

## World and Turkey over the past twenty years chicken examination of the production, consumption export and import

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### Abstract

One of the most important conditions of a healthy and balanced diet is the daily amount of vitamins, minerals, water, carbohydrates, fat, and protein that the body needs to be met from vegetable and animal origin products. Among the products of animal origin, chicken meat is both cheap and; it is a quality product. High-efficiency lines have been obtained with various breeding and selection studies carried out on poultry animals for many years throughout the world. Especially in recent years, chicken meat has attracted attention with its rich amount of nutrients. One of the biggest reasons for this is the rapid increase in production and consumption over the years. Worldwide USA, Brazil, China, European Union, India, Russia, Mexico, Argentina, Turkey, Thailand, countries like Indonesia is located in the first take place of chicken meat production. Turkey, especially in the last 30 years, poultry has increased rapidly over the years the production capacity of the work done on. Especially in recent years, a rapid increase has been achieved in exports and imports worldwide. In the World and Turkey with the increase in the production amount over the years, per capita consumption of chicken meat has also increased. In this study, the last two decades the world and Turkey, chicken meat production, consumption, export, and import are intended to provide information about.

**Keywords:** World; Turkey; White meat; Production; Consumption; Export; Imports

### 1. Introduction

One of the most important conditions of a healthy and balanced diet is to meet the sufficient and necessary amount of nutrients per person. The body needs vitamins, minerals, water, carbohydrates, fat, and protein daily. Proteins are nutrients that cannot be stored in the human body and must be taken from outside on a daily basis. The amount of protein needed varies according to age and gender, and it is stated that individuals need an average of 0.8 g of protein per kg/body weight per day for adequate nutrition (3, 13, 18). For an adult, 0.83 g of protein per day per body weight is required (9, 10, 19). When an average calculation is made, it is possible to say that a person weighing 70-80 kg needs 70-80 g of protein per day (14). 40-50% of the amount of this protein to be consumed should be met from animal origin proteins (3, 4). While this amount is over 50 g in developed countries; It weighs less than 9 grams in countries in the south of Africa (14). Considering the amount of protein consumption of animal origin worldwide, 5.2 grams of India's consumption of 48.4 grams of protein is of animal origin. When other countries are examined, 43.7 grams of protein consumption in Indonesia; 5.1 grams of animal origin. In Bangladesh, 5.7 grams of the consumption of 42.4 grams of protein are of animal origin. 36.4 grams of total protein consumed in Zaire, one of the African countries; 7.1 grams of animal origin. 42.1 grams of protein consumed in Guinea; 4.5 grams of animal origin. Of the 36.0 grams consumed in Mozambique, 4.3 g is provided from an animal protein source (2, 11). Especially products such as milk, eggs, red and white meat attract attention with their rich nutrient and protein content. When the protein amounts of these products are examined, it is noteworthy that they have an important amount of 20.94% for beef, 19.5% for mutton, 20% for veal,

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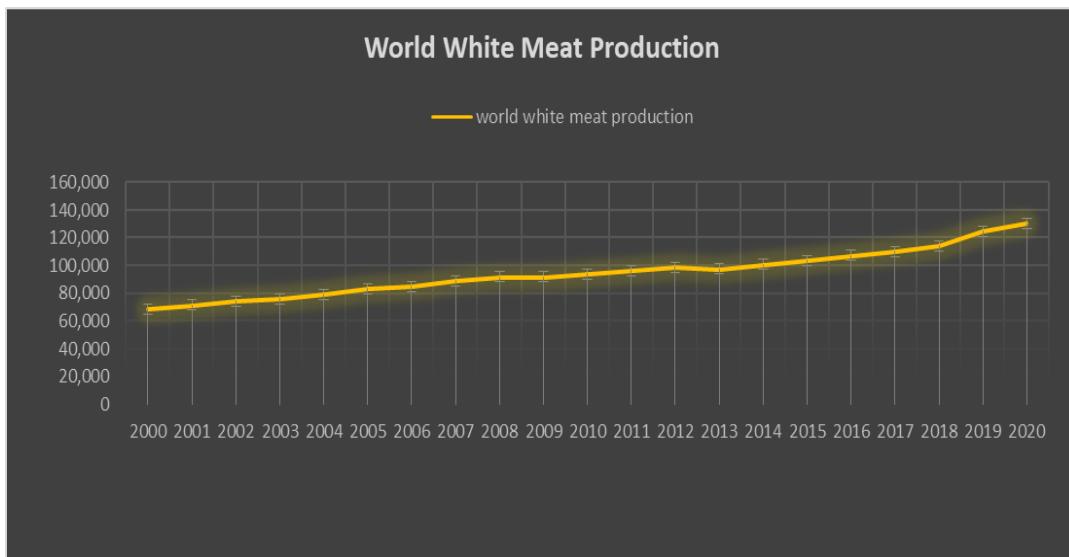
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and 21.39% for chicken (1). It is remarkable that chicken meat is a source of high quality and digestible protein content, rich essential amino acid content, B group vitamins including B6 and B12, and rich in vitamins A, D, and E. (12). In addition, niacin, riboflavin, ascorbic acid, iron, zinc, phosphorus, Na, K. It is also rich in Mg, Ca, Fe, P, S, CP maintenance. It has an important role in the growth and development of children due to its rich content. Meat quality varies depending on environmental factors such as slaughter age, breed, breed, gender, diet, and temperature. It is stated that on average 100 grams of chicken meat has phenylalanine 842 mg, leucine 1.540 mg, isoleucine, 1.125 mg, tryptophan 907 mg, methionine 556 mg, valine 750 mg, and threonine amount 250 mg (5). Protein content, on the other hand, has a high value of 20-22% on average (6). Chicken meat production with all these characteristics has increased significantly in the last 30 years due to the developments in poultry farming worldwide. When Turkey's progress is examined chronologically, production is made in a small family business in the 1970s. In the 1980s, it is seen that thanks to the structural changes that occurred with the increase of industrialization, integrated facilities were established and the contracted production model started to be implemented. With the government support and the efforts of entrepreneurs, the number of modern production facilities in the 1990s has increased. Along with this, the production capacity has also developed rapidly and high standard production has begun.

## 2. World chicken meat production and per capita consumption review

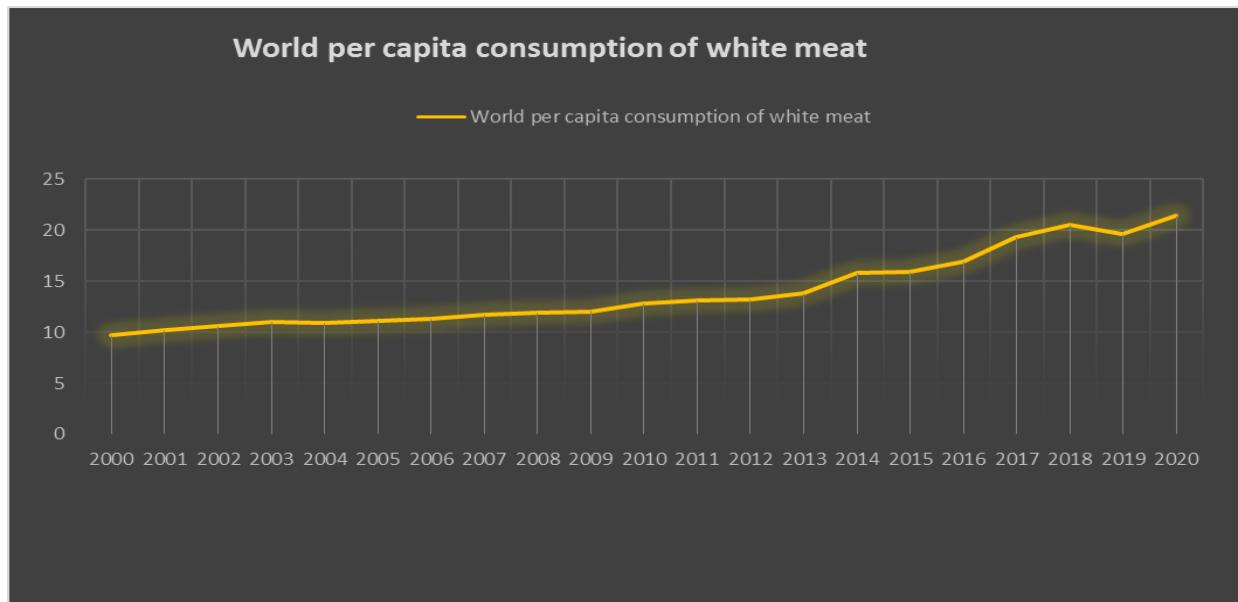
Poultry meat production in the world was 68.7 million tons in 2000, it reached 107 million tons in 2016, 121.6 million tons in 2017 and 123.7 million tons today (7,8,9,10). Today, 37.27% of world meat production is obtained from chicken, while pork is 36.52%, bovine meat is 21.69% and ovine meat also has a share of 4.51% (10). While the total amount of meat produced today is 330.5 million tons, it is estimated by FAO that the total amount of meat will reach 357.5 million tons in 2025, while the amount of poultry meat will maintain its position and increase its share. In particular, in the world chicken meat production in the United States, Brazil, China, European Union, India, Russia, Mexico, Argentina, Turkey, Thailand, Indonesia is located in the first take place (19). The United States, China and Brazil had a large 46.5 percent share of chicken meat production in 2018. In Turkey, 2.3% of the world production took place in the 8th rank (7,8,9,10).

### 2.1. White meat production in the world in the last twenty years (million ton)



**Figure 1** World white meat production

## 2.2. The last twenty worldwide annual white meat production (kg)

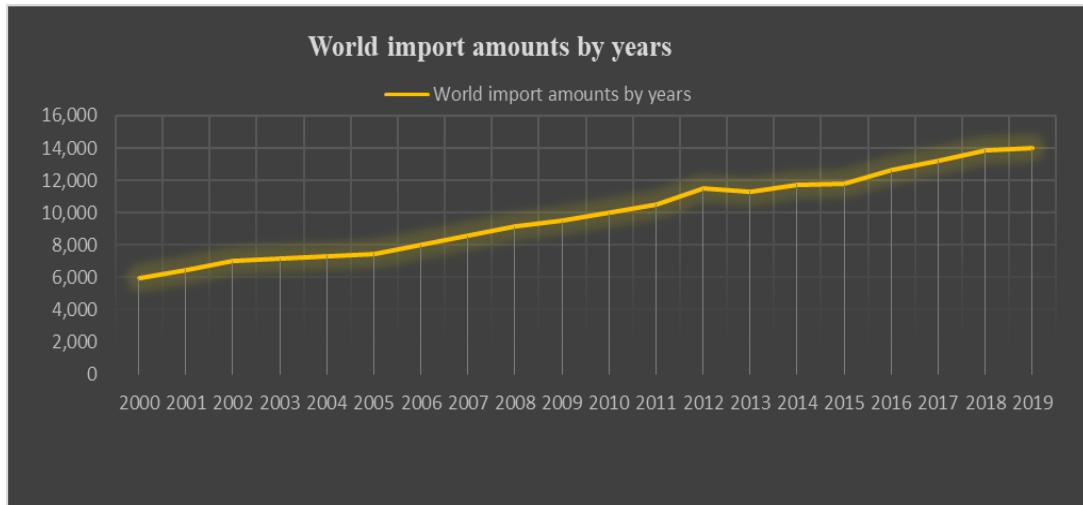


**Figure 2** World per capita consumption of white meat

## 2.3. World chicken meat import and export examination

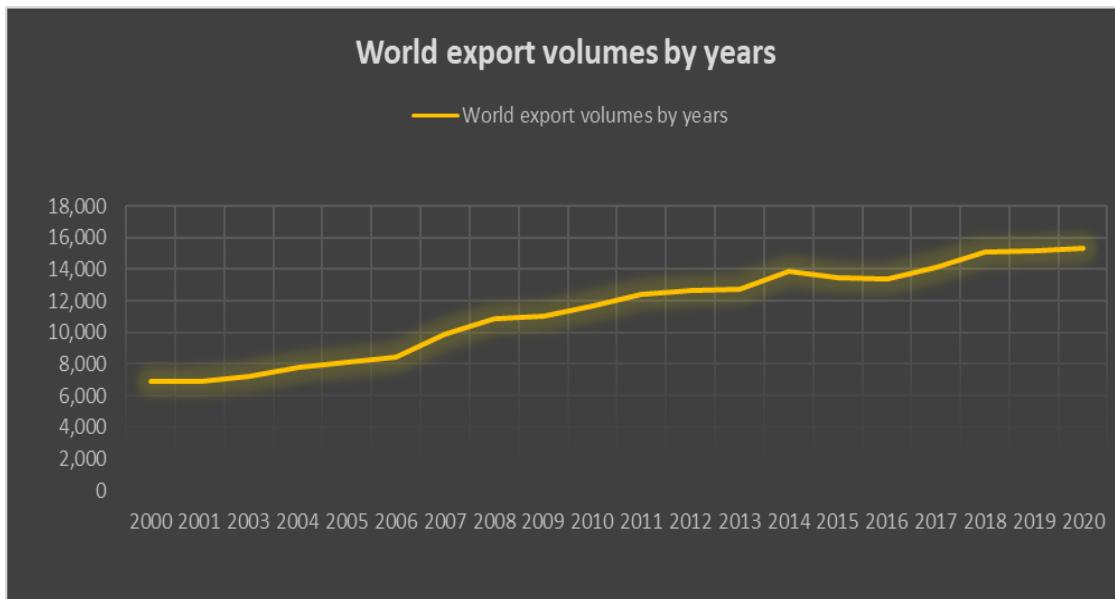
The chicken meat export in the world reached 12.6 million tons in 2012. The USA and Brazil, which take part in providing this amount, take first place with a large share of 46%. While the USA leads in chicken meat production, in export; Brazil ranks first with a share of 32% (9). However, while the production amount was 12.74 million tons in 2013; it reached 13.40 million tons in 2016 and has increased gradually until today (9,10).

### 2.3.1. World white meat imports in the last twenty years (million tons)



**Figure 3** World import by years

2.3.2. *World white meat imports in last twenty years (million tons)*

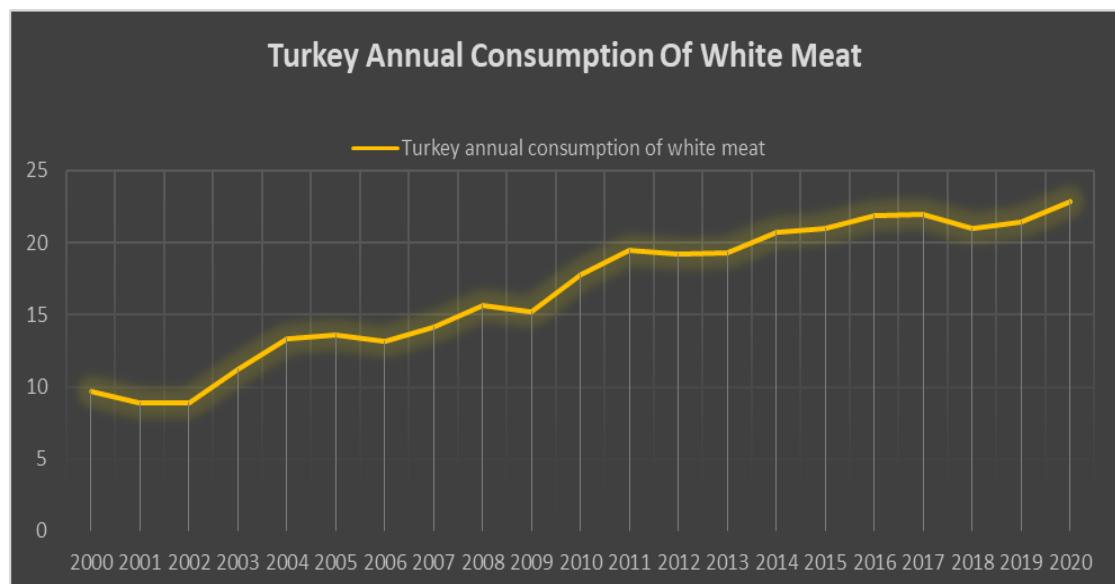


**Figure 4** World export volumes by years

### 3. Examination of turkey chicken meat production and consumption per person

Due to developments in Turkey; The annual production increase of chicken meat increased gradually between 1990-2000. Between the given years, Turkey's per capita annual consumption of chicken meat has increased from 3.8 kg to 14.5 kg, the year 1990 increased by approximately 3.8 times in the period up to 2008; It has increased 1.5 times in 2010-2018. In particular, since 2008 in Turkey broiler industry worldwide in the first ten countries located in Turkey. Turkey's growth in the years include poultry meat production reached 2.23 million tons in 2018. In addition, it increased its annual share per capita to 22 kilograms (9). The studies in 2025 in line with the per capita poultry meat consumption in Turkey 32.9 It is stated that it will reach kilograms.

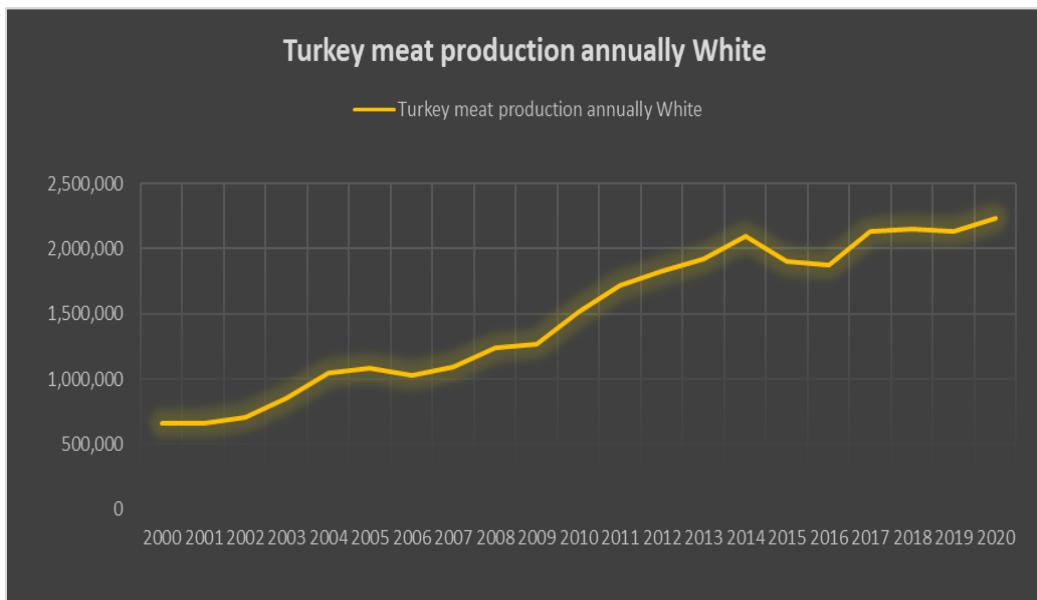
#### 3.1. Last twenty years turkey white meat consumption per capita (kg)



**Figure 5** Turkey annual consumption of white meat

Turkey's poultry meat production in 1990 is 217 thousand tons, while the production level in 2000 was 752 thousand tons and 1.5175 million tons in 2019 and 2010 has exceeded 2.1 million.

### 3.2. Over the past twenty years Turkey white meat production (tons)

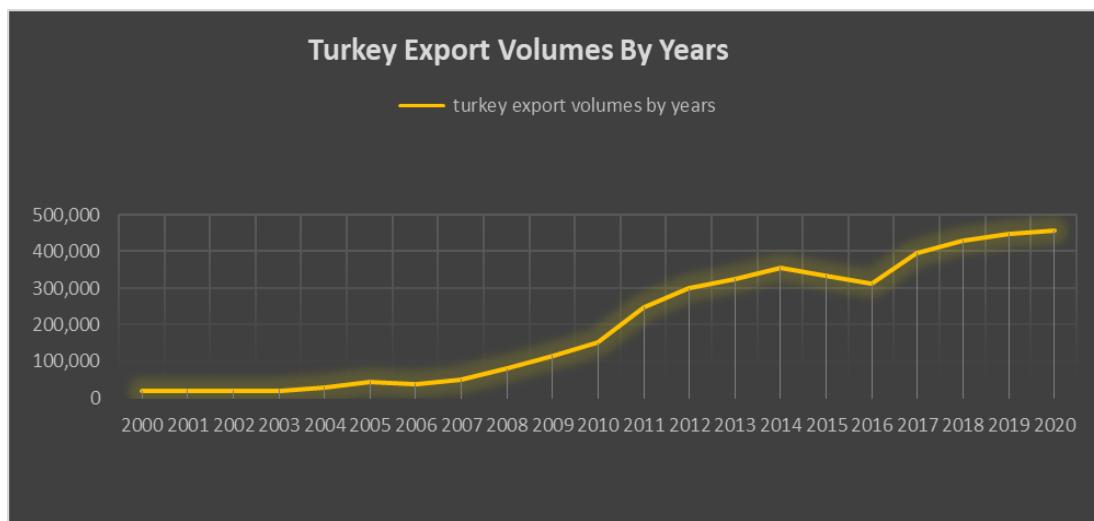


**Figure 6** Turkey meat production annually white

### 3.3. Examining Turkey Chicken meat exports and imports

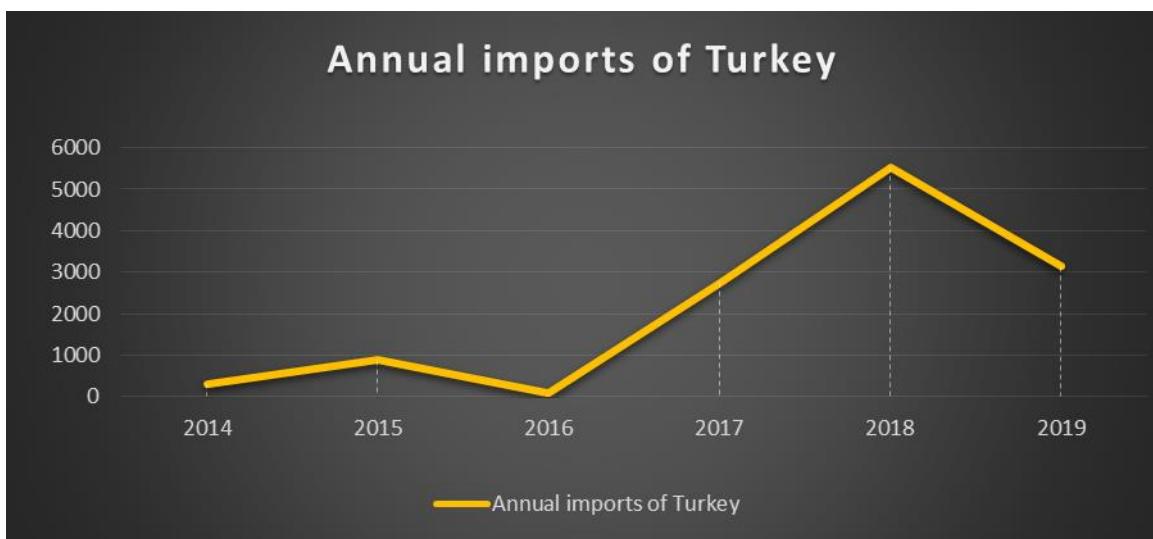
In Turkey, while in 2005, 46 thousand tons of poultry meat exports; In 2018, it increased 8 times and reached 413 thousand tons, it has ranking 7th in the world. Also, in 2018, Turkey has reached it has highest level in history with the number of chicken meat exports. It has been stated that this export amount decreased by 3.0% in 2019. Turkey approximately 141.700 tons in 2010 and 211 million dollars of exports of poultry meat increased by 202.8% provided conveyed to 429.100 tonnes in 2017 and it has exported value reached 553 million dollars. This value is 571 million dollars in 2019 and provides 95.2% of it from chicken meat production (16). According to the estimates, it is stated that an 11 percent increase is expected in 2025.

#### 3.3.1. Last twenty years turkey white meat export (million tons)



**Figure 7** Turkey export volumes by years

### 3.3.2. Amount of annual imports to Turkey from 2014 to 2019 year



**Figure 8** Annual imports of Turkey

## 4. Conclusion

While chicken meat production was 68.7 million tons worldwide in the 2000s; today it exceeds 130 million tons. The largest share in this production the United States, Brazil, China, along with countries such as Turkey. Turkey has increased rapidly, especially in recent years the production of chicken meat every day are placed in top positions in the world market. One of the biggest indicators of this was 662.96 thousand tons in the 2000s; today it exceeds 2 million tons. At the same time, while there were mainly family businesses in the 1970s; today, 95% of the processes consist of integrated enterprises. In addition, with the selection and reclamation studies carried out, the production amount is increasing day by day throughout the world with the achievement of rapidly developing lines. Especially, when the last twenty years in chicken meat production are examined, both worldwide and; the rapid increase is observed in Turkey. Over the years, the per capita consumption of chicken meat contains year has increased significantly over the world both in Turkey. Newmarket opportunities with this increase have occurred in Turkey. Accordingly, it has increased both the export and import amount over the years. The studies and statements and in the coming years both in the world of poultry and poultry meat production in Turkey indicated that it will increase quickly.

## Compliance with ethical standards

### Disclosure of conflict of interest

There is no conflict of interest in this study.

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