

## A COMPARISON OF THE AGRICULTURAL SECTOR IN ROMANIA AND TURKEY

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**Abstract.** *The present overview aims to statistically enlighten the similarities and differences of the agricultural sector between Romania and Turkey. Our overview uses official statistical data from the year 2021 to compare the agricultural sector of Romania and Turkey. The data of this study were collected from the National Institute of Statistics of Romania (NSI Romania) and from the Turkish Statistical Institute (TUIK). Also, Turkey is one of the largest wide-range agricultural product producers worldwide, with a 5.54 percent share of total gross domestic product (GDP) in 2021. In Romania, the share of the agricultural sector in 2021 was 4.4. Arable land represents 64.22% from the total agricultural land in Romania and 52.20% in Turkey; this fact highlighting the agricultural specificity of each of the analysed countries. The structure of the agricultural production is very different in the analysed countries, because the greatest productions in Romania are obtained by the cereals for grain and green fodder cultivated in arable land, while in Turkey the most important from the perspective of the production are fruits, nuts and vegetables. Turkey has a very divert range of vegetable crops, dominated from far by tomatoes, while in Romania cabbage and tomatoes are the greatest production. The sector of fruits and nuts in Turkey is represented by a great range of species, from those citrus fruits have the greatest production. In Romania, the greatest fruit production is given by grapes. Regarding the animal breeding, Romania has the greatest number of poultry, while in Turkey sheep are dominant. The greatest animal production in Romania was obtained in poultry sector and in Turkey in the raw milk. The latest available data on agricultural sector of Romanian and Turkey shows that both agricultural sectors are complementary.*

**Keywords:** *Agricultural sector, Romania, Turkey.*

### INTRODUCTION

Agricultural sector worldwide is very important for the economic growth, because it accounts for about 4% of the global gross domestic product (GDP), and in some less developed countries, it could account for more than 25% of the GDP (WORLD BANK, 2023). But also, the food and agriculture sector produce a great range of agricultural products contributing to the feeding of a great part of the world population (WORLD HEALTH ORGANIZATION, 2023). RITCHIE et al. (2003) mentions that in most of the countries across globe increased the diversity of the diets. Thus, cereals, different roots, together with other staple crops were dominant in the past dietary structure of the humankind. Nowadays it has diversified in vegetables, legumes, fruits, seeds, nuts, and other raw food products, with a specific structure from a country to other.

According with FAO (2009) agriculture in this century is facing with numerous challenges: e.g. the need of producing more food and fibres for feeding a rapidly growing population with decreasing labour force, the demand of more agricultural products for a increasing bioenergy market, the necessity to contribute at the overall development in the developing countries dependent by agriculture, the need to adopt more sustainable production systems able to adapt agriculture to climate change.

Agriculture is still playing an important role in both economic and social terms. It is considered that about a quarter of the labour force worldwide work in agriculture. In numerous less developed countries, a great part of the active population works in farming and is relying on it as the main source of income and livelihood (ROSER, 2023).

Agricultural sector in Romania in 2021 had a contribution to GDP estimated at 4.4% (WALL-STREET, 2021). The income produced by the agricultural sector in the year 2021 in Romania was greater with 25.5% in comparison with the previous year (EUROSTAT, 2021; STANCIU, 2022).

The area used for agriculture in Romania is about 13.5 million hectares (ha) (EUROPEAN COMMISSION, 2023), occupying the fifth position in the European Union (MAT, 2023). The areas cultivated in Romania in 2021, compared to the data from the previous year, were higher for cereals for grains, plants and orchards, and were lower for pulses, sugar beet, tobacco, potatoes - total, vegetables - total, green forage cultivated in arable land and vineyards (NATIONAL INSTITUTE OF STATISTICS, 2023).

According to the results of the statistical survey "Livestock and animal production in 2021", compared to the previous year, cattle, pigs, sheep and goats were lower, while poultry numbers increased (NATIONAL INSTITUTE OF STATISTICS, 2023).

According to the 2020 TURKSTAT data cited by MINISTRY OF ENVIRONMENT, URBANIZATION AND CLIMATE CHANGE (2023), the total agricultural land is 37,762 thousand hectares (meadow and pasture land are also included). 51.9% of the total agricultural land is cultivated land, 9.4% is land with perennial crops (perennial orchards), and 38.7% is permanent meadows and pastures.

Turkey is one of the largest wide-range agricultural product producers worldwide (TURKSTAT, 2022a, FAO, 2023).

Turkey's agricultural products are highly diversified due to the diverse topographic and climate features. The production amounts of the cereal and other agricultural crops (excepting forage crops) have increased with 14.6% in the year 2022 in comparison with the year 2021, and also increased with 7.7% in fruits, beverage and spices crops, but in the case of vegetables production has decreased with 0.5% (TURKSTAT, 2022a).

The aim of this overview is to analyse and compare the agricultural sector profile in Romania and Turkey.

## **MATERIAL AND METHODS**

The data considered for the Romanian agriculture sector National Institute of Statistics of Romania (NSI Romania) (2023).

The datasets of the year 2021 for Turkey were registered by the Turkish Statistical Institute (TUIK). From those data, crop production data from Turkey were obtained from TURKSTAT (2022a). Regarding the livestock and animal productions from 2021 they were obtained from TURKSTAT (2022b).

For both countries were compared the following: land fund, production of the main crops and livestock. The purpose of the work is to analyse and compare the profile of the agricultural sector

## **RESULTS AND DISCUSSIONS**

The main point of the work was to compare the agricultural sector from Romania and Turkey.

In Figure 1 is presented the area of agricultural and forestry land fund from both compared countries in the year 2021. The area of agricultural arable land, forests and pastures differs between Romania and Turkey due to the difference of each countries' area. Analysing the graphs, it can be noticed that Turkey has bigger arable land area than Romania, but when we compare it to each countries' total area, the arable land area of Romania represents about 64.22%

of its total area while in Turkey it represents 52.20%, so this fact evidences the agricultural specific of each country.

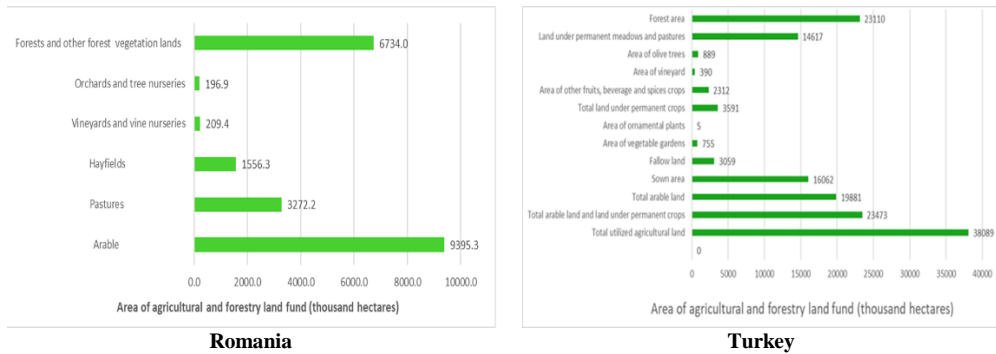


Figure 1. Comparison of the agricultural and forestry land fund

The comparison regarding the agricultural production between Turkey and Romania is displayed in Figure 2. Agricultural production structure strongly differs between the analysed countries. Respectively the greatest productions in Romania are given by the cereals for grain and green fodder in arable land, while in Turkey fruits, nuts and vegetables are the most important agricultural products.



Figure 2. Comparison of the agricultural production

In Figure 3 is compared the vegetable production of the two analysed countries. Unlike Romania, in vegetable production sector, Turkey has diverse range of crops, while the most important vegetable crops are tomatoes, then watermelon and pepper in Turkey, Romania's number one vegetable crop is the white cabbage followed by tomatoes.

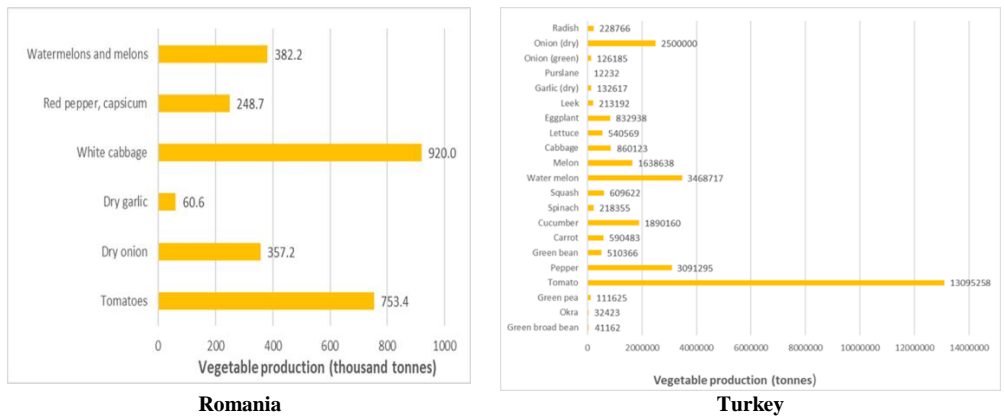


Figure 3. Comparison of the vegetable production

Fruit production is other indicator of the agricultural sector of the two compared countries and the data from 2021 are presented in Figure 4. In fruit production, the case is similar as in the vegetable crops. For Turkey's agricultural sector nuts and fruits sector is very important, with high production and great range of species; with citrus fruits having the greatest production. In Romania, the greatest production in the fruit sector was given by grapes.

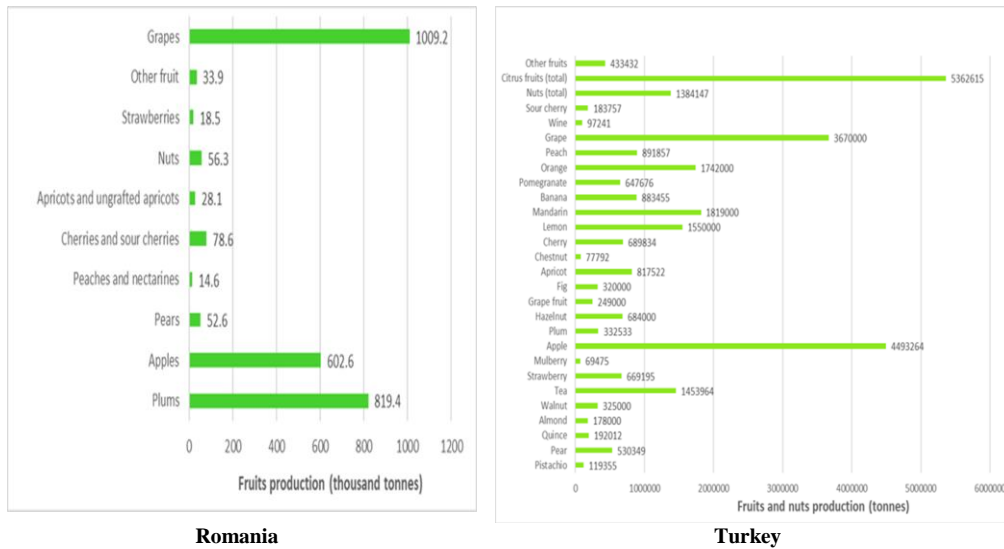


Figure 4. Comparison of the fruit production

One of the indicators of the animal production is represented by livestock, the situation in the two countries being presented in Figure 5.

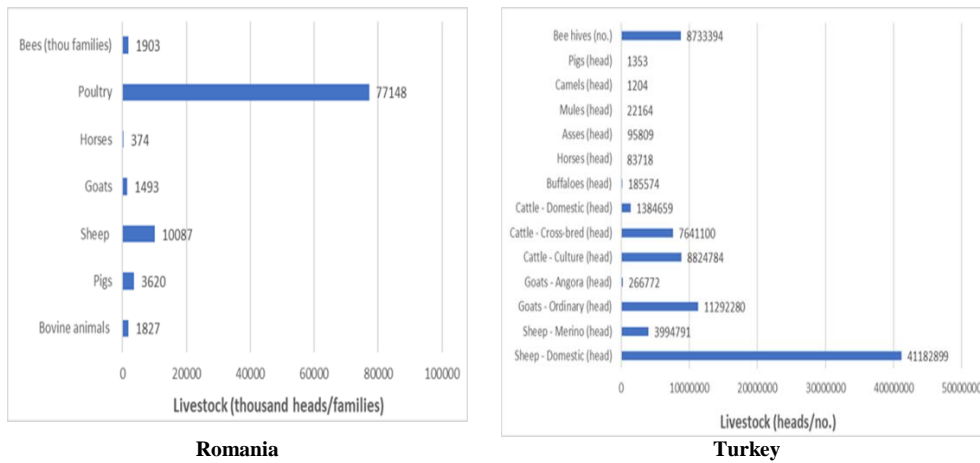


Figure 5. Comparison of the livestock

In livestock, Turkey has a great number of bee hives compared to Romania. While Romania has a higher number of pigs than Turkey. The greatest livestock production in Romania is represented by poultry.

Thus, animal production is presented in Figure 6, comparing the statistical data reported in 2021 by both countries for this sector, respectively Romania and Turkey.

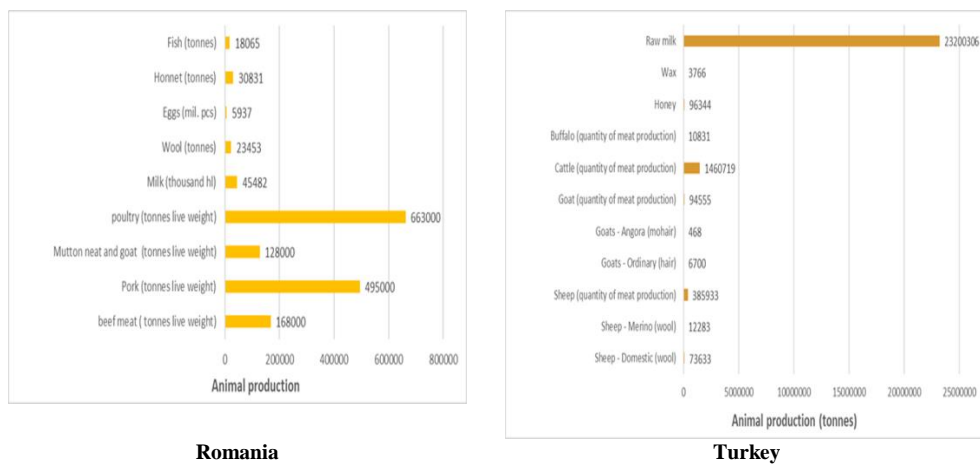


Figure 6. Comparison of the animal production

The greatest animal production in Romania was represented by poultry and the highest animal production in Turkey was raw milk.

### CONCLUSIONS

This overview statistically enlightened the similarities and differences of the agricultural sector between Romania and Turkey; as, we conclude that:

- In Romania arable land represents 64.22% from the total agricultural land and in Turkey it represents 52.20%, this fact evidencing the agricultural specific of each country from this study.
- Agricultural production structure differs strong between the analysed countries, respectively the greatest productions in Romania are given by the cereals for grain and green fodder in arable land, while in Turkey fruits and nuts and vegetables are the most important in general.
- In the vegetable production sector, Turkey has a very divert range of crops, but the most important is from far represented by tomatoes, while in Romania white cabbage is on the first position followed relatively closely by tomatoes.
- As in the case of vegetable sector, the fruits and nuts sector in Turkey is very important and also represented by a great range of species, from those citrus fruits having the greatest production. In Romania, the greatest production in the fruit sector is given by grapes.
- In the animal breeding sector, Romania has the greatest number of poultry, followed by sheep, while in Turkey sheep are dominant from far, being followed by goats.
- The greatest animal production in Romania is represented by poultry and in Turkey by the raw milk.
- In the analysed features of the agricultural sector between the considered countries it was noticed the existence of complementarity.

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