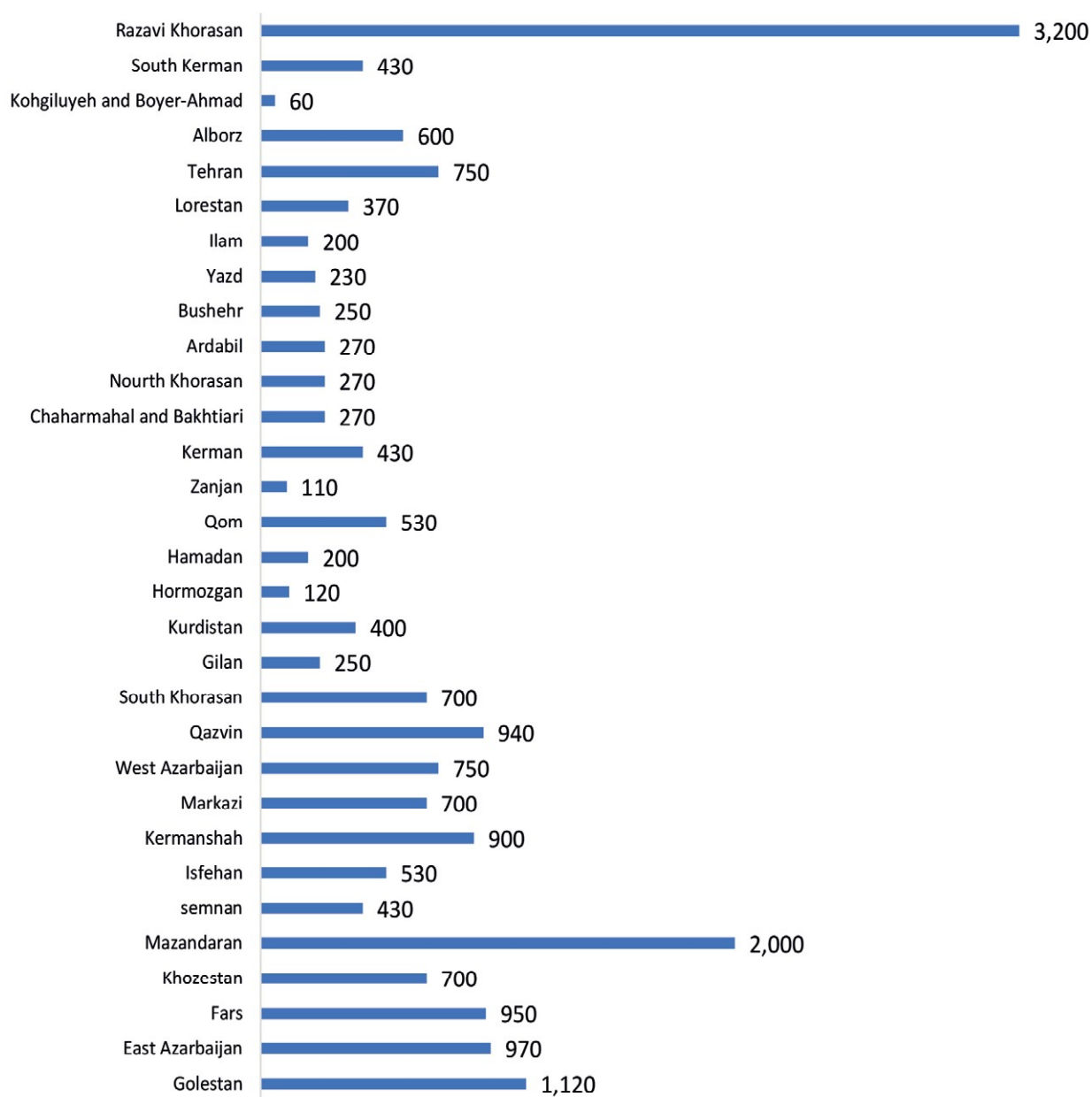
Figure 7-17. Number of Animal Feed Mills in Provinces

Source: IFIA

Razavi Khorasan province has the highest nominal capacity of animal feed production by 3,200,000 tons. In the following, there are the provinces of Mazandaran, Golestan, East Azarbaijan, Fars and Qazvin. The lowest nominal capacity of animal feed production was allocated to Kohgiluyeh and Boyer-Ahmad by 60,000 tons.



Figure 7-18. Production Nominal Capacity of Animal Feed Mills in Provinces- (000 tons)



Source: IFIA

Total animal feed production has risen from 3,177,391 tons to 5,575,943 tons with an average growth of 75.49% during the years ended March 2012 to 2018.



Market Overview Animal feed is produced in over 30,000 feed mills by more than 1 bn tones and 469-bn USD, of which more than 80% is allocated to the 10 largest countries in the world. America (17%) and China (19 %) enjoy one-third of the produced industrial feed, and in the next ranks are France, Spain, Mexico, Russia, Brazil, India, Germany and Japan. Food and Agriculture Organization (FAO) has anticipated that the feed demand will be increased to 60% by 2050, as well as, the animal proteins production will be grown to 1.7% during 2010-2050.

In Iran, the market value of animal complete and industrial feed is over 120,000 bn IRR and the feed share in animal production has been over 470,000 bn IRR of which 120,000 bn IRR is related to the animal feed mills. Iranian animal feed industry is played important role with 34,000 bn IRR of fixed capital and 110,000 bn IRR of working capital.

Trade of Animal Export Ingredient & Feed

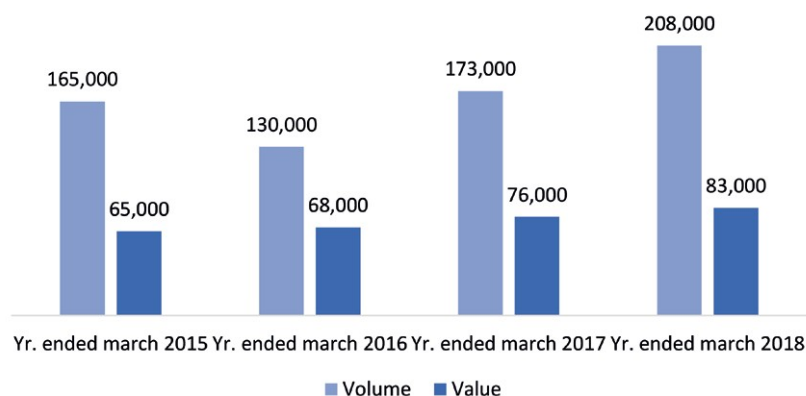
Exporting feeds are compound feed, concentrates (cattle, boiler and aquaculture), premixes (mineral and vitamin), high-energy feedstuff, supplementary protein sources, and animal feed additives. According to the Islamic Republic of Iran Customs Administration (IRICA), animal feed have been exported to 16 countries, including CIS and the Middle East, which display estimation of 26,000 tons by 10 mn USD in the year ended March 2011, about 130,000 tons by 68 mn USD in the year ended March 2015, 173,000 tons by 76 mn USD in the year ended March 2017, and 188,000 tons by 86 mn USD in the year ended March 2018. About 19 mn USD aquatics feed and additives, and 67 mn USD livestock and poultry feed have been exported, in the year ended March 2018.

Table 7-5. The Export of Animal Feed (tons-000 USD)

	Yr. ended March 2015	Yr. ended March 2016	Yr. ended March 2017	Yr. ended March 2018
Volume	165,000	130,000	173,000	208,000
Value	65,000	68,000	76,000	83,000

Source: IFIA

Figure 7-19. The Export of Animal Feed (tons-mn USD)



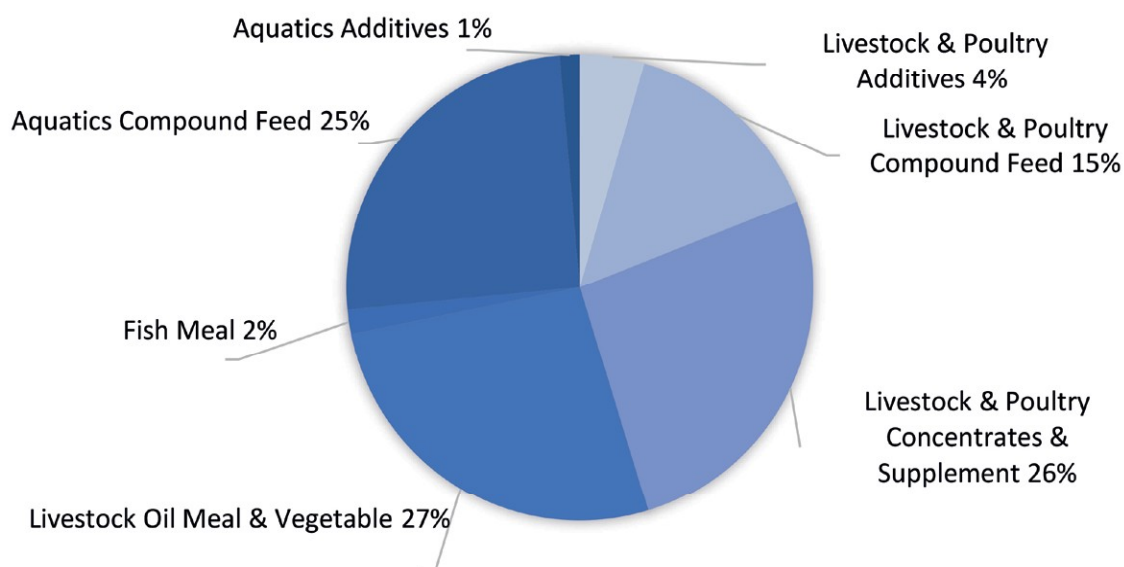
Source: IFIA

Table 7-6. The Export of Animal Feed by Type in the year ended March 2018 (tons-%)

	Export	Growth
Livestock & Poultry Additives	2,240	16%
Livestock & Poultry Compound Feed	36,610	52%
Livestock & Poultry Concentrates & Supplement	45,610	94%
Livestock Oil Meal & Vegetable	111,930	95%
Fish Meal	200	6%
Aquatics Compound Feed	840	90%
Aquatics Additives	5,490	5%

Source: IFIA

Figure 7-20. The Growth of All Types of Animal Feed Export in the year ended March 2018 (%)



Source: IFIA

Export Destinations

During the years ended March 2014 -2018, export of livestock feed has been growing by 13.9% which seems to be increased significantly in the future. The target-exported countries for animal feed are the UAE, Iraq, Turkmenistan, Afghanistan, Azerbaijan, Turkey, Armenia, Tajikistan, Georgia, Kyrgyzstan, Kuwait, Oman, Spain and Uzbekistan. In addition, it is paved the way to entry the markets of countries such as Algeria, Bangladesh, Oman, Afghanistan, Kuwait, Tajikistan, Armenia and other neighboring countries.



Import

Livestock ingredients such as corn, soybean meal, barley, wheat etc. are provided through domestic production and import. Now, corn is amounted 60% of total imports of domestic animal ingredients. In addition, since Iran is faced to water scarcity there is no possibility of developing such crops on a large scale. Corn and soybeans are considered as plants soak up the most water and are not economical. The required of animal industry for corn, wheat and barley are 7 mn tons, 700,000 tons and 5 mn tons per year, respectively, and the share of each ingredients is 90%, 30% and 36%. In 2017, imported ingredients were including 82% of corn, 16% of wheat, 26% of barley and 90% of oil seed cake. After corn, Soybean meal plays important role in the industry as ranked 5th of the imported item and has been imported more than one mn tons, annually.

Iran is allocated 66th rank of concentrates import and about 3% of imported concentrates, supplements and animal feed additives. The value of import has grown by 4% over the past five years. The largest import of livestock input include feed corn, soybean meal, feed wheat, cottonseed meal, sunflower meal, safflower and ready-made meal, vitamin supplements and additives from 41 countries.

According to statistics of Islamic Republic of Iran Customs Administration (IRICA), the import amount and value of livestock ingredients was estimated at 6,462,000 tons with 1,843 bn USD in 2014, which would be 6,282,000 and 6,556,000 tons with 1,446 bn USD and 1,438 bn USD in 2015 and 2016, respectively. In 2017, the import of various types of meal was 1,356,000 tons with 162,530 mn USD, of which each import was as follows:

Soybean meal was 1,268,000 tons with 305,259 mn USD and cottonseed meal was 53,470 tons with 16,875 mn USD, which has had 65%, increase in import compared with the year ended March 2016. Sunflower meal was 26,724 tons with 7,651 mn USD, which has had 39% increase in import compared with the year ended March 2016. Rapeseed meal was 7,294 tons with 2.375 mn USD, which has had 71% decrease by weight and 68% decrease by value in the year ended March 2016. In general, various types of meals' import has decreased to 18% by weight and 16% by value in the year ended March 2017 compared with the year ended March 1980.

Based on tariff and statistics of IRICA, the amount and value of feed corn, feed wheat, cottonseed meal, sunflower meal, rapeseed or canola meal are as follows.

Table 7-7. Import of Animal Feed Ingredients (Kg)

	Yr. ended March 2015	Yr. ended March 2016	Yr. ended March 2017	Yr. ended March 2018
Feed Corn	6,329,717,599	6,141,132,536	6,458,153,915	1,648,585,308
Feed Wheat	34,997,144	65,549,073	33,418,213	-
Cotton Meal	74,766,035	55,882,260	32,495,894	15,466,590
Sunflower Meal	14,107,145	14,191,401	19,235,831	3,705,723
Rapeseed Meal	155,018,322	42,509,646	25,517,650	920,800

Source: IRICA

Table 7-8. Import of Animal Feed Ingredients (USD)

	Yr. ended March 2015	Yr. ended March 2016	Yr. ended March 2017	Yr. ended March 2018
Feed Corn	1,798,888,616	1,405,227,279	1,413,050,428	360,598,391
Feed Wheat	11,170,644	15,803,265	7,042,511	-
Cotton Meal	26,786,494	17,548,183	10,384,337	4,211,503
Sunflower Meal	4,288,110	3,986,485	5,154,616	956,378
Rapeseed Meal	50,142,411	12,895,795	7,434,993	310,085

Source: IRICA

Import of feed corn, feed barley and oil seeds have accompanied 30%, 34% and 23% increase in comparison to the same period of the last year, respectively. Also, import of soyabean meal have experienced 27% decrease in comparison to the same period of the last year.

Table 7-9. The Most Recent Import Data of Animal Feed Ingredients

	Apr-Aug 2018	
Feed Corn	3.8 (mn tons)	867 mn USD
Feed Barely	947 (000 tons)	240 mn USD
Soyabean Meal	451 (000 tons)	255 mn USD
Oil Seed	1.2 (mn tons)	552 mn USD

Source: IRICA



The volume and value of animal feed import has been about 10.8 tons with 18 mn USD in 2014, 19.6 tons with 38.2 mn USD in 2015, and 69 tons with 36.2 mn USD in 2016. Due to the tariff and statistics of IRICA, the volume and value of animals' feed, additives and vitamin supplements import are as follows:

Table 7-10. Import of Animal Feed & Additives (Kg)

	Yr. ended March 2015	Yr. ended March 2016	Yr. ended March 2017	Yr. ended March 2018
Aquatics Feed	2,456,730	3,170,845	554,301	224,133
Aquatics Additive	1,034,580	1,2019,162	5,116,627	-
Livestock & Poultry Additive	5,593,996	12,846,122	1,472,574	776,185
Livestock & Poultry Feed	-	309,731	19,376,167	43,650
Other Products of Livestock & Poultry Feed	1,700,410	2,092,741	42,507,578	105,000

Source: IRICA

Table 7-11. Import of Animal Feed & Additives (USD)

	Yr. ended March 2015	Yr. ended March 2016	Yr. ended March 2017	Yr. ended March 2018
Aquatic Feed	5,074,849	4,241,329	450,072	344,874
Aquatic Additive	1,875,065	2,052,639	5,071,559	-
Livestock & Poultry Additive	7,833,022	31,192,475	742,451	2,410,899
Livestock and Poultry Feed	-	301,399	9,271,727	38,416
Other Products of Livestock & Poultry Feed	3,262,665	400,092	20,698,109	110,842

Source: IRICA

The Import Countries of Origin

The main import animal feed countries of origin include Russia, Ukraine, Kazakhstan, Brazil, Argentina, China, the European Union (Germany, the Netherlands and Austria), and Eastern Europe, Australia. Their major imported products are as the following.

Table 7-12. Imported Feed Ingredients from Origin Countries

Raw Materials	
Russia	Barely, Wheat, Soybean Meal
Ukraine	Barely, Corn
Kazakhstan	Barely, Wheat, Oil Seed cake
Brazil	Soybean Meal, Corn
Argentina	Soybean Meal, Corn
China	Premix
European Union	Barely, Premix, Minerals, vitamins, substitutes for Milk, supplements
Eastern Europe	Corn, Oil Seed cake
Australia	Wheat

Source: IFIA

The Required
Animal Feed
Ingredients

The required feed ingredients for animal feed are 72,264,000 tons, by 427.146 bn IRR. The highest required ingredient of wheat and barley bran is 14,446,000 tons, and the lowest required input of feed wheat is 766,000 tons.

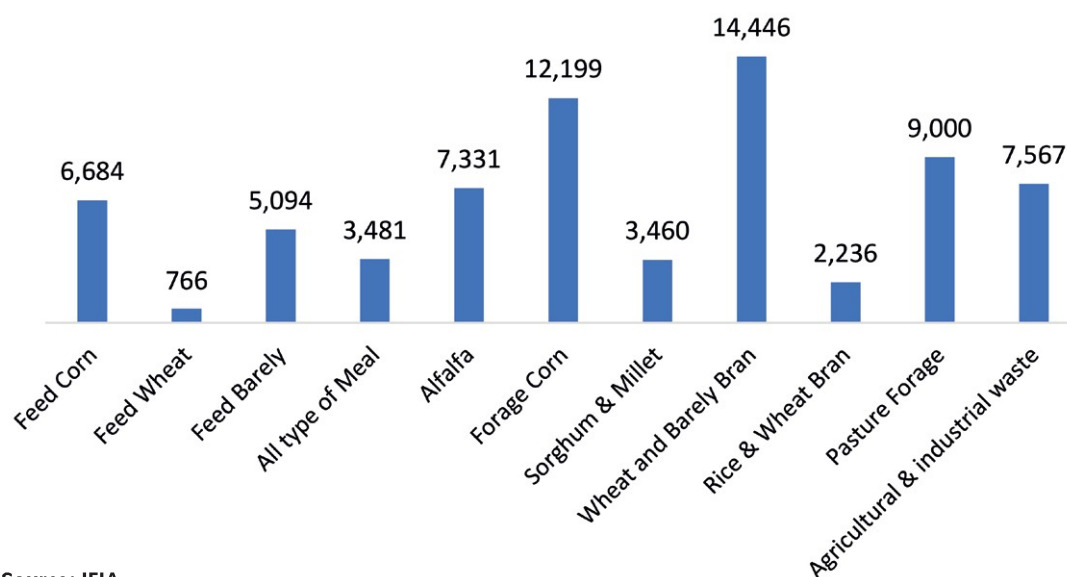
Table 7-13. Required Animal Feed Ingredients (000 ton)

	000 tons
Feed Corn	6,684
Feed Wheat	766
Feed Barely	5,094
All type of Meal	3,481
Alfalfa	7,331
Forage Corn	12,199
Sorghum & Millet	3,460
Wheat and Barely Bran	14,446
Rice & Wheat Bran	2,236
Pasture Forage	9,000
Agricultural & industrial waste	7,567
Total	72,264

Source: IFIA



Figure 7-21. Required Animal Feed Ingredients (000 ton)



Source: IFIA

SWOT Analysis of Animal Feed Industry

Strengths

- Enjoying relatively advanced marketing system
- High potential of creating value added in pre and post sector
- Proper use of state facilities
- Availability of feeding stuff (Import)
- Quick return of capital
- Presence of expert work forces
- Extensiveness in all parts of the country
- Access to consumption market (400 mn) of the region

Weaknesses

- High cost of products
- No liquidity
- Government entry in the pricing of protein products
- High costs of energy carriers
- No goods supplement in the stock exchange
- No monitoring on the import of animal feed ingredients
- No tax exemption
- No agricultural insurance for products
- No cheap facilities
- No government support

Opportunities

- Growth of domestic market
- Benefiting of not-used production capacity
- Presence in growing regional markets

Threats

- Drought and its impacts on ingredients production
- Fluctuations in exchange rates
- Unilateral sanctions and the politic restrictions
- Export with legal constraints ingredients
- Competitiveness in the global markets
- None of export infrastructure and incentives





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Investment in Iran Feed Industry Opportunities & Potentials

Iran is located in the heart of the Middle East and have access to the open seas and Central Asian countries, Turkey, Iraq, Afghanistan and Pakistan. Iran is a four-season country and have potentials of the agricultural and livestock production. In addition to these geographical and natural position, Iran enjoys young, educated and trained population.

Moreover, agriculture industry is required to develop and invest. Husbandry is largest sub-sector of agriculture by a turnover of 1,340,000 bn IRR which annually produces 9 mn tons of milk, 2 mn tons of chicken meat, 950,000 tons of eggs and 800,000 tons of red meat. Iran Husbandry is allocated the 7th world rank in chicken meat production, 11th rank in egg production in the world, 19th world rank in milk production and the 1st rank in fish production in Middle Asia, Caucasus and the Middle East.

By 20 mn tons capacity of animal feed, this strategic sector plays an important role as the supply chain to provide the ingredients and feed in husbandry sector. In order to benefit from the potential, the industry requires investment, support, advisory, technological transfer, new technologies as well as the knowledge-based companies. Total animal feed production is about 9.865 mn tons, which cattle, poultry and aquatics hold 5.645, 3.960 and 0.291 mn tons, respectively by 8.5 bn USD. Export of animal and aquatic feed was about 135,300 and 6,329 tons, respectively grown by 81% and 74.4 mn USD.

Due to the export volume and Iran's export destinations and predicting Iran's 900,000 tons of export in 2020, investment in animal feed should be export-oriented in addition to supplying essentials ingredients of Iran's husbandry sector.

Already, 80% of the required animal ingredients are provided by import and remaining is produced domestically that is big challenge. Resumption of agricultural and horticultural wastes is one of the ways to produce animal feed, which has both environmentally and economically benefits.

In horticulture sector is destroyed a large amount of fruit in different stages, in ripe, in transit to shopping centers, wet markets and in retail store which cannot be supplied to the consumers; while the wasted have nutrients but the moisture is about 80% of which produces 150-liter leachate per ton that is damaged to natural resources, groundwater and soil. However, using of the processing wasted as animal feed is prevented the environmental problems. According to the statistics, about 2 mn tons of wastes are produced in wet markets annually, of which are obtained about 500,000 tons of nutrients after a dry air phase which is provided 8-10% shortage of animal feed.

Food and protein needs of domestic and large markets of the region are main factors to development of Iran animal feed. In this regard high potential sectors for investment would be included Production technology of animal feed, packaging, advanced quality control labs, financing developing projects, industry supply chain and construction of grain depots.

Animal feed industry of Iran has high potential to attract foreign investment and international partnerships, which enjoys sources, infrastructures, experts and large regional and domestic markets.

Iran's Animal Feed Market Outlook

Increasing global demand for meat is one of the key factors in increasing demand for animal feed, while the international community's concerns about the prevalence of animal-related diseases have increased the importance of enzymes in livestock and poultry feed, which growth of Chemical reactions in animal feeds result in better quality. Therefore, the increase of world's population probably has led to an increase in global meat consumption and per capita consumption of meat is estimated to be 87.7 pounds in the world. On the other hand, livestock feed is one of the most important factors in the production of meat, and rising demand for meat increases the demand for animal feed.

Many Asian developing countries, especially India and China, are the major consumers of meat in the world, in addition to their large population, the per capita revenue growth of the middle class in these countries has also increased the demand for livestock products. In the meantime, Asian countries, mainly China and India, have the largest industry in the market for animal feed and poultry in their area.

According to the global statistics, the consumption of world-wide types of cereals, in human nutrition, is equivalent to 45% and its consumption in other cases increases by about 60% since 1996 to 2030. Approximately 70% of the costs of producing milk, meat and egg are related to the livestock's feed. It shows the importance and role of food and it is economic and quality. Analysts predict that the market will grow at an annual rate of 4.92% by 2019. According to the GLOBE NEWSWIRE website, the size of the market for animal feed and poultry feeds will reach 22 bn USD by 2022. According to anticipates, the feed market continues to be increased at a growth rate of 4% by 2022. Meanwhile, aquaculture is also one of the most important sectors of the global trade in animal products. According to analysts, it is expected that the feed market will continue to grow with an annual growth rate of 4.2% and comprises part of the global revenue for animal feed and poultry by 2022.

On the other hand, a significant share of the revenues of the sector is spent on the preparation of amino acids that play an important role in livestock and poultry feed, and accounting more than 33% percent of the revenue share, which about 5.5 bn USD is spent for amino acids. On the other hand, Antibiotics are other important substances used in the production of livestock and poultry feed, which has become even more important in recent years, according to the EU's strict regulations, so accounting 25.7% of the livestock and poultry revenues.

The highest demand of protein products is in Iran with a growing and young population of 80 mn and in the neighboring countries with 400-mn population. Due to the improvement of technology and expert, Iran could provide the market demand of protein in the country and neighboring countries (due to the undeveloped technology), which is predicted to increase the demand of production of animal complete and industrial feed.

Linking the producing and the processing cycling with industry has led to industrial production and the modern technologies have a new horizon to produce the products.

According to the predictions, about 200 animal feed production mills will be added to the livestock feed production with a capacity of about 7 mn tons, modern technology and high productivity by the end of the year 2030, which will lead to growth of 12% to 20% in animal feed mills. So, production capacity is increased to 26 mn tons and 1.5% share of the global markets by the year ended March 2030. The provinces with the capability of producing animal feed are Isfahan, Khorasan Razavi, Mazandaran, South Khorasan, Fars, Golestan, West Azarbaijan, Kermanshah and Kurdistan.

Nowadays, 80% of the raw materials of animal feed are imported and cannot achieve self-sufficiency in the near future, but the import can be decreased by increasing the productivity and reducing the production conversion coefficient of the milk, meat and egg. So, animal feed will export to 20 countries by 900,000 tons and 400 mn USD by 2020.



Chapter 8

IRAN FEED INDUSTRY ASSOCIATION PERFORMANCE





Iran Feed Industry Association

Summary of Iran Feed Industry Association Performance in the year ended March 2017

The report of the Iran animal feed association was presented on Strategic, Structural and Non-Programmatic Actions to the annual general meeting in February 2016. Some guild activities are informed with the aim of developing and strengthening the share of animal feed industry, employment and the national economy.

- Approval of the amendment to the Article 19 of the Veterinary Health Code approved by the government in the Article 76 Committee of the Fifth Development Plan
- Releasing export of animal feed
- Export preferential tariff of livestock feed with 3 export target countries
- Prohibiting the production of animal feed in breeding units during the notification of Iran Veterinary Organization in the year ended March 2016
- Approval of 1,000 bn IRR budget by the Iranian National Fund of Animal Feed Industry Development
- Decreasing the tax exemption from 12% to 6% in animal feed mills
- Investment risk reduction in animal feed industry
- Approving the amendment of the executive code of sentence (g) - Article 3 and Articles 7, 8 and 9 of the Veterinary Organization Law adopted in the year ended March 2012 in the Article 76 Committee of the Fifth Development Plan
- Setting up the arbitration center of animal feed industry
- Setting up ranking and competitiveness center of the animal feed industry
- Grains and animal feed swap in ECO members
- Separation of animal feed exhibition from International Livestock and Poultry Exhibition
- Setting up Statistic and economic information center of animal feed industry
- Follow up 15% increase in working capital of animal feed mills
- Follow up to allocate 250 bn IRR budget to modernize and improve 30 animal feed mills

The Current Activity of Iran Feed Industry Association

The infographic is illustrated the profile of Iran animal feed association activities to members with the aim of enhancing and promoting knowledge, leadership skills, improving the business environment and promoting the community's knowledge and belief of animal feed industry role in comprehensive development.

- 52, Attendances at business seminar
- 256, Guild notifications to members
- 5, Forum seminars across the province
- 6, Forum seminars Iran Animal Feed association with the government and parliament presence
- Glorification celebration of Dr. Ali Rahimian
- 27, Attendance at radio program
- 19, Attendance at national and international television program
- 19, Guild poll of members
- 4, MOU and cooperation documents
- 11, Publication of economic report at the press
- 18, Technical committee seminars

Services to Members in the year ended March 2017

- 14, Educational centers
- 24, Legal centers
- 33, Ranking centers
- 18, Social securities
- 67, Tax advices

Developing the International Interactions

Major adopted boards of directors
31 boards of directors from Russia, Ukraine, Kazakhstan, Turkey, Emirate, Oman, Armenia, Turkmenistan, Austria, Germany, Belgium, France, Italy, Netherlands, South Korea, Thailand, Argentina, Brazil.
Major mission of the board of directors
15 boards of directors to Russia, Pakistan, Austria, France, Italy, Ukraine, Turkey, Germany, Canada, India, China, Thailand.

Major Courses Held by the Association

- Holding a training course on the principles of chemical tests for animal feed, August 2016.
- Holding training course on acquaintance with national and international animal feed standards, August 2016.
- Holding two-days+ GMP for senior managers of Iranian animal feed mills by the presence of international professors, April 2018.
- Holding one-day elementary + GMP course for the animal feed mills of North, South and Razavi Khorasan, July 2018.
- Holding arbitration training workshop for economic activists of livestock, poultry and aquatic industry, August 2018

Project by Iran Feed Industry Association

- Mycotoxins in animal feed products of Iran, since December 2015 to December 2016.
- Setting up competitiveness development center of animal feed mill in the year ended March 2017.

Major Seminars

- Third forum seminar of Iran animal feed mills, February 2015-Tehran.
- Forth provincial seminar of Iran animal feed mills in Kermanshah, June 2016.
- Fifth forum seminar of livestock feed mills, August 2016.
- Expert seminar of mycotoxins in animal feed industry, November 2016.
- Celebration of Dr. Ali Rahimian- founder of animal feed industry, February 2016.
- Forum seminars of top animal feed Mills-June 2017.
- Seminar of the Agriculture Committee of the Islamic Consultative Assembly with board members of animal feed industry, July 2017.
- First regional seminar (5 regions) of total forum seminars related to animal feed industry, August 2017- Razavi Khorasan.
- Challenges and solutions of animal feed export improvement, February 2017.

Major MOUs between Iran Feed Industry Association & the International Organizations, Companies

- MOU between Iran Animal Feed Association and NIOBio company of Russia, March 2017.
- MOU between Iran Animal Feed Association and GMP+ international validation company, October 2017.
- MOU between Iran Animal Feed Association and state trade company of Kazakhstan, October 2017.
- MOU between Iran Animal Feed Association and Russia grains council, April 2018.
- MOU between Iran Animal Feed Association and animal feed producer's union of Russia, April 2018.
- MOU between Iran Animal Feed Association and national animal feed of Russia, April 2018.
- MOU between Iran Animal Feed Association and European feed producer's federation -FEFAC, June 2018.

Top Companies in Last 4 Years



Company: Gharb Daneh Group
CEO: Burhan Mandoomi
Province: Kurdistan
Year ended March 2018



Company: Gohardane Shargh (Livestock)
CEO: Ahmad Salahshoor
Province: Razavi Khorasan
Year ended March 2016



Company: Danedaran Tous (Livestock)
CEO: Hasan Hasanzadeh
Province: Razavi Khorasan
Year ended March 2017



Company: Daneh Pak Savana (Poultry)
CEO: Abdolali Tahmasebi
Province: Mazandaran
Year ended March 2016



Company: Milad-e Mahabad (Poultry)
CEO: Hasan Qoreishi
Province: West Azarbaijan
Year ended March 2017



Company: Orom Gohar Daneh
CEO: Aziz Hosseini
Province: West Azarbaijan
Year ended March 2015

Iran Animal Feed Mills with IR Code

Iran Animal Feed Mills	CEO	Province
Sepahan Daneh Parsian	Dr. Ghalamkari	Isfahan
21 Beyza	Mr. Abudi	Fars
Mazandaran	Mr. Kaboli	Mazandaran
Gohar Daneh Shargh	Mr. Salahshoor	Razavi Khorasan
Amol Behdaneh Tabarestan	Mr. Miran	Mazandaran
Daneh Pak Savana	Mr. Tahmasebi	Mazandaran
Fara Daneh	Mr. Heydai	Chaharmahal & Bakhtiari
Kimiyagaran Taghziyeh	Dr. Rezaei	Chaharmahal & Bakhtiari
Dorna Dan	Mr. Baigi	Khouzestan
Avizh Darou	Mr. Habibi	Markazi
Kaivan Morgh Par Tala Mahabad	Mr. Savari	West Azarbaijan
Khorak Pardaz Hezar Dasht	Mr. Makuei	Alborz
Daneh Daran Tous	Mr. Hasan Zadeh	Razavi Khorasan
Dan & Oloofe Shargh	Mr. Mohamadi	South Khorasan
Sepehr Iranian Caspian Company- Anzali Region	Mr. Mozafar nia	Gilan
Orom Gohar Daneh	Mr. Hossaini	West Azarbaijan
Setareh Kian Birjand	Mr. Kheirieh	South Khorasan
Kimia Dan Torbat	Mr. Mohamad Zadeh	Razavi Khorasan
Dordaneh Razavi	Mr. Bagheri	Razavi Khorasan
Gorgan & Dasht	Mr. Eftekharodin	Golestan
Hashtgerd Supplement	Dr. Nosrat	Alborz



Members of Iran Feed Industry Association

Iran Animal Feed Mills	Nominal Capacity (tons)	Iran Animal Feed Mills	Nominal Capacity (tons)
East Azarbaijan		• Mad Daneh Boroujerd	24,000
• Agriculture Cooperative of East Azarbaijan	120,000	Ardabil	
• Shadmehr	51,000	• Zibadaneh Sabalan	10,000
• Fakoor	6,800	• Najafi	700
• Haji Poor	24,000	• Nami	44,000
• Daneh Sabalan	24,000	• Azar Daneh Meshgin	-
• Afkhami	19,500	• Samian	15,000
• Ghaflan	-	• Asra	-
• Behin Daneh Azarbaijan	60,000	• Arazimak	40,000
• Ag-Cooperative of Marand	1,500	Isfahan	
• Mohamad zadeh	17,500	• Sepahan Daneh Parsian	27,000
• Rahimloo	10,500	• Ghasemi Nejad	6,000
• Azarbaijan	86,000	• Larsk Cooperative	9,000
• Rezvan	75,600	• Morvarid Daneh Sepahan	30,000
• Niroom Sahand	200,000	• Dastchin Aali	26,000
• Negin Daneh Gharb	110,000	• Momtaz Daneh Kohpayeh	3,000
• Azar Daneh Bonab	18,000	• Mohamad Hossain Mehri	9000
• Ag-Cooperative and service of Ahar	7,500	• Negin Mazraeh Harand	-
• Zaer Kaabeh	19,500	• Pajoohehsh Parvar Zayand	18,000
• Zardaneh Karan Marand	39,600	• Pishgam Damparvar Sepahan	18,000
• Govahi	3,000	• Cattle breeders of Tiran & Karavan Cooperative	9,000
• Fathi Brothers	-	• Chavdaneh	29,500
• Poor Mohammad	5,000	• Chakavak Daneh Zavareh	18,000
• Shad Bakhsh	4,940	• Espadana Halah Poultry Chain Complex	12,000
• Baghi	-	• Khorak Sazan Isfahan	9,000
• Niroom Daneh Sahand Maragheh	40,000	• Daneh Zarrin Naghshe Jahan	18,000
• Nick Daneh Sahand Maragheh	124,800	• Nivan Golpa	9,000
• Tak daneh Motahar Azarbaijan	-	• Ramyar	9,000
• Kamel Daneh Maragheh	-	• Mahdaneh Ashayeri	18,000
• Azardan Maragheh	21,000	• Kimia Roshd Sepahan	-
• Feshangchi	5,000	• Kabileh	220,000
• Abbas Zad	-	• Omid Amir Yousefi	9,000
• Azar Daam Sam	1,400	• Isfahan Mokamel	27,000
West Azarbaijan		• Ashkan Daneh	9,000
• Keyvan Morgh Par Talai Mhabad	30,000	• Araz Daneh Sepahan	5,000
• Oroom Gohar Daneh	40,000	• Behparvaran Nami Naghshe Jahan	7,000
• Oshnoo Gostar	48,000	• Azmoon Daneh West Sepahan	18,000
• Oshnoo Zarrin	9,000	• Dan Gostar Ahook	9,000
• Tollo Azarbaijan	-	• Mobin Kashaan	5,000
• Zarrin Daneh	9,000	Ilam	
• Milad Mahabad	146,000	• Roshd Kar Sarableh	9,000
• Mohamad Kamyar	24,000	• Zagros Daneh	9,000
• Dr. Sojoodi	20,000	• Morgh Daneh Ilam	9,000
• Araz Dan Chaipareh	10,000	• Ilam Ashayer	7,200
• Feed Bookan Industrial	20,000	Bushehr	
• Orrom Daneh	19,800	• Taam Sazan Bandar	15,000
• Dam Gostar Salmas	30,000	• Hoorash	40,000
• Khorak Gostaran	-	• Daneh Gostar Ahmad	2,000
• Hamid	90,000		
• Oroom Chakavak	18,000		

Iran Animal Feed Mills	Nominal Capacity (tons)
Chaharmahal & Bakhtiari	
• South Saharkhizan	2,400
• Feedar Patira	3,500
• Morvarid Gandoman	8,000
• Momtaz Sooreshtjan	24,000
• Kimiagaran Taghziyeh	44,000
• Fara Daneh Aquatics Feed	40,000
• Dordaneh Kian	15,000
• Roshd Daneh Aquatics Feed	10,000
• Dordaneh Falard Aquatic Feed	21,000
• Jahan Daneh Shahrekord	10,000
• Lordegan199 Cooperative	18,000
Nourth Khorasan	
• Alghadir	44,000
• Chamanzar Farooj	-
• Goldasht Shirvan Cooperative	30,000
• Bak Poolad	10,000
• Yekta Daneh	-
• Golestan Behdaneh	45,000
• Bojnord Behdam	20,000
South Khorasan	
• Sajad Sarayan	100,000
• Dan va Oloof Shargh	75,000
• Sepid Daneh Cooperative	21,000
• Omid Sabz Sarayan	25,000
• Mavadat	24,000
• Khoosineh Poultry Feed	21,000
• Behdaneh Khezri	-
• Setareh Kian Birjand	113,000
Khouzestan	
• Karoon	180
• Sadaf Fish Meal Production	500
• Shoaybieh	60,000
• Karoon Romez	-
• Haft Tapeh Naishekar	90,000
• Navid Daneh Iranian	-
• Ahvaz	20,400
• Maki Dan	18,000
• South Kalhor Daneh	500,000
• Dorna Dan	250,000
• Chamran Mahshar	10,000
• Ashayeri	7,000
Zanjan	
• Novin Parvaz Iranian	1,200
• Zanjan 1	30,000
• ZarinDaneh Hidaj	15,000
• Zanjan Feedar 2	50,000
• Parvaz Novin Tehran	12,000
• Pooyesh Daneh Zanjan Concentrates and Animal Feed	50,000
• Keshtzar Khodabandeh	15,000
Semnan	
• Tabai Fish Meal	1,650

Iran Animal Feed Mills	Nominal Capacity (tons)
• Nabdaneh Semnan Oil Pressing	450,000
• Protein Sazan Ghomes	44,000
• Maral	25,000
• Garmsar Mill	60,000
• Mokhtar Arab	6,000
• Afrand Tooska	-
Fars	
• Zoraat Zardaneh Fars Cooperative	24,600
• Khansha	19,800
• Zomorod Daneh Amiri	6,000
• Farbeh Daneh Pasargad	25,800
• Talaei Daneh	-
• Negin Daneh Cooperative	10,000
• Dorsa Larestan	3,600
• Vahdat	36,600
• Askari Poultry Feed	8,300
• Zar Zolal Daneh Cooperative	5,000
• Gheshlagh	26,000
• Pars Dam Saba	20,000
• Shirin Daneh	75,000
• Arya Marve Daneh	24,000
• Shayan	29,700
• Estakhr	81,000
• Fars	75,000
• Rad Arad Pars	60,000
• Yek Daneh	30,000
• Almas Daneh	30,000
• Fath Daneh Maham Arvand	25,000
• Fars Cultivation and industry Complex	90,000
• Pars Daneh Beyzaa Cooperative	17,000
• 21 Beyzaa	150,000
• Royan Daneh Pars	24,000
• Darya Dasht Daneh	21,500
• Nick Daneh Pars	15,000
• Shahin Pars	1,080
• and Fars Cooperative Union of Farmers	6,000
• Behshir	10,000
• Dan Avaran Bistoon	6,000
• Pooya Nahadeh Kimia	18,000
Qazvin	
• Energy and Protein Shayan	100,000
• Choobindar	21,600
• Negin Daneh Qazvin	24,000
• Chavdaneh Negin Gharb	18,000
• Golestan Taak	25,600
• Daneh Taak	75,000
• Negin Khorak Leia	-
• Ziaran	36,000
• Arasanj Cooperative	6,480
• Kavosh Daneh cooperative	-
• Booin Zahra cooperative	45,000
• Kimia	2,800

Iran Animal Feed Mills	Nominal Capacity (tons)
• Faraz Daneh Avand	-
• Zaheri	-
• Simorgh Booin Zahra	-
• Sayalan Sam	45,000
• Hamid Haji concentrates	-
• Pak Daneh Iranian	-
Qom	
• Yek Daneh Paya Gostar	1,210
• Kimia Danesh Alvand	360
• Taj Daneh Saba Industry	10,000
• Rooz Amad (Dehghani)	-
• Danaday	30,000
• Qom Broiler Poultry Union	-
• Behen Parvar Khorak Sazan Asia	62,000
• Ayrik Daneh Shokoohie	23,000
• Arya Dan Roshd	72,000
• Sadeghi Poultry Feed	48,000
Kurdistan	
• Marivan Daneh poultry feed	48,545
• Saral Ghezel Ozan	10,000
• Aghe Jari	-
• Zar Daneh Gostar Gharb	20,000
• Kordestan Daneh Amanj poultry feed	5,000
• Sepehr Arab supplement	4,000
• Zhinoo Dan	-
• Leilakh	25,000
• Saral 703 Cooperative	1,500
• Abshar 392 Cooperative	10,000
• Jik Daneh	36,135
• Gharb Daneh Abbidar Zagros	40,000
• Hakan Daneh 35 cooperative	24,465
• Gharb Daneh Negin Baneh	40,000
• Zarivar Daneh poultry feed	20,000
• Gharb Daneh Bitay Kamyaran	-
• Kamyaran Daneh	15,000
Kerman	
• Rafsanjan 33	3,000
• Barekat	6,000
• Ag-Cooperative Rafsanjan	2,475
• Apashta Rafsanjan	72,000
• Rafsanjan Dairy Cooperative	17,000
• Simin Daneh	-
• Etehad	6,000
• Poor Vali	10,000
• Parvar Estabaragh cooperative	10,000
• Seyf Ekhtiar Abad cooperative	-
• Kerman Daneh cooperative	-
• Khorak Saz Kerman	21,000
• Poultry cooperative companies	14,000
• Tavanmehr	-

Iran Animal Feed Mills	Nominal Capacity (tons)
• Mehr Keshavarzi Persian Gulf	-
• Simorgh	6,000
Gilan	
• Dornab Khazar	-
• Goharnab Verna	-
• Gilan Feed Agro-Industry	30,000
• Sepehr Iranian Caspian	-
• Etehad	29,000
• Behnam Moharam Zadeh	8,000
• Navid	22,000
• Navid Poultry Feed	-
• Mehregan Khazar	6,000
• Dan Varsh Gostar cooperative	-
• Khazar Daneh Fooman	20,000
• Massoleh Protein	7,200
• Haji Abad	18,000
• Sepid Makian	-
• Sabz Daneh Sahar	70,000
• Vahdat Anial Feed cooperative	6,000
• Samam	20,000
• Roodsar cooperative	8,000
• Loshan Agricultural Production	46,000
• Dordaneh Arya Loshan	12,000
• Pakdaneh Fooman	20,000
Lorestan	
• Daneh Talaie Boroujerd	50
• Rad Ard Pars	100
Markazi	
• Zarrin Daneh Farahan cooperative	-
• Daneh Matboo Saveh	-
• Behrood Supplement	6,000
• Javan Daroo	28,800
• Asia Azgar Production Complex	5,000
• Daneh Chin	60,000
• Ghadiri Zadeh	3,000
• Delijan poultry cooperative	57,600
• Dordaneh Kavir	50,000
• Pars Daneh	150,000
• Tohid Daneh Kamareh	200,000
• Daneh Parvaz Khomain	14,000
• Poormand	-
• Golbar Shimi Daneh	-
• Mahalat Cooperative	15,000
• Morvarid poultry feed	12,000
• Simorgh	50,000
• Avizhe Daroo	27,000
• Beh Roshd	10,800
• Daneh Talaie Kamijan cooperative	10,000
• Farivar Zarand Commercial	-
• Espid Daneh	42,000

Iran Animal Feed Mills	Nominal Capacity (tons)
Hormozgan	
• Shahre Aftab Fish meal	2,000
• Mahmood Mobaraki Fish meal	500
• Kimiei Jask Fish meal	1,200
• Aras aquatic feed	2,500
• Fan Avaran Darya Fish meal	3,000
• Sepid Bastak	80,000
• Saba Majde Qeshm Fish Meal cooperative	2,000
• Sayad Qeshm Fish Meal	3,000
• Qeshm Fanoos Fish meal	2,000
• Qeshm Aquaculture Feed	-
• Meto Qeshm Fish International	2,000
• Davood Khadang	2,200
• Salehi Fish meal	11,000
• Sarchil Fish meal	3,000
• Jonoob Fish meal	3,000
• Hormoz Dam	150,000
• Hossain Amaani	37
• Sirik fish meal cooperative	1,100
• Hatami fish feed Cooperative	10,000
• Abdollah Hatami Mazaghi Fish Meal	1,000
Hamadan	
• Golfam Alvand	86,400
• Moeini	28,800
• Asad Abad Jolgeh	5,000
• Kamel Daneh Zarrin Nahavand	2,500
• Danehaye Gharb nahavand	75,000
• Hami Omid Hamedan Agro-Industry	3,600
• Hamadan Kooshe talaei Mad	12,000
Yazd	
• Jamee Gostar Yazd	-
• Zia Daneh Meibod cooperative	21,000
• Simorgh, Yazd branch, Poultry Feed	23,000
• Shokouh Shimi taban Yazd	300
Golestan	
• Persian Complex	-
• Zarrin Daneh Gonbad	74,000
• Damyar Golestan	25,000
• Laleh bagh	-
• Alten Daneh Sahra	45,000
• Dordaneh Amin Alton Sahra cooperative	12,000
• Pars daneh	34,000
• Zar daneh Golestan	7,500
• Abed Golestan	25,000
• Ghaboos daneh	-
• Minoo Sabah	60,000
• Negar Golestan	30,000
• Gonbad	60,000
• Shafa Daneh Gorgan	-
• Shabdar Gonbad Agriculture	-
• Zarrin Roshd Golestan	20,000
• Gorgan & Dasht	184,000

Iran Animal Feed Mills	Nominal Capacity (tons)
• Feyz Abad	50,000
• Tymaz	22,000
• Rame Golestan	22,550
• Artan Daneh Golestan	33,000
• Daneh Talaei Gonbad	79,000
• Banafsh Tapeh	60,000
• Imen Tab Protein production	36,000
• Daneh Aftab Golestan	10
• Behshad Afarin	24,000
• Oloofe Afarin Golestan	4,500
• Salamat daneh Golestan	24,000
• Peygir, Phase 2	-
• Pegah Jahan Nama	100,000
• Mazraee Nemooneh	13,500
• Faravardaneh Arya Production Complex	22,000
• Gol Daneh Sahra-cooperative	29,500
• Chine Sahar Farda Kordan	72,000
• Sefid Bal Ghaboos	-
• Koomeh	-
• Behshad Afarin	24,000
Kermanshah	
• Ravansar Feed	130,000
• Gharb Daneh	130
• Farokhi Brothers	42,000
• Naghshin-aquatic feed	8,000
• Ravansar	120,000
• Kermanshah Daneh	200,000
• Beigi	-
• Pars Gharb	-
• Concentrates Production	-
• Kia daneh Kermanshah	-
• Zarrin Daneh Songhor	36,000
• Taher Abadi	-
• Bisotoon Agricultural Complex	93,500
• Dorsa Daneh Gharb	30,000
• Dan Pak Agrin Production	100
• Danehaye Gharb	60,000
• Farokhi Brothers	-
• Chashm Sefid (white eye)	85
• Tiba Daneh Sazan Novin	-
• Kermanshah Daneh	200,000
• Zarrin Daneh	36,000
• Gonabad Cooperative	15,000
Mazandaran	
• Tala daneh Shomal-cooperative	2,000
• Behdaneh Shomal-cooperative	2,500
• Etehad Khazar Aquatic Production	1,200
• Sahel	122
• Babolsar Fish Feed-cooperative	800
• Negin Toyoor Shomal Tabarestan	3,000
• Goodarzi	15,000
• Alborz Daneh Daroo	40,000

Iran Animal Feed Mills	Nominal Capacity (tons)	Iran Animal Feed Mills	Nominal Capacity (tons)
• Ajdad Morgh	-	• Salar Dasht Jovin Cooperative	-
• Zarrin Emervan	48,000	• Afrial Dasht Join Cooperative	50,000
• Zarrin Balan Shomal	-	• Beh Saman Gonabad Cooperative	24,000
• Pars Daneh Savadkouh	22,000	• Afrooz Jaam	75,000
• Savad kouh-cooperative	21,000	• Golchin Sabzevar	24,000
• Avid	46,000	• Fazel Kakhak Gonabad	-
• Miladaneh Khazar	4,200	• Sabzevar	-
• Dorna Pellet Savadkouh	130,000	• Zarrin Daneh Sabzevar Cooperative	
• Aashoori	-	• Behin Roshd Ghochan	60,000
• Sepehr Poutry & Aquatic Feed	8,250	• Tous Neishabour	-
• Protein Khazar Meal Production	1,500	• Paya Farayand Hezareh Novin	11,000
• Ghatreh Talaei Now-shahr	35,200	• Gohar Daneh Shargh	1,000
• Solar Sooy Alborz	72,000	• Momtaz Daneh Tous	-
• Doostdaran Ghadir (Doona) Poultry Feed	30,000	• Khorasan	30,000
• Ghaemshahr Cooperative	60,000	• Simin Daneh Neishabour	30,000
• Tirang Daneh Tabarestan	10,000	• Negin Gonabad	42,000
• Behkam Daneh Sedaghat	8,000	• Daneh Daran Tous	80,000
• Pars Daneh Tabarestan	-	• Mehr Chin Chine Kian	21,000
• Gohar Daneh	-	Tehran	
• Mazandaran Livestock & Aquatics Feed	55,000	• Pars	300
• Golnaz Animal Feed	-	• Azheh Nab Tehran	9,000
• Morgh Behesht	11,000	• Yasna Mehr	140,000
• Shimi Alayesh Shomal	-	• Tak Zhen Zist	4,000
• Kimia Palayesh Caspian Sea	-	• Behparvar	72,000
• Tehran Klika Meal	-	• Sanadam pars	150,000
• Kilka Meal Melli	1,500	• Vetak	60,000
• Golshan Assor	1,500	• Mina Toyour	-
• Ashoor Protein	1,800	• Raz Amad	-
• Velesht Daroo	3,000	• Par Arian Dam	-
• Rash Sazeh Behshahr	35,000	• Pars Pouyesh Vitamin	-
• Negin	-	• Telavang	-
• Negin Klika Meal	900	• Kimia Fam	-
• Daneh pak Khazar	333	• Parand	-
• Marshan	-	• Asyab Group	-
• Amol Behdaneh Tabarestan	70,000	• Avaran Tavan Persia	-
• Alborz Makian	30,000	Tehran-Trade Companies	
• Aras Bazar Poultry Concetrates Production	25,000	• Farbeh Daneh	-
Sistan & Baluchestan		• Mahde Amin Kian	-
• Farbeh Daneh Agricultural Production	10,000	• Pars Zhivar	-
Khorasan Razavi		• Timar Makian	-
• Rokh	30,000	• Taraz Trade	-
• Kohpayeh Aftab Shargh	23,000	• Khorshid Tejarat	-
• Zarrin Daneh Sahel	-	• E-Took Farda	-
• Javaneh Khorasan	13,000	Tehran-Machinery Companies	
• Vivan Group	-	• Pishgam	-
• Khaf Cooperative	-	• Bouhler	-
• Fariman	24,000	• Asyab Group	-
• Zar Daneh Diz Bad	40,000	• Feed Machine	-
• Tous Consentrates Production	50,000	Alborz	
• Diz Bad	84,000	• Zarrin Roshd	-
• Saleh Kashmar Complex	250,000	• Khorak Pardaz Hezar Dasht	-
• Kimai Dan Torbat	100,000	• Karaj	-
		• Zarnam Group	-



Chapter 9

IRAN ANIMAL FEED INDUSTRY TOP COMPANIES





NAVID KHALEEJ FARS (NKF)

Overview

In 2008, Navid Khaleej Fars (NKF) oil-pressing project has begun its activity with the aim of increasing oil and meal production from oil seeds in the country. Regarding the resistance economy doctrine and the vision document 2025, this company has been the largest private sector in the food industry by invest over 150 million USD in the Strategic district of Imam Khomeini Port (BJK).

The project is exploited in three phases with 202,000 square meter lands and the daily production capacity of 6,000 tons (2,000,000 tons per year). The first vice president of the Islamic Republic of Iran was operated the first phase, in February 2017. Unique features of NKF oil-pressing are including gaining significant market contribution of the region and the world, the significant increase of GDP, sustainable employment production with international standards framework.

Capabilities

The company uses the modern technology of oil-pressing. All machines and equipment have been purchased from Italian Andreotti Impianti Company and have been installed and operated under the supervision of experienced engineers. The major products are including oil and meal, which is worked in the highest quality to decrease import and to compete with the producers of neighboring countries and even the trans-regional. The company is located in the special economic zone of Imam Khomeini port, which have allocated the largest contribution of import of raw feed and agricultural inputs. Navid Khaleej Fars (NKF) oil-pressing company is distinguished from other oil producers in the country, due to the advantage of presenting in the free trade zone, facilitating the import of raw materials, and exporting products from the exclusive harbor directly.

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Main Factory: Section 85., The support lands., Ports and Maritime Organization., Imam Khomaiini Port., Khuzestan., Iran.

Postal Code: 6357173691

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WE OFFER...



Pegah Jahan Nama Vertically Integrated Poultry Co.

Pegah Jahan Nama

- Supplying a broad portfolio of high-quality, cost-effective feed products in Iran & exporting to CIS countries
- Using best feed additives to support animal health
- Offering cutting-edge technologies and nutrient analysis to gain best performance

Gildaneh Jahan Nama

- Production of day-old broiler chicks to customers in Iran & CIS countries
- Engaging in the development, production, and sale of broiler breeding stock
- Supplying specific market requirements

Negin Jahan Nama

- A protein-focused company in preparing & processing food products in Iran, & exporting to middle east & CIS countries
- Making great food for a variety of food service customers



Pegah Jahan Nama (Feed Factory)

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www.pjn.co.ir

Gildaneh Jahan Nama (Broiler Breeders)

Address: No. 401, 4th Floor,
Karafarin Bldg., Edaa'lat 60/1 Alley,
Naharkhoran Ave., Gorgan, Iran
Tel: (+9817) 3253 67 20 & 30
Fax: (+9817) 3253 67 21
Email: gildanehjahannama@pjn.co.ir

Negin Jahan Nama (Chicken Meat Producer)

Address: No. 402, 4th Floor,
Karafarin Bldg., Edaa'lat 60/1 Alley,
Naharkhoran Ave., Gorgan, Iran
Telefax: (+9817) 3453 35 36 - 9
Extensions 253 to 257
Email: neginjahannama@pjn.co.ir

Main Office

Address: No. 25, West Nosrat St.,
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JAVANEH KHORASAN CO.



Mohammad Reza Khabiri
CEO

Javaneh Khorasan Company has always made effort to develop the animal feed industry, which requires participation, motivation and support of the private sectors. We believe that we can work together towards the promotion of the livestock and Poultry industry in the country.

Our Suppliers:



Markets and Export Potentials

Javaneh Khorasan company is one of the top producers in animal feed industry with a long-time experience in producing animal supplements. The company produces high quality products thank to knowledgeable experts and high quality raw material brands such as DSM, Adisseo, BASF, Nutrex and Innovad providing great potentials for exporting many products. Currently, various premixes, animal supplements, concentrates and feed additives are exported to the mills and farms in Afghanistan, Turkmenistan, and Tajikistan. In line with development of non-oil export policy, Javaneh Khorasan has the capability of presenting its products in the other countries of the region making mutual cooperation with consumers and other active traders in the industry.

Investment Opportunities

Javaneh Khorasan company is ready to produce new products, offer precious services and send the knowledge-based products to the markets with the help of experts in this industry, considering national resources, technical knowledge of the target countries, and also shortages and necessities in their farms.

Introducing Cooperation Opportunities & International Partnership

Animal feed industry has great potentials in neighboring countries such as Tajikistan, Kirgizstan, Afghanistan and etc. due to the rich sources of water, soil, but low technical knowledge in these countries, which is a good opportunity for related companies to enter and operate in this industry.

Introducing the Services, Products, Export Potentials

Javaneh Khorasan company has sent a wide range of animal vitamin and mineral supplements to the market as a pioneer for more than 3 decades. Currently, considering different climates, quality of water and soil in each region, products are manufactured as to customers' requirements. Javaneh Khorasan company offers after sale services which are aimed at optimizing the use of raw materials, increasing feed efficiency and product quality, giving advice on nutrition, health and management, offering regular farm visits, and holding of workshops with presence of well-known masters of the industry.

Variety of products and services available according

to the needs and demands of the customers, has led this company to improve the export potentials in the region.

Livestock products

Pioneer in production of customized livestock supplements such as:

- Infant calf supplement
- Fattening calf supplement
- Heifer supplement
- Dry cow supplement
- Anionic salt 1+12 supplement
- Transition period supplement
- Bioni pharmaceutical supplement (for ketosis and lameness prevention)
- Special industrial dairy supplement
- Super twin supplement
- DAMINEH supplement special Dairy, non-Dairy, close up and starter
- Special Lamb and ewe supplements
- BEHINA –Buffering supplement
- Special vitamin A premix for ruminants
- Vitamin premixes D3,E and E-selenium
- Customer customized livestock supplement

Poultry products

- Vitamin and mineral supplements for different breeds of laying hens (production period rearing period)
- Vitamin and mineral supplements for different breeds of broiler chickens
- Vitamin and mineral supplement of parent stock contain organic minerals (Glycinate)
- Vitamin and mineral supplements for pellet manufacturing company
- Types of concentrates of 2.5 and 5 percent for laying hens and broiler chickens
- Canthaxanthin (Lucantin red) and choline chloride (Nutrex) and multi enzymes (Natugrain)



Head Office: No. 9, on the corner of 2 Sa'adat Ave. & Azadi St., 91 Azadi, Asiaei Highway, Mashhad, Razavi Khorasan, Iran.

Teharn Office: Unit 11, Floor 4, No. 25, East Boali Sina Alley, Fatemi Intersection, Valiasr St., Tehran, Iran.

Mill Address: Block 2/4, Between 5 and 7 Alley, North Lalash Blvd, First Phase, Ious Industrial Park, Mashhad, Iran.

Head Office (Mashhad): +98 51-36 58 40 70-1

Tehran Office: +98 21-88 99 57 41-3

Amol Office: +98 11-43 27 04 17-19

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info@javanehkhorsan.com



GOHAR DANEH SHARGH

GDS CO GROUP



Ahmad Salahshour
CEO

Some of the products are exported to countries, including Afghanistan and Turkmenistan.

Gohar Daneh Shargh co is considered as a member of 'Gohar Holding' having an extent market in Iran and other neighbouring countries. The company has been proud to produce and offer diverse and high quality products in order to become more dynamic using the most advanced machines and devices, as well as the use of experts and foreign consultants. In line with the expansion of the company's activities, it put activities as launch of an aquaculture feed production line, flaking grains, full fat soybean, pet and laboratory animals feed and semi-ready meals on its agenda. It is ready to cooperate with internationally recognized brands in production, sales etc, besides providing high quality products. It is one of the competitive advantages of our company to synchronize the world's knowledge in the areas of research and development, production and after-sales services. To this end, a University Of Applied, Sciences and Technology (UAST) has started to train highly qualified and efficient staff.

With more than 100 different types of products, this company is able to flexibly operate according to the facilities, climate conditions and customer demand in order to satisfy customers. Currently, some of the manufactured products are exported to countries,

including Afghanistan and Turkmenistan. Gohar Daneh Shargh co has been carefully tested and examined all inputs and products by using a laboratory equipped with fully automatic devices and experts.

During the period of its operation, the company has won the necessary honours and production standards as follows:

- Top Country Producer
- Provincial Producer
- Awarded Consumer Rights
- Receiving Grade A from Iran Veterinary Organization
- Receiving the IR code for export from Iran Veterinary Organization
- Receive Iran's Standard Certification
- Receiving International Standards of ISO 9001, ISO 22000, GMP and HACCP from Swiss SGS Organization

We are proud to say that we attempt to increase the productivity and satisfaction of our customers, and we will be able to maximize our ability to improve it. Customer satisfaction is the key to our success in today and in the future, because we believe that general progress brings synergy and creates more value for all stakeholders.



Mashhad Office: No. 24, 9th Tofigh St., 12th Sadeghi Ave., Sazeman Abb Blvd., Rahnamaei Sq., Mashhad, Iran

Tellfax: (30 Line) +98 (51) 37075 **Postal Code:** 9185884945

Factory: Molk Abad Industrial Complex-Mashhad-Baghehch Road(40kilometers)-Iran

Tellfax: +98 (51)-33533171-5

Web: www.gohardanehco.com

E-Mail: info@gohardanehco.com



Seyed Ali Kheirieh CEO

Iran is passing from the developing to the developed country. The necessity of sustainable development is enjoying healthy and joyful nation. Our team has a duty, which provides the sanitary and the high quality animal feed to production of animal protein sources; so, we are shared in the development process of the country. In order to achieve our goals the essential factors is needed to produce standard products, such as high quality raw materials, using modern technologies and utilizing knowledge and new findings in nutrition science and the production of animal feed, the presence of creative and educated employees who are committed to sustainable values. Setareh KianBirjand has described the transcendental values to staff in its regulations as: relying on the industrial dynamics and search for innovations related to industry, maximum operation accuracy, and the health of white meat's final consumers, which should be full of respect and honesty, satisfaction of employees, which is manager's mission and finally considering the environment and preventing its pollution.

Regarding the above-mentioned goals, we expect to be well known in the future, as the largest and most reliable producer of animal feed in Iran and Central Asia and the best brand in the supply chain of healthy livestock protein and white meat. Moreover, we will provide health and relaxation of final consumers by producing a product at the highest levels of health in their diet.



SETAREH KIAN BIRJAND

FEED MILL

In the year ended March 2014, Setareh KianBirjand the animal feed mill, has started operating by consulting of Trouw Nutrition International company of Netherlands to planning and manufacturing the mill and installing planed modern machines in the Netherlands, as well as using Iranian experts and engineers. The raw material storage capacity is over 30,000 tons, which supply the animal feed to customers. The mill operates by two separate production lines with a capacity of 50 tons per hour Totally, which are used conventional industrial machines, as well as horizontal rotary twin-shaft mixers; Long-Term grain feed Conditioners (LTC), thermal tunnels or Hygienizers (raise the confidence coefficient of non-contamination Such as Salmonella), two crumbling and pellet machines (with a high capacity of grain supply). In addition, the animal feed mill has the oil injection machine with completely isolating reservoirs and other modern and unique equipment in the country. Also, several systems are installed such as weighing high and low consumable raw materials (macro and micro dosing), providing water vapor and purified water, controlling system and automatic valve control with PLC technology, a robust pneumatic system, complete ventilation and various cyclonic system, sanitary facilities for staff and clients (providing special retire rooms for drivers), car wash (arrival and departure), automatic disinfectants for raw materials and products. Modern laboratories, which equipped with NIR (Near Infrared), and connected to the central laboratory via Internet Online that provided the sample results of maximum 1 or 2 minutes.

Considering personnel's facilities and efforts, this mill is currently one of the greatest mills and the largest exporter of ready-Feed (5,000 tons per month)

Setareh KianBirjand is one of the largest producer and exporter of ready-feed (5,000 tons per month) to Afghanistan. The company's potential includes creating joint venture with large European companies in order to produce concentrates or complete feeds (fortified grain/ forage mix), as well as marketing in Central Asian countries such as Tajikistan, Uzbekistan, Kazakhstan, Turkmenistan, Kyrgyzstan or Caucasian countries like Azerbaijan, Georgia and Armenia.

The company's vision includes investing in the aquatic feed production and the construction of a complementary production unit and utilization of the 4,000-tons full-fat soybean production line (the line is operating now), and will be implemented gradually by supplying financial needs. The priority, in recent projects, is allocated to complete usage of full fat soya, which will provide the farmers' major needs by supplying soybean and producing high-fat soybean meal which has a significant potential for export to Arab countries and Afghanistan (as an animal husbandry country).



Tehran Office: No. 32, 4th Floor, 1st Kowsar Alley, Sattarkhan Ave, Towhid Sq, Tehran, Iran

Birjand Office: Kheirieh Passage, Malek bazar, 4/8 Jomhuri e eslami Ave, Birjand, Iran

Mashhad Office: No. 612, 6th Floor, Kian Center 2 Complex, Intersection of Janbazan, Faramarz Blvd, Mashhad, Iran

Main Factory: 40 km of Birjand-Zahedan Road, Birjand, South Khorasan, Iran

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**FARHIKHEGAN ZARNAM
RESEARCH & INDUSTRIAL GROUP**

Corn Gluten

Corn gluten is used as a rich source of amino acids and xanthophyll (as pro-vitamins and natural pigments) to provide the protein needed for livestock, poultry and aquatic animals.

Corn Fiber

The dried corn fiber, which contains 20% starch, 4-5% oil and 10-12% protein, is used as a rich source of fiber in the diet of livestock and poultry.

Corn Germ

Corn germ contain 47-50% fat and are used as a suitable source of energy and fiber for livestock and poultry feed.

Broken Corn

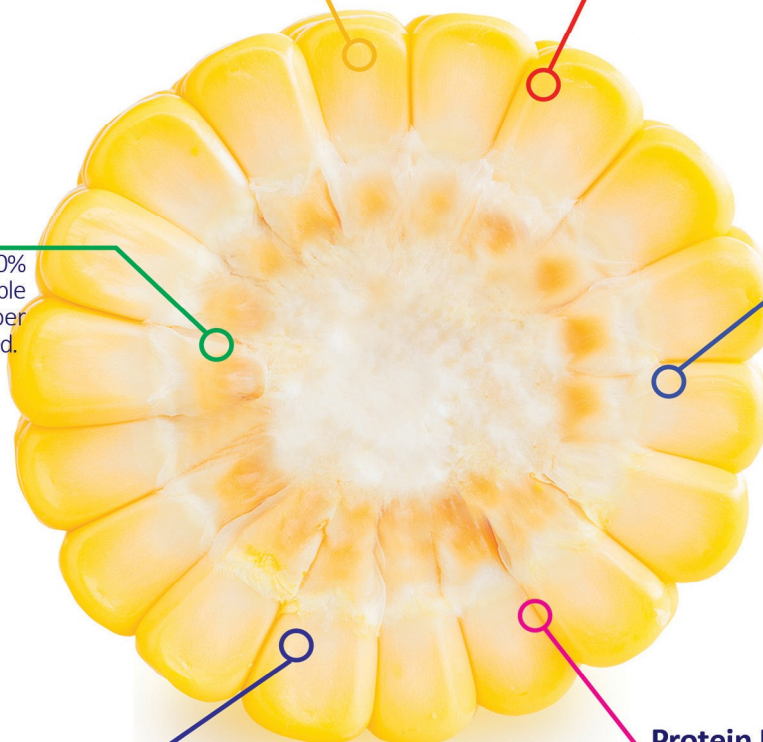
Broken corn is one of the types of cereals that is used as an energy source due to starch abundance, relatively high nutritional value, palatability, and lack of nutritional problems in livestock and poultry diet.

Liquid Gluten

Liquid gluten is used as a rich source of amino acids, minerals and vitamins in group B in the rate of 5-15% in the diet of livestock, poultry and aquatic animals.

Protein Enriched Corn Fiber

The protein corn bran consists of corn fiber and liquid gluten, which is an excellent supplement for livestock and poultry diets. It is also a good source of protein and energy.



Address: Zar Grain Refinery, Hashtgerd, Karaj, Iran
Tel: +98 26 43 21 20 00



21 BEYZA FEED MILL COMPANY

The largest and most technologically equipped producer of livestock, poultry and aquatic feed in the South of Iran

Producer, Exporter & Top Entrepreneur Equipped with Integrated Management System

HACCP – ISO 9001 – ISO 14001 – ISO 22000 – OHSAS 18001

Beyza Feed Mill 21 (BFM) was established in 2002 with the purpose of increasing the productivity and efficiency of production and eliminating the inefficient use of resources in animal husbandry industry in Fars Province, Sepidan County, Beyza region.



Hamid Reza Abudi
CEO

The company has been established in two separate phases:

1- Animal feed production phase, producing livestock and poultry feed, using pellet technology with a capacity of 100,000 tons, annually.

2- Aquatic feed production phase, producing various types of aquatic feed, using modern extrusion-based technology with a capacity of 50,000 tons, annually.

BFM as a reliable brand is producing a wide range of high quality products and distributing them in domestic and international market by enjoying most experienced R&D team, young and efficient human resources, using domestic and foreign high-quality raw materials, the implementation of international qualitative standards and powerful management.

Our products are very well established and distributed in different parts of Iran and neighbor countries such as; Iraq, Afghanistan, Tajikistan, Armenia, Pakistan, Turkmenistan, Qatar, UAE, Oman and Turkey.

The BFM's products include:

- Various types of aquatic feed for cold and warm water fishes, Sturgeon, Marine (Sea bass and Sea bream), Tilapia fishes and Shrimp.
- Various types of livestock concentrate for calf, dairy and beef cattle, sheep, goat, horse and camel.
- Various types of poultry complete feed and the concentrates for broiler chicken, laying hens, breeder, turkeys, partridges, quails, ostriches.
- Various type of food for laboratory animals and pets

Shiraz Office: No. 26, 5th alley, Shahid Rabbani Blvd, Atlasi Sq, Shiraz, Iran.

Tel: +98-71 32281589

Fax: +98-71 32289774

Tehran Office: No.503, Amir building, corner of 10th street, Kargar-e-shomali Street, Tehran, Iran.

Tel: +98-21 88014981, 88014967 **Fax:** +98-21 88029130

Factory Address: Beside Ard-e-Sepidan factory, 12th Km of Beyza road (Lapui) , 20th km of Shiraz-Marvdasht highway, Shiraz, Iran.

Tel: 071-36775960-62

Web: www.bfm21.com

Email: info@bfm21.com





AMOL BEHDANE OF TABARESTAN FEED MILL



Amin Miran Amoli
CEO

It is also predicted that the increasing trend of the feed products would be kept on and we expected the next year to increase by 12%

Being of more than 40 years' experience in poultry industry, Amol Behdane of Tabarestan company was established in Babakan industrial Town in Amol city. Total of the machines, including the material carriers, electronic system, and production lines automation control system has been provided by Buhler Company (Swiss). The poultry feed production is conducted by using the Hysys and fully automated system (Weighting and inclusion of all additives are even practiced through automation), resulted in introducing integrated grain, having high quality, free from dust Microbe, any microbial contamination and fungi free. Regarding enjoying modern world wide standards, the advanced technology, highly skilled human resources, and benefiting the professional experts' knowledge, this company is proud of making a significant contribution to improve the poultry industry and customer satisfaction.

The company's products are as follow

- Mashed feed for breeders since 2013.
- Feed for broiler farms include: super special grain and phase 1 in the form of die pelletizing 2, phase 2 in the form of crumbling (die 4), phases 3,4,5 feed in the form of 4 die pelletizing feed since 2013.
- Feed production in pelletizing (die 2) and crumbling (die 4) since 2014 for great grandparent's farms

Certificates

- Obtaining grade A from Iran Veterinary Organization in 2014.
- Obtaining the IR code for export from Iran Veterinary Organization in 2015.
- Obtaining certificate of ISO2200:2005 from TUV NORD company under the license of DAKKS (Germany) in 2016.
- Obtaining certificate of HACCP from TUV NORD Company under the license of DAKKS (Germany) in 2016.
- Amol Behdane of Tabarestan Company the producer of poultry feed has been established in a 9500 m2 in Babakan industrial Town in Amol in 2007.

The position of company in industry

The company produces pelletized feed. In the current year the industry's sell rate has been increased in to an average of 31% in comparison with the previous year, due to modern machinery, raw materials and supplements, as well as committed skilled human resources. The company achieved the gold statue award of quality as a top producer in 2017.

Regarding a total annual production of 48,000 tonnes, the company is among the top producers.

It is also predicted that the feed production growth trend would be kept on and we have expected to increase by 12% for the next year.



Address: Babakan Industrial District, 8th KM of Old Amol-Babol Road, Mazandaran., Iran.

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Fax: +98 11-43114223

www.mirangroup.ir

Amolbehdanehtabarestan@gmail.com

Main factory Email: Amol_joojeh@yahoo.com



- Production of Animal Feed
- Animal Feed Concentrate
- Extruded Full Fat Soya
- Extruded Full Fat Falxseed

Add: Unit 2., Building No. 117., Dr Gharib Cross., Azadi st., Tehran., Iran.

Tel: +98 21 66 56 46 26

Fax: +98 21 66 43 50 55

www.danadayco.com

khalaji@danaday.com

RADIN FEEDAR FARDA CO.

- Additives
- Mineral & Vitamin Supplement

The logo for Radin Feedar Farda is located inside a white circle. It features the Persian text 'فیدار فارد' in a stylized font, with 'Radin' in English above it.

Kamyar Montaser
CEO

Address: Unit 7., 4th Floor., Yekta Building., No. 21.,
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www.feedarco.com

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info@feedarco.com



THE EFFICIENT SUPPLY CHAIN OF FEED

Today, after 67 years Experience:

A manufacturing & Trading Group With 8 subsidiaries
More than 1.1 Million tonnes sales in 2016
More than \$0.6 BN turnover
More than 100 employees

Core Values Established:

Customer Orientation, Responsiveness, Quality Orientation

What Makes Us Unique:

Reputation, Trust, Efficiency & Stability Wealth of Knowledge

Core Capabilities Developed:

Market Knowledge, Nationwide Distribution, Network Access to all layers of Customers

Estiri Family Business
Established in 1951

Our Mission

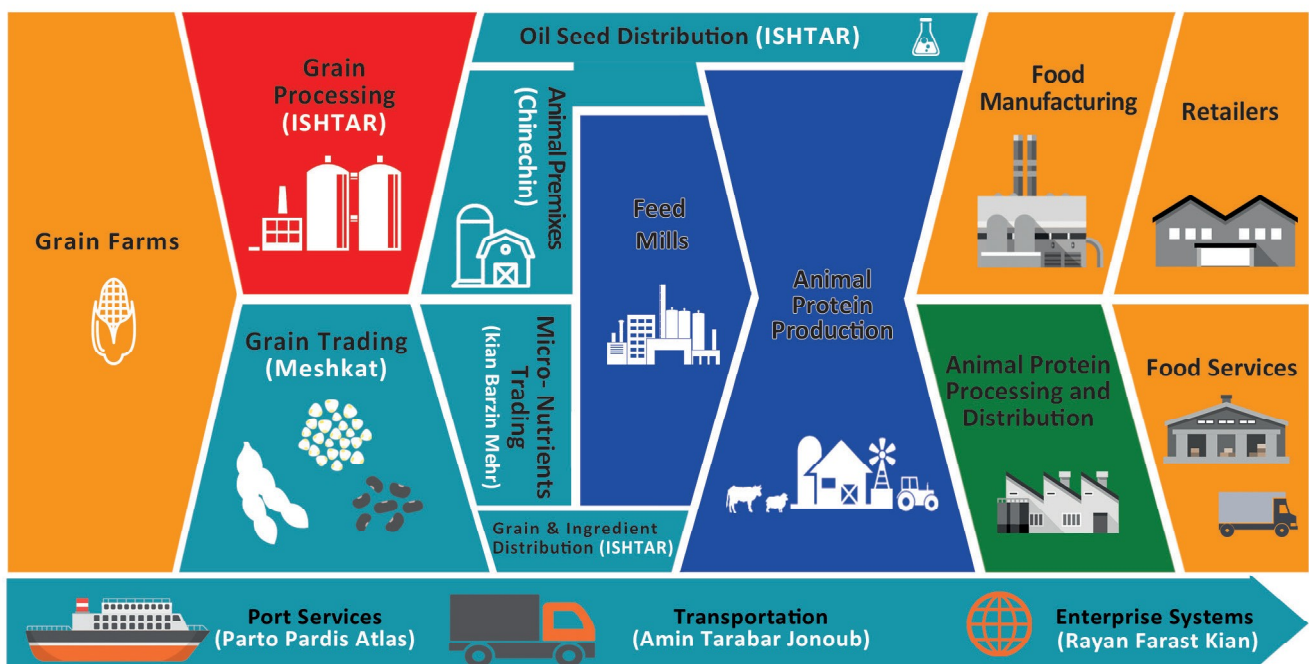
We are a manufacturing and trading company focused on supplying grain and livestock feed, poultry and aquatic products that seek to manage supply chain, promote productivity of industry and create value for society through the promotion of food safety and security.

Our Vision

To be the largest and the most prosperous private corporate for supply & distribution of oil seed and grain in Iran and the neighboring countries in 2022.

The value of our activities will be in healthy, inexpensive and diverse meals.

OUR ROLE IN THE SUPPLY CHAIN



- Currently running business
- Not in our focus for the next 5 years
- Currently running this business via outsourcing
- Planning to enter the business as an owner within 5 years
- Planning to enter the business as a national business lead-firm in 5 years



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Web: www.estiri.org
Email: info@estiri.org

Instagram: [estiri_group_official](https://www.instagram.com/estiri_group_official)
LinkedIn: Estiri Group
Telegram: @estiribot



Research & Development are Endless Ways; our ideal is high quality & customer satisfaction

Hashtgerd supplement company has been established by a team comprised of experienced experts and investors in the animal feed industry in the year ended March 1996. Its establishment has been begun in the year ended March 1997, and the first products have been distributed in the market in the year ended March 1999. The company is located in 70 km of western Tehran, with an area of 5,000 square meters. The privileges of the company are modern and advanced production facilities, well-equipped quality control labs, R&D sector, consumption warehouse and raw material refrigerator. Hashtgerd supplement company is independent, dynamic and expandable organization, and the Board of Directors and Managers are experienced with the necessary expertise in their duties. The company has influenced in updating production lines and products by facilitating and improving the production lines,

establishing 9 production lines including 3 premixing lines and a concentrating line as well as 3 livestock and poultry feed lines, a flack feed line and an equipped line for aquatic feed production since the year ended March 2014. Other proceeding could be considered are mineral premixes export to Austria and producing 14 new products for poultry and horses.

The modern equipped laboratory department of the complex has also been as the most comprehensive livestock and poultry analysis laboratory in the country; and was succeeded in obtaining a partner laboratory certificate from Ministry of Health and Medical Education, Iran Veterinary Organization and Institute of Standards and Industrial Research of Iran. The company also has a ISO-22000 certificate as well as national standard IR code in animal feed.



Address: Section 103., 23th St., 3rd Phase., Hashtgerd Industrial District., Alborz., Iran.

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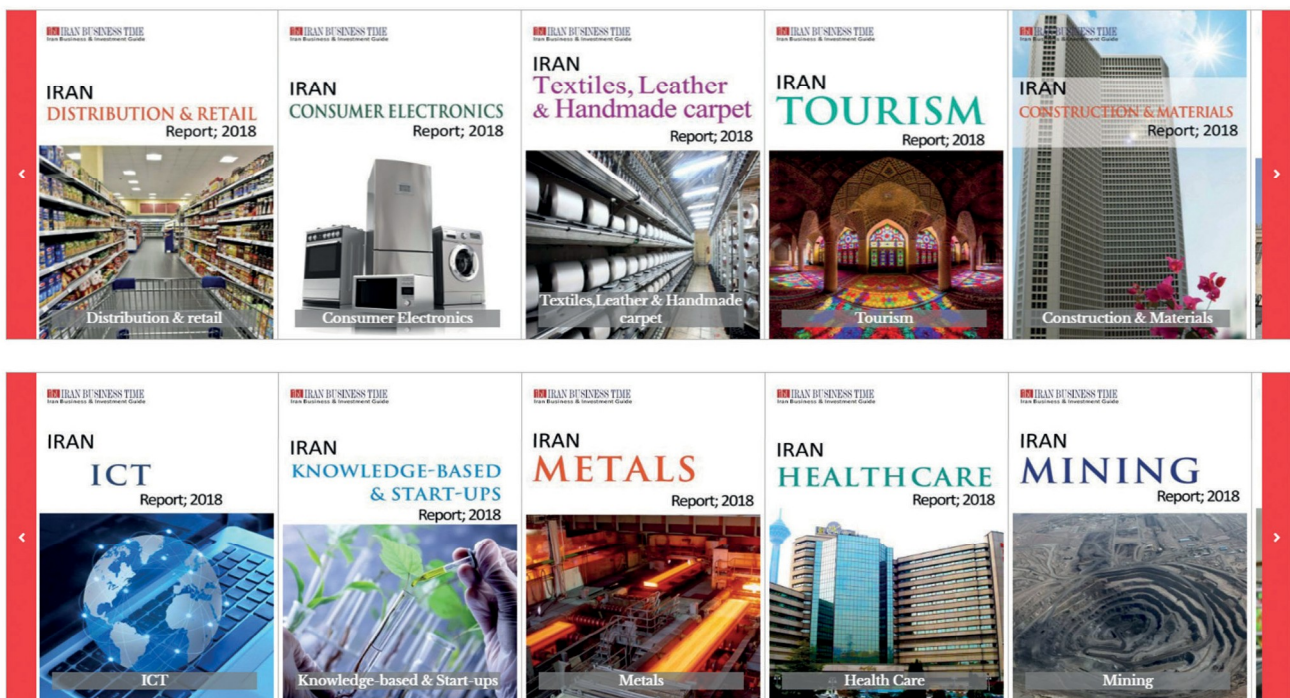
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Iran Feed Industry Association

Sustainability In The Feed Industry



Persian Kneeling Bull Holding Vessel
Period: Proto-Elamite, 3100–2900 B.C.