# ANALYSIS OF THE CONSUMPTION OF AGROO-FOOD PRODUCTS IN THE CURRENT PERIOD

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RESEARCH ARTICLE

**Abstract**
*Specialists in the field say that Romania is a country with a very high agricultural potential. Due to the soil and climate conditions, a variety of crops can be cultivated in our country and, consequently, the number of animal species to be reared can be increased to allow the supply of food consumption for the population. The authors of the present paper analyse food consumption availability in Romania so that the food security of the population can be ensured, as well as the possibilities of Romania to ensure usable food resources from its own production. In order to carry out this analysis, the authors resorted to data collection and processing, to mathematical and statistical calculation, and to graphic interpretation. The results of the analysis highlight, unfortunately, that, for over three decades, Romania has been importing most of the basic products – meat, fruits, vegetables – because of the inefficiency of the agri-food agents and of the inability to function of the agri-food chains under market economy conditions. The high share of imports of food shows a lack of concentration of the supply of agri-food products and the inability of Romanian producers to be competitive on both domestic and international markets.*

**Keywords**: agricultural potential, food security, production, import, export
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## INTRODUCTION

In the European Union (EU), the structure of the agricultural land fund in the second decade of the 3rd Millennium shows that six countries – France and Spain with over 16% each, followed by Germany, United Kingdom, and Poland with over 9% each, and Italy and Romania with over 8% each – had the largest shares of agricultural land (*Mateoc-Sîrb et al*., 2013; *Gavrilescu*, 2019).

These countries concentrated about 78% of the agricultural area and about 71% of the arable area of the EU. According to the provisional results of the General Agricultural Census 2020 (GAC 2020) in Romania, the agricultural area used was 12,763 thousand ha. The structure of the land fund of Romania highlights the large share of the arable land area of over 67.2% – 8,571.00 ha – (more than in 2010) of the agricultural area, which ranks Romania first in the hierarchy in terms of agricultural potential (Table 1, Figure 1). Unfortunately, though Romania has favourable conditions for cultivating a wide range of crops, GAC 2020 shows that the main crops are maize, wheat, sunflower, and rapeseed, representing 73.1% of the cultivated arable land, compared to about 67.7% in 2010. (*National Institute of Statistics*, 2022)

Table 1

**Structure of the land fund in Romania**

| Specification | 2010 (thousand ha) | 2020 (thousand ha) |
|---|---|---|
| Arable land including greenhouses and solaria | 8,306 | 8,571 |
| Grasslands and hayfields | 4,506 | 3,724 |
| Permanent crops | 312 | 344 |
| Family gardens | 182 | 124 |

| | | | |
|---|---|---|---|
| | Total | 13,306 | 12,763 |

*Source: General Agricultural Census (RGA), 2020*

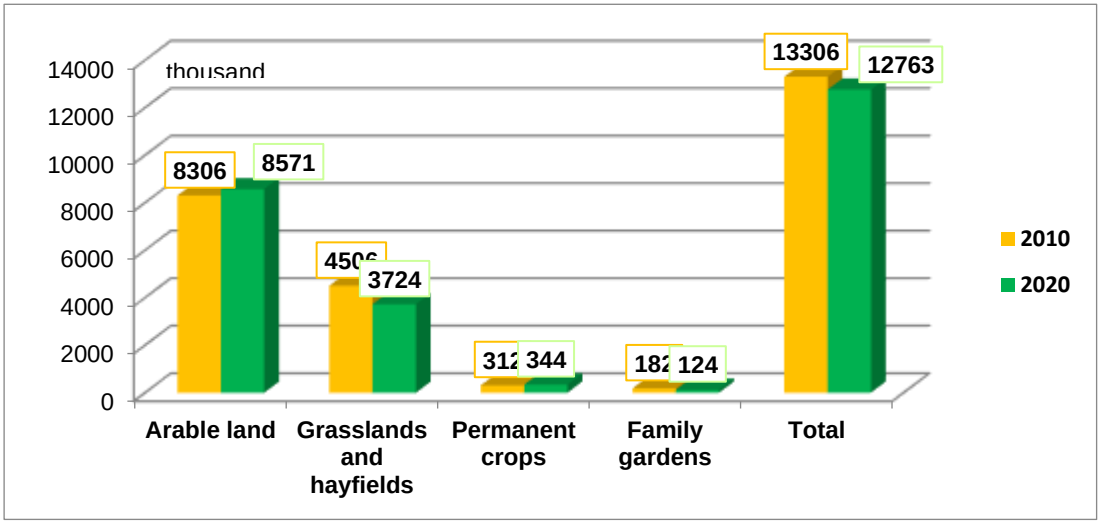


Figure 1**. Structure of the Land Fund of Romania (ha)**

Both rural economy, as a whole, and agri-food economy, as an important element of rural economy, have different structures in Romania compared to the European Union. (*Mateoc-Sîrb et al*., 2022; *Venig et al* 2022)

Romanian rural economy is mainly agricultural (about two thirds) or agri-food (more than three quarters). (Eurostat, 2019). In the EU, the processing of agricultural raw materials in food (raw value bearers) shares more than half of the agri-food economy while, in our country, the production of agricultural raw materials (agricultural economy) has a much higher share of the value total of the final agri-food production (over 75%). (*Gavrilescu*, 2018; *Mateoc-Sîrb et al*., 2013).

## MATERIAL AND METHOD

At national level, agriculture is one of the most important branches of the Romanian economy (*Gavrilescu et al*., 2017). In carrying out this analysis, the authors started from the premise that, within the economy of each country, agriculture holds an important position regardless of the degree of agricultural development due to natural and human resources, to the contribution to the creation of the gross domestic product, to the gross added value, and to the contribution to domestic and foreign trade.

The contribution of agriculture to economic development can be determined by an analysis of the multiple functions it performs, as well as by its contribution to social balance and stability.

## RESULTS AND DISCUSSIONS

Agriculture should **ensure the food security of the population**, that is, permanent access to a sufficient, acceptable quality food for all citizens, to lead an active and healthy life.

Food security is determined through the prism of three elements: *food availability* – expressing the daily needs of food from a quantitative, qualitative, and assortment point of view (about 2,700 kcal/inhabitant/day and minimum 55 g of proteins of which half of animal origin – *according to FAO recommendations*); *security of food supply* – implying the existence of a certain volume of products, of the stocks (reserves) of food from one's own production or their redistribution through exchanges between countries; *economic accessibility* – requiring the acquisition by the population of the necessary food at affordable prices.

Each state needs to ensure the food security of its citizens because the issue of access to food for the population contributes to peace and social peace, stability and prosperity. Currently, food security, population's access to basic agricultural and high-quality agri-food products are major issues and concerns of the states of the world – mainly of developing or underdeveloped countries.

Specialists in the field consider that access to food is a problem that can be an

important factor leading to instability worldwide.

Another problem is **food safety**. According to World Health Organisation data, annually over two million people (of which a significant share is represented by children) die because of diseases transmitted through food. Food can contain viruses, bacteria, parasites or chemicals that cause over 200 diseases, from enterocolitis to cancer. Diseases transmitted through food influence national economies and burden the health systems, thus affecting the socio-economic development of the states.

In Romania, food safety is regulated by Law 150/2004 on food safety. This law represents the basis for ensuring a high level of protection of people's health and consumers' interests.

The analysis of the average annual consumption per inhabitant in the main products, in Romania, has highlighted a change in consumer behaviour of during the analysed period (2014-2020). There are some products in which consumption has decreased: cereals and cereal products, potatoes and eggs; in some products, consumption has increased: vegetables and vegetable products, fruit and fruit products, sugar and sugar products, milk and dairy products, fish and fish products, and meat, meat products and edible offal (Table 2, Figures 2 and 3).

Table 2

Evolution of average annual consumption per inhabitant in the main products

**kg/locuitor**

| Specification | UM | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|
| **Products of plant origin** | | | | | | | | |
| 1.Cereals and cereal products | | | | | | | | |
| *in grain equivalent* | kg | 207 | 211.2 | 208.4 | 208.2 | 205.4 | 204.2 | 204.4 |
| *in flour equivalent* | kg | 156.4 | 159.8 | 157.6 | 157.3 | 155.1 | 154.3 | 154.6 |
| 2. Potatoes | kg | 100.8 | 98.3 | 95.5 | 96.6 | 95.5 | 92.2 | 93.4 |
| 3. Vegetables and vegetable products (in equivalent fresh vegetables), legumes, grains and melons | kg | 182.9 | 182.6 | 178.3 | 187.8 | 202.1 | 196.6 | 194.4 |
| - vegetables and vegetable products (in equivalent fresh vegetables) | kg | 158 | 158.5 | 155.8 | 162.1 | 173.4 | 170.2 | 167.8 |
| 4. Fruit and fruit products (in fresh fruit equivalent) | kg | 80.2 | 87.8 | 96 | 96.1 | 110.8 | 111.3 | 107.6 |
| 5. Sugar and sugar products (in refined sugar equivalent) | kg | 21.1 | 25.6 | 25.3 | 25.7 | 25.4 | 25.6 | 25.5 |
| **Animal products** | | | | | | | | |
| 6. Milk and dairy products, in milk equivalent of 3.5% fat (excluding butter) | l | 244.2 | 243.4 | 246.2 | 244.1 | 250.7 | 252.2 | 252.6 |
| 7. Eggs | buc | 246 | 262 | 267 | 255 | 236 | 241 | 236 |
| 8. Fish and fish products (in fresh fish equivalent) | kg | 4.9 | 5.5 | 5.9 | 6.3 | 6.7 | 6.4 | 6.3 |
| 9. Meat, meat products and edible offal (in fresh meat equivalent) | kg | 60.9 | 66.4 | 68.6 | 71.5 | 76.2 | 77.7 | 77.4 |

*Source: General Agricultural Census (RGA), 2020*

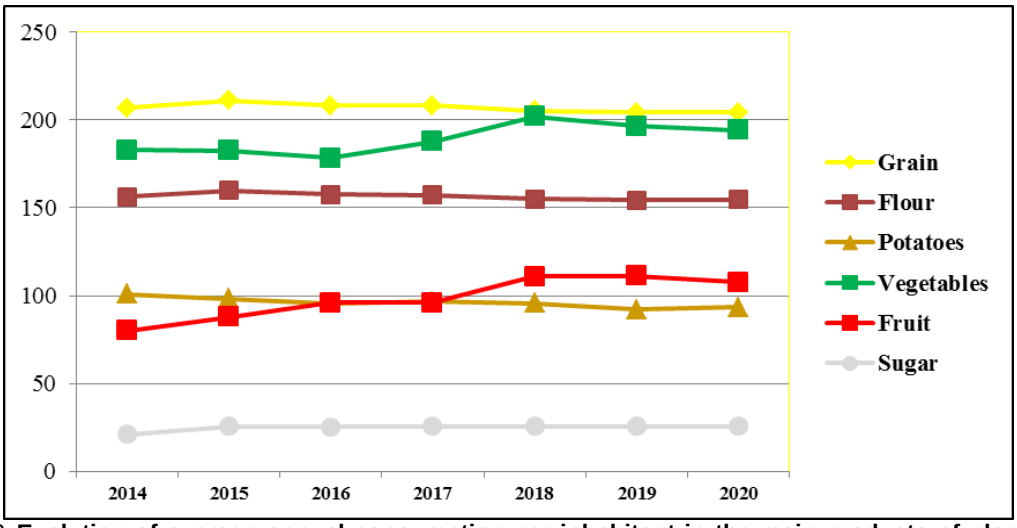


Figure 2 **Evolution of average annual consumption per inhabitant in the main products of plant origin**

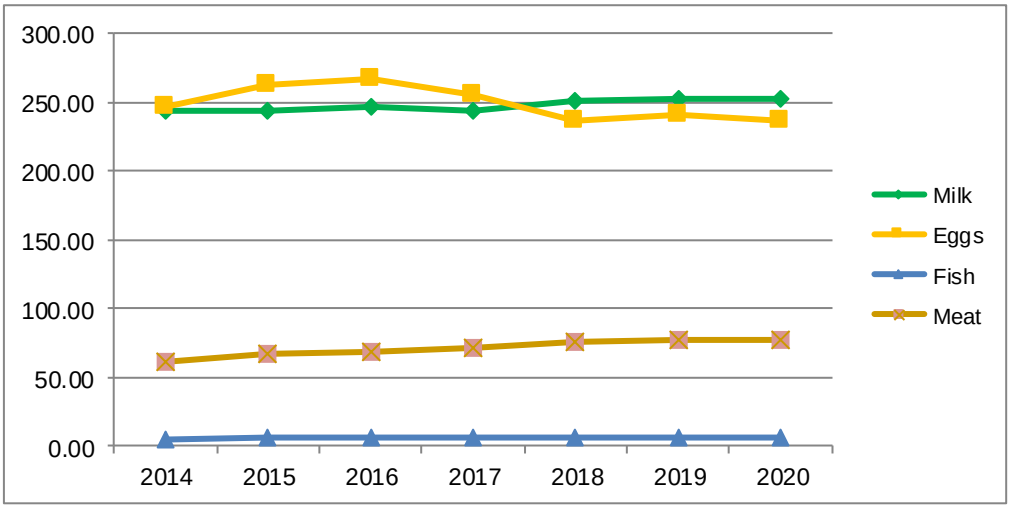


Figure 3 **Evolution of average annual consumption per inhabitant in the main products of plant origin**

Regarding the assurances of food consumption, the analysis of statistical data shows that our country's agriculture succeeded only in cereals and cereal products to ensure its consumption necessities: for all other basic products, it has to resort to imports to ensure the necessary consumption for population (Table 3, Figures 4 and 5).

Table 3

**The evolution of the main agri-food products in Romania**

| | Years | Resources thousand t | Production thousand t | Import thousand t | % | Export thousand t |
|---|---|---|---|---|---|---|
| **Products of plant origin** | | | | | | |
| 1.Cereals and cereal products in grain equivalent | 2020 | 23,070 | 19,089 | 3,981 | 17.3 | 11,525 |
| | 2019 | 32,370 | 30,017 | 2,353 | 7.3 | 14,204 |
| | 2018 | 33,176 | 31,112 | 2,063 | 6.2 | 12,066 |
| 2. Potatoes | 2020 | 3,217 | 2,699 | 518 | 16.1 | 24 |
| | 2019 | 3,163 | 2,627 | 535 | 16.9 | 38 |
| | 2018 | 3,428 | 3,022 | 405 | 11.8 | 43 |
| 3. Vegetables and vegetable products (in equivalent fresh vegetables), legumes, grains and melons | 2020 | 5,249 | 3,605 | 910 | 17.3 | 90 |
| | 2019 | 5,240 | 3,766 | 865 | 16.5 | 135 |
| | 2018 | 5,328 | 3,990 | 845 | 15.9 | 133 |
| 4. Fruit and fruit products (in fresh fruit equivalent) | 2020 | 4,094 | 2,527 | 1,328 | 32.4 | 108 |
| | 2019 | 3,779 | 2,465 | 1,314 | 32.1 | 113 |
| | 2018 | 4,225 | 2,958 | 1,265 | 29.9 | 98 |
| 5. Sugar and sugar products (in refined sugar equivalent) | 2020 | 665 | 187 | 478 | 71.9 | 126 |
| | 2019 | 784 | 292 | 492 | 62.8 | 122 |
| | 2018 | 631 | 137 | 494 | 78.3 | 111 |
| **Animal products** | | | | | | |
| 6. Milk and dairy products, in milk equivalent of 3.5% fat (excluding butter) - mii hl | 2020 | 64,063 | 52,812 | 11,251 | 17.6 | 2,437 |
| | 2019 | 62,946 | 52,568 | 10,378 | 16.5 | 2,464 |
| | 2018 | 63,263 | 52,835 | 10,428 | 16,5 | 2,791 |
| 7. Eggs – mil pcs | 2020 | 5,910 | 5,446 | 464 | 7.9 | 316 |
| | 2019 | 5,994 | 5,564 | 430 | 7.2 | 381 |
| | 2018 | 6,061 | 5,713 | 348 | 5.7 | 428 |
| 8. Fish and fish products (in fresh fish equivalent) | 2020 | 129 | 19 | 110 | 85.3 | 8 |
| | 2019 | 163 | 24 | 140 | 85.9 | 12 |
| | 2018 | 135 | 23 | 112 | 83.0 | 6 |
| 9. Meat, meat products and edible offal (in fresh meat equivalent) | 2020 | 1,588 | 1,028 | 560 | 35.3 | 153 |
| | 2019 | 1,606 | 1,046 | 580 | 36.1 | 163 |
| | 2018 | 1,609 | 1,035 | 574 | 35,7 | 171 |

Source: calculations using INS, 2021, 2022

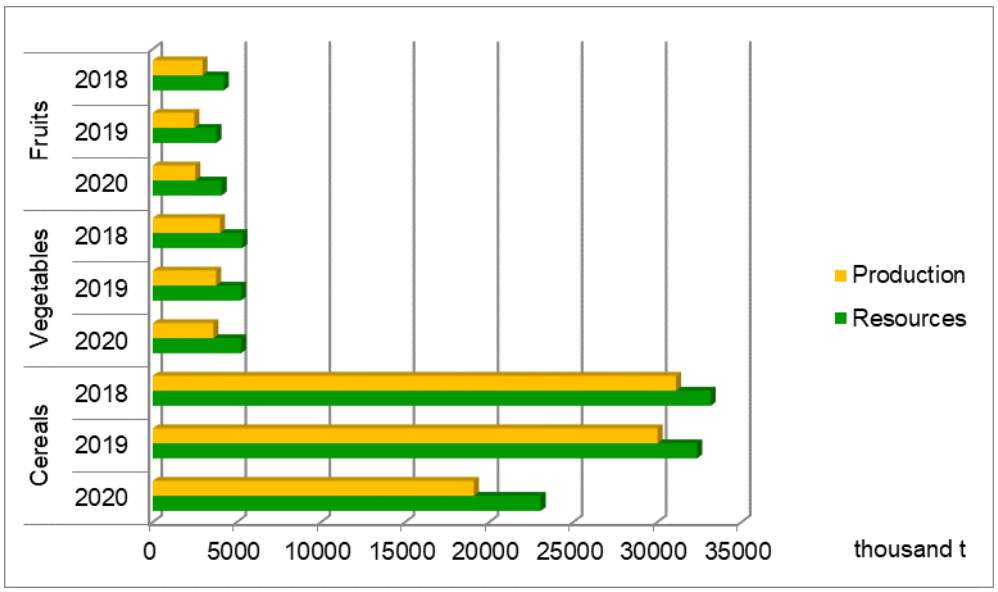


Figure 4. **Ensuring consumption availability in the main products of plant origin**

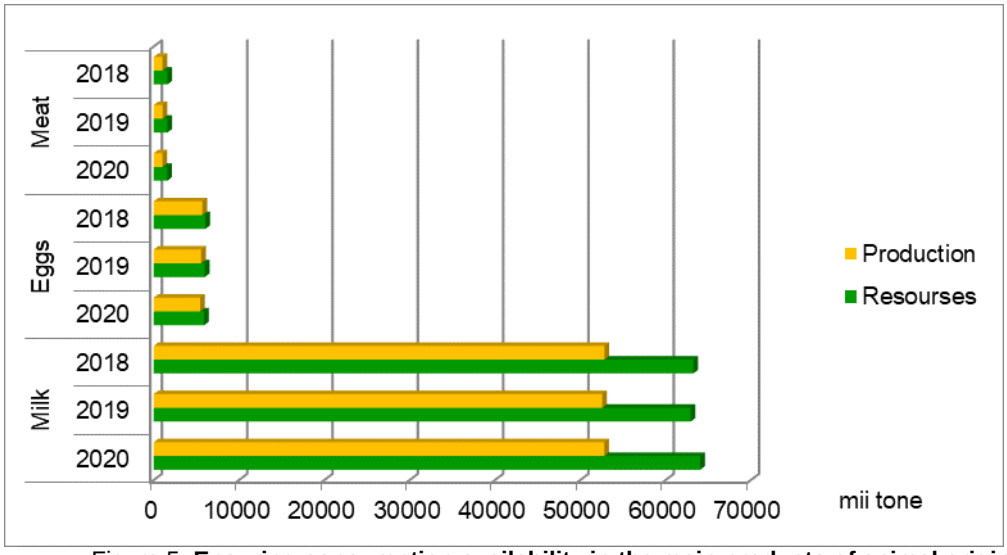


Figure 5**. Ensuring consumption availability in the main products of animal origin**

According to statistical data registered by the National Institute of Statistics in 2020, the degree of self-deprivation (%) in the main basic products consumed in Romania is as follows: cereals and cereal products – 155.6%; vegetables and vegetable products – 82.3%; fruit and fruit products – 68.55; sugar and sugar products – 34.9%; milk and dairy products – 86.4%; eggs – 96.8%; meat, meat products and edible offal – 72.1% and fish and fish products – 15.7%.

The data highlights the imbalances in Romanian agriculture and the inability of the Romanian farmers to produce enough to ensure the necessary consumption.

## CONCLUSIONS

Agriculture is one of the branches of major importance that can contribute to the relaunch of the country's economic growth, especially since agriculture cannot take over any other economic activity because the demand of food is essential and has a permanent character for human existence, on the one hand; on the other hand, agriculture provides raw materials necessary to relaunch many other industries (agri-food, textile, chemical, pharmaceutical, cosmetics, energy, etc.).

In Romania, the agri-food production sector has been severely affected since the 90s, by destroying the functional agri-food chains in the centralized economy and the powerlessness of entrepreneurs to create new functional chains to cope with competition in a market

economy. As a result, our country has become an importer of most basic products consumed by the Romanians.

In 2020, meat and meat products imports represented 35.0%, fruit and fruit products imports represented 32.4%, sugar and sugar products imports represented 71.9%, and fish and fish products imports represented 85.3% – way too much for Romania which has a high potential to provide for the consumption requirements in basic products from its own production.

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