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A review of the turkey meat production industry in Iran

Ahmad SALAHI (Msc)

ahmad.salahi2010@gmail.com

According to FAO Statistics on the turkey meat production industry, Iran ranked third in Asia after Israel and Turkey.

The production of turkey meat in Israel, Turkey and Iran was respectively in 2000 (137.4, 11.8 and 6); in 2007 (104, 11.6 and 6) and in 2010 (90, 10.2 and 6 Thousand) tons.

Table 1. Poultry meat production in the World, Asia and Iran (million tons) (FAO)

	2000	2005	2007	2010	2011	2012	2013
World	58.5	70.2	76.2	87.2	90	91.6	93.2
Asia	18.6	22.4	25	29.1	29.8	30.3	30.7
Iran	0.804	1.2459	1.4783	1.6627	1.6923	2.042 ^a	2.10 ^b

a, b information provided by Iranian Ministry of Agriculture.

Table 2. Poultry and red meat imports to Iran between 2007-2012 (1,000 tons)

Year	Poultry meat	Red meat
2007	34	64
2008	20	72
2009	35	118
2010	51	200
2011	22	118
2012	45	15

This data shows that turkey meat production in Iran, while showing no increase has been stable.

Based on FAO published statistics of poultry meat production in Asia, Iran, after China (11.556) and India (2.206), is in 3rd place with production of 1.6923 million tons in 2011.

Table 3. Turkey meat production in Asian countries from 1970 to 2010 (tons)

Country	1970 (tons)	1990 (tons)	2010 (tons)
Israel	12,000	57,000	90,000
Turkey	4,690	9,000	10,200
Syria	*	4,690	4,690
Iran	1,257	4,200	6,000
China	4,350	3,016	2,950

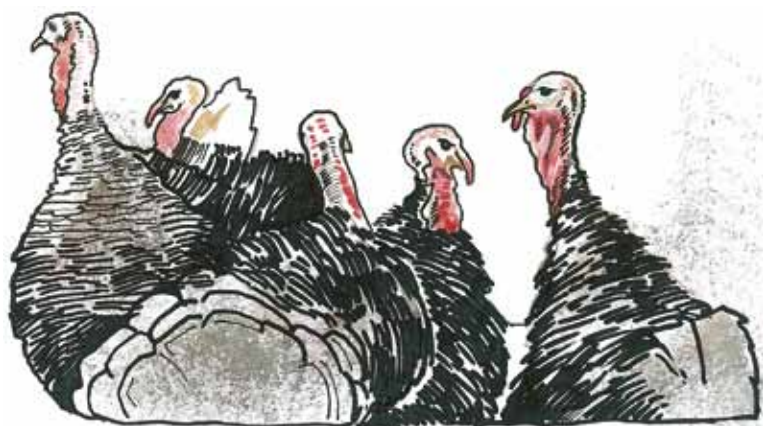
Source: Global poultry trends, Dec 2012 (FAO)

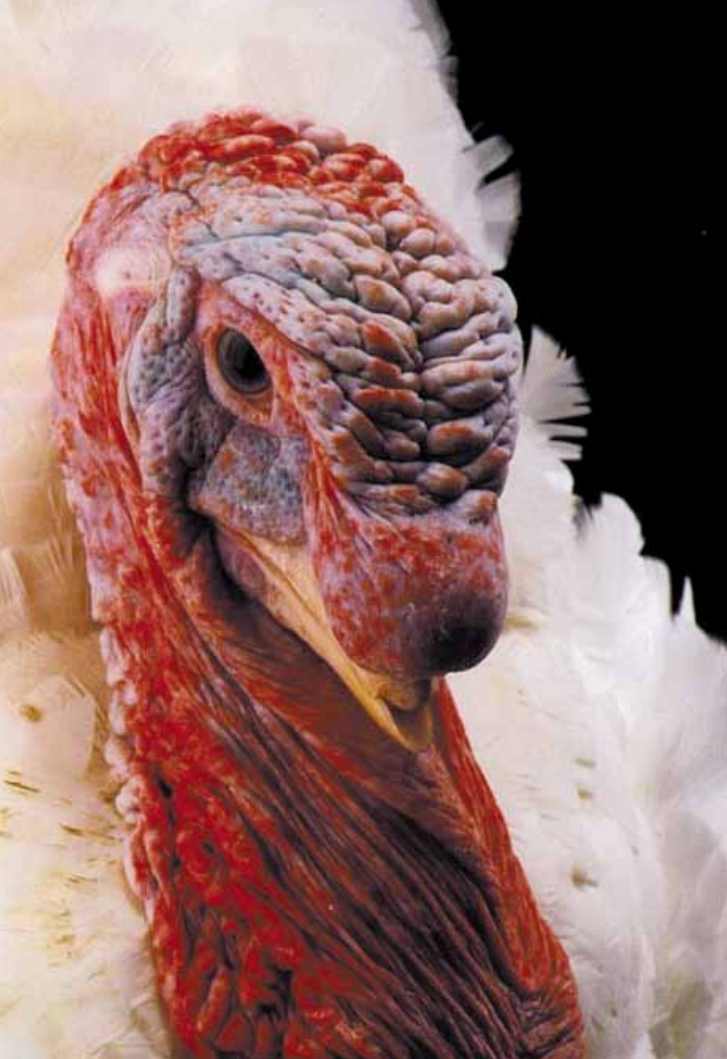
Although the breeding of turkeys in the world started 60 years ago it might be argued that industry growth has been relatively slow over this period. One of the reasons for this slow expansion might perhaps be an over emphasis in hybrid breeding program to focus on growth traits. Recently breeding programmes have also concentrated on other reproduction traits such as egg numbers, fertility, hatchability, egg weight and sexual maturity. Factors associated with weight gain such as feed intake, livability, heart and foot problems have also received attention.

Unfortunately, possibly due to lack of propaganda promoting turkey meat as a valuable protein source in people diets and as a meat that is a good alternative to chicken meat, the world wide increase in turkey consumption might be viewed as less than acceptable. Turkey meat is almost a natural organic product that is low in cholesterol and digestible fat. The bird is resistance against many diseases resulting in less use of antibiotics.

Industrial turkey production in Iran

Although turkey breeding in the world has a long history, it is a new industry in Iran. The turkey was called "Boghalamoon" in the Per-





sian and “Hashdarkhan or Hindi” in the Turkish languages of the country. At the time of “Shah Abbas”, the Iran Armenian merchants, who in their travels to Italy had brought back birds and this led to the Armenians being commissioned to reproduce and grow these turkeys in Iran. Lack of government attention and support over the decades meant industry growth was minimal. According to Mr. Hassan Shahsavan Managing Director of the Shaylo Company, industrial turkey rearing on a small scale in Iran goes back before the Islamic Republic revolution. Over the past 10 years, the industry has developed and spread over 18 provinces. Ten years ago (1995-2000) approximately 50 to 60,000 turkey poults were imported into Iran. In the same period Iran imported annually around 1 million chicks, lots of eggs and between 6 to 8,000 tons of turkey meat.

In an interview with Mr. Aghnyanzhad from the Ministry of Jihad-Agriculture of Iran, Department of Animal production, he stated

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Table 4. Turkey meat production, meat consumption in Iran 2001-2012

Unit	2001	2006	2010	2011	2012
No. of poult entering farms (Day olds in millions)	0.5	0.15	1.3	1.7	1.3
Turkey meat production (tons)	400	1,200	16,000	21,000	16,000
Turkey meat consumption (per capita) (g)	5	18	280	300	280

Source: Zarrin turkey 2013

that turkey meat consumption in 2007 stood at 25 grammes per capita and is programmed to rise to 300-350 grammes by the year 2013. He also stated that turkey rearing in 2006 stood at 150,000 poults started and now stands at 2.3 million poults being reared by 400 growers in Iran.

A survey of data from turkey growers showed that more than 2.4 million poults were reared in 2012 and these growers produced 27,000 tons of turkey meat. The majority of turkey growers (40 %) are located in the Isfahan province. One of the great problems of the Iran turkey industry is the stocking capacity of the farms. Farmers tend to rear between 2 to 10,000 poults with the average being 5,000 poults.

In Morocco and the United States capacity of farms is more than 50,000 poults and this means the industry in these countries can be run more economically than it can in Iran.

Turkey poult imports to Iran

Currently one-day old turkey poults are imported from countries such as Canada, France and UK. These imported poults are mostly off-sex birds with a low number being from commercial strains.

Most of strains are Hybrid (Hendrix) and Avia-gen (Nicholas 300 and the BUT; Big 6, 9 and 10). Nearly 50 % of the poults come from G.P off-sex and unfortunately these poults will have a poorer FCR and weight than poults from commercial strains. Out of respect for Iranian growers and a need for transparency, one would like to see an increase in the number of commercial strains being imported with the ratio of off-sex being decreased.

The large administrative bureaucracy apparatus for importing day old poults causes problems. For example in January 2008 nearly 10,300 poults imported from Canada to Iran died in airport (<http://isna.ir>). Regardless of country of origin nearly 10 percent of poults imported to Iran died during their first week of life causing an obvious negative effect on profitability and the turkey industry in general.

Ministry of Jihad-Agriculture of Iran increased tariff rates on one-day old poults from 4 to 10 % from 2013 and this certainly will have an affect on rate of poults entering Iran.

The tariff rates for turkey eggs were not changed (<http://aftabnews.ir>).

Table 5. Number of eggs and poults imported to Iran between 2010- 2011

Unit	2010	2011
Turkey eggs	244,706	625,365
Turkey poults	1,125,592	1,468,319

Source: Iranian turkey experts data

Turkey egg imports to Iran

While the data in *Table 5* shows that over 625,000 eggs were imported into Iran in 2011, Mr. Sohrab Aghebati, General Director of Guilan Veterinary states that more than 980,000 turkey eggs were imported to this province during 2012 from France (<http://gilan.isna.ir>). Importing fertilized turkey hatching eggs rather than importing day-old poults is better and more economical. It is also known that mortality rates on imported poults was higher than in poults hatched in Iran from imported eggs. In recent years there has been a shift from importing poults in favour of importing hatching eggs.





Experts strongly believe that poults produced in Iran have a better liveability and are 200 to 300 Toman (6.45-9.67 cents) cheaper than imported day olds.

Backyard turkeys (native)

Currently there are more than 25 farms growing native turkeys in Iran with a rearing capacity of 95,000 birds producing 10,000 kg of turkey meat annually. **We can assume that turkey meat production in Iran from both commercial strains and native breeds is 37,000 tons annually.**

Parent farms

There are no Grandparent stock farms in Iran because there is no economical benefit when the annual bird population for turkey meat production is below 3 millions poults. Until 2012 there was also no turkey parent stock in Iran. Mr. Hassan Shahsavan comments that many years ago some parent stock poults were imported into the country but there seemed to be many problems in the rearing and with the artificial insemination procedure for the turkey hens, although there is no documented evidence of this fact.

After a five-year period of rearing meat type turkeys the Tina Turkey Complex (TTC) decided on 5 March 2013, to import 2600 female and 400 male turkey parent stock. In making this step the company chose the Nicholas 300, because this is a small strain turkey with good FCR and of an acceptable size for the Iranian market. Along with the native strains of turkeys one can find Nicholas, BUT and Hybrid Grade Maker breeds present in Iran. During a three years period the market share for the Hybrid strain, which is produced by the Hendrix genetic company, has increased and now represents more than 52 % of the market.

Turkey slaughterhouse

Turkeys at the end of the rearing period are transported by trucks with capacities of 200 to



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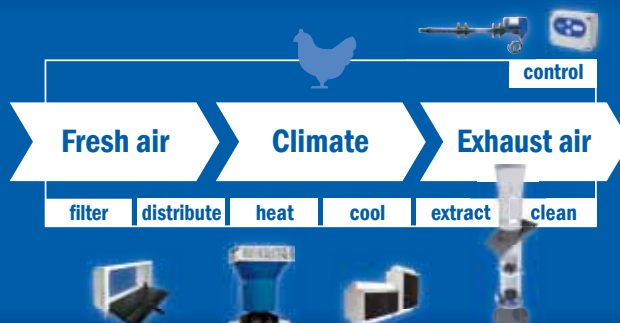
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400 birds to the slaughterhouse. Many broiler slaughterhouses will also slaughter turkeys at the end of the day after the broilers have been processed.

There are two specialized turkey slaughterhouse units in Iran. The Bouin Zahra slaughterhouses in Qazvin province has been operational since 2007 and with a land capacity of 10,000 square meters it can process 12,000 turkeys daily. The complex has a chilling tunnel with 500 tons capacity and can freeze 30 tons turkey meat in 8 hours.

The Samin and Sepahan Slaughterhouse currently has 2 linear chains with equipment dedicated to turkey slaughtering. The Isfahan province is one of the principal rearing centres for turkeys in Iran. Other names and complexes involved in turkey slaughtering are Sepid Baal Miad in Qazvin; Zanjan poultry slaughterhouse; Iran Tytoo in Tehran; Azar poultry in Azerbaijan and Baharan slaughterhouse in Qom.

Distribution of turkey meat in Iran

With a low fat content turkey might be viewed as a lean meat with little flavour or taste which may not be compatible with everybody's taste.

The meat does however lend itself to being further processed into value-added products (sausages etc) with excellent taste qualities.

Unfortunately in Iran there has been little investment in further processing turkey meat into a range of value-added meat products such as has occurred in many Western countries where such turkey meat products command high prices. Thus more investment should be made in this area.

The transportation costs of moving birds from the farms to the slaughterhouses in trucks that can only carry between 250 to 300 birds is a major cost and has a direct

influence on the price of turkey meat in Iran. If we assume one truck with a capacity of 250 turkeys, and an average bird weight of 12.5 kg, calculations mean a live weight cost of 1230 Toman (40 cent) per kg for transportation.

Another problem facing the industry is the high price of feed. As the protein levels required in a turkey diet are higher than those required for chickens and as soybean is the main source of protein and because most of the soybean imported into Iran comes from Brazil, Argentina, India, etc. protein costs have a major impact on turkey meat prices.

We know that the division of red and white meat in turkeys is 40 and 60 % respectively and that 65 % of the carcass is lean meat. Turkey meat in Iran is sold in many different methods and more than 90 % of this meat is distributed directly from the meat stores and bazaars.

Methods of turkey meat distribution are:

1. Sales of live birds - in the Khorasan, Kord-estan, and Charmahal Bakhtiari provinces turkeys are sold as live birds and people slaughter the birds themselves at home.
2. Whole carcasses - in many provinces turkey meat is sold as a whole carcass in large markets and retail stores.
3. Cut up & packaging - in Tehran and Isfahan we can observe that some turkey meat is cut up and packaged into products. Famous brands in this area are Maral, Pekad, Tokav and Shakilan.
4. Turkey meat processing products - some companies like Iran Tyto, Goshtiran, Mikaeilian(Tehran), Ferydan packaging, Shakila Kish (Isfahan), Baharan (Qom), Kale, Andre (Mazandaran) and Sems (Fars) do the major work in this field.

Turkeys grown in Iran generally are in the small to medium weight range. When the market position is not good turkeys with heavy weights (more than 16 kg) will be directly turned into salami and sausage products. ■

