

THE ANALYSIS OF THE LIVESTOCK SECTOR IN ROMANIA

STĂNESCU-COVASALĂ COSTIN

PhD Student, Bucharest University of Economic Studies

e-mail: costincstanescu@gmail.com

DIMITRIU ANTON- THEODOR

PhD Student, Bucharest University of Economic Studies

e-mail: dimitriuanton17@stud.ase.ro

NICA (POPA) OVIDIA- RAMONA

PhD Student, Bucharest University of Economic Studies

e-mail: nicapopaovidia23@stud.ase.ro

CHIVA ALINA - OANA

PhD Student, Bucharest University of Economic Studies

e-mail: chivaalina21@stud.ase.ro

Abstract

This study proposed to analyze the dynamics of production of animal based agricultural goods in Romania between 1990 and 2020, and to identify the actual problems in this sector. Romania has a diversified plant based agricultural production, with consistent production especially for grains, corn and sunflower. This is an important advantage for the development of animal husbandry farms that have a mixed national source of animal feed.

According to the collected data, the animal stock had a significant decrees in this period, with stock drops up to 50% in the last 30 years. After 1990 the meat production industry has been affected by the bad management of the central, regional and local authorities and the lack of force labor in rural arias. All of these caused the fell in numbers of livestock farms.

This study uses statistical research, quantitative and qualitative data interpretation. This research is relevant for decision makers that are involved in this industry.

Key Words: *animal breeding, farms, food security, economic analysis, strategic plan.*

Clasificare JEL: *Q15*

1.Introduction and context of the study

The agriculture industry has a considerable importance for any state because it offers raw materials for many other processing industries. It also creates lots of jobs especially in rural arias (Popescu et al., 2021) and is the most important pylon of the food security. If we look at the fact that the world population is constantly growing, food security becomes more and more important. Meat is one of the most important feed that is being produced in farms because of its high protein content, minerals and vitamins (Ava, et al., 2004).

In Romania, Agriculture is one of the industries with significant decline after 1990 because of the transition period. The reasons that lead to this are: land fragmentation, restructuring and reorganization of farms, lack of investments for modernization and updated equipments, aspects that have led to subsistence agriculture (Sterghiu et al., 2014).

In The National Strategic Plan DR 20 Investments in the livestock setor, are mentioned the objectives of the Common Agricultural Policy, strenghtening market orientation, enhancing competitiveness on both short and long term, including increasing focus on research, technology

and digitalization, adapting and contributing to the mitigation of climate change by reducing greenhouse gas emissions, improving carbon sequestration and by promoting sustainable energy. The sector analysis and the influence of future financial investments can offer solutions for a better development of this sector in Romania.

The Common Agricultural Policy has very well established objectives that help farmers to improve agricultural productivity. The sector can grow also by having a sustainable management of natural resources, by conservation of rural areas and landscapes and by promoting jobs in this sector and maintaining the vitality of the rural economy. The National Strategic Plan is designed to contribute to the objectives of the European Green Deal, the strategy from farm to consumer and the strategy regarding biodiversity. DR 20 Investments in the livestock sector, beside the specific investments for farms, plays a role those necessary investments to ensure animal feed for farms.

This sector is very complex and needs major investments.

Romania has an advantage because of its geographical positioning and climate that helps growing the most important crops for this sector at a price that helps improving the competitiveness of the final product.

Having these advantages and because of the extensive grasslands that helps cattle and sheep farming, Romania stands out for the milk produced here. The accession to the European Union brought new challenges for farmer, especially for small holdings because they didn't have modern technology and enough resources. These led to decrease in milk production (Popescu et al., 2016). In Romania this sector faces strong decrease in the number of farms, the dimensions of the holding and also in the number of animals in farms. Concomitant decreases occur in meat production, less eggs and honey (Grigoras et al., 2016).

Regarding the pork production, it differs from a region to another due to these factors: number of pigs in every farm, every farms system (intensive livestock farms or extensive livestock farms), quality of feed and the technologies used by every farm.

According to the National Institut of Statistics, starting with 1990 the livestock numbers is been decreasing.

Right now in Romania there are a lot of small holdings that find difficulties to grow because of import prices of raw materials that they can not challenge. Production prices for raw materials in small farms are slightly bigger and this causes customers to shift towards imports.

Small farms generally raise small numbers of sheep, poultry, pork, goats and cows (Popescu et al., 2021). Most of the products obtained here are used for self own consumption. In some cases, excess is sold in small markets or local fairs.

In Romania, agricultural products made for own consumption may secure food security and avoid supply chain problems regarding imports (Sandu et al., 2015).

2. Materials and methods

The data we used in this study were obtained from the National Institute of Statistics, from the site Food and Agriculture Organization of the United Nations and the from the Ministry of Agriculture and Rural Development.

The methodology of this study is based on the analysis of the evolution of livestock sector from Romania, between 1990 and 2020, from five to five years, because no significant changes can be seen from one year to another. The data used were on actual numbers of livestock and the production of meat in the period mentioned before. We also used information about the financial intervention within the National Strategic Plan, which contributes to the development of this sector (Table no.1, Figures 1 and 2).

3. Result and discussions

In 1990, in Romania, the largest numbers were found among poultry, up to 121.378.539, followed by sheep, with 14.061.864 and pigs with 12.003.384. During the period from 1990 to 2020 significant declines were recorded. The numbers decreased for all livestock categories mentioned above, concomitant with the decrease in the numbers of farms.

Table no.1 ,Livestock numbers by main by main animal categories (numbers)

	Year 1990	Year 1995	Year 2000	Year 2005	Year 2010	Year 2015	Year2020
Poultry	121.378.539	80.524.106	70.075.647	86.552.203	80.844.859	78.648.098	71.183.431
Sheep	14.061.864	10.380.906	7.656.798	7.610.958	8.417.437	9.809.512	10.281.473
Pigs	12.003.384	7.959.539	4.797.357	6.622.302	5.428.272	4.926.928	3.784.507
Bee Colonies	1.091.300	696.152	648.808	888.180	1.274.917	1.392.846	1.879.611
Cows	5.380.780	3.496.255	2.870.415	2.861.671	2.001.105	2.092.414	1.875.169
Goats	1.004.810	705.294	538.014	686.765	1.240.786	1.440.151	1.611.785
Rabbits	-	-	-	569.602	267.995	292.339	253.566

Source: NIS

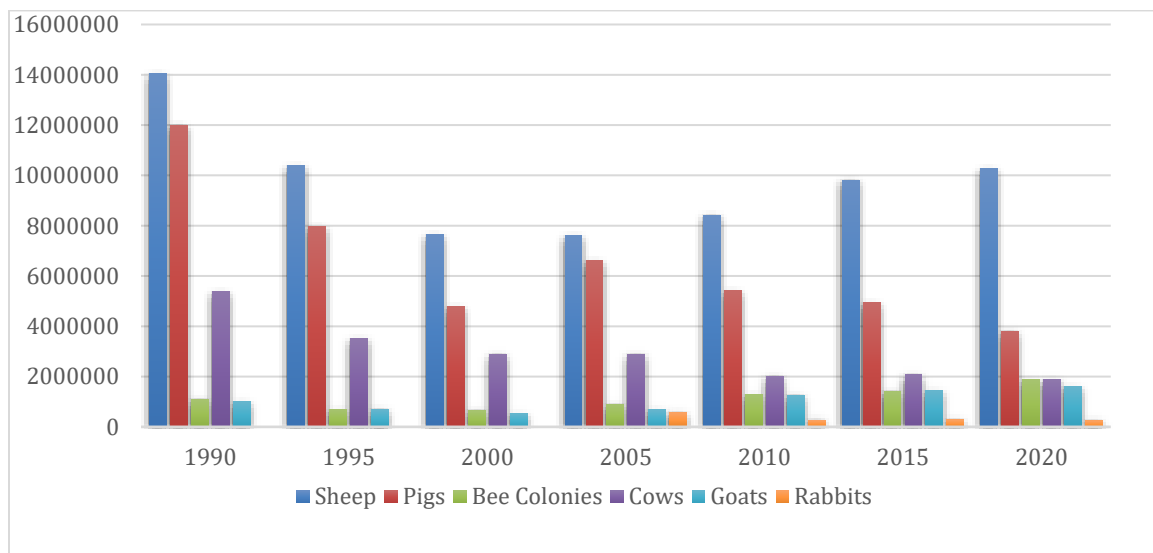


Figure no.1 , Livestock by main by main animal categories (1990 – 2020)

Source: NIS

According to the presented data, we may see that in Romania, after 1990 livestock decreased in all categories. In 1990 the sheep population reached 14.061.864 animals. By 2020 their number fell to 10.281.473. Significant decreasing in numbers were registered in swine numbers from 12.003.384 to 3.784.507 in the same period. Cow numbers also fell from 5.380.780 in 1990 and reached 1.875.169 by 2020, a very steep decline. A different evolution we may find in goat numbers that increased with approximate 50% from 1.004.810 in 1990 to almost 1.611.785 in 2020.

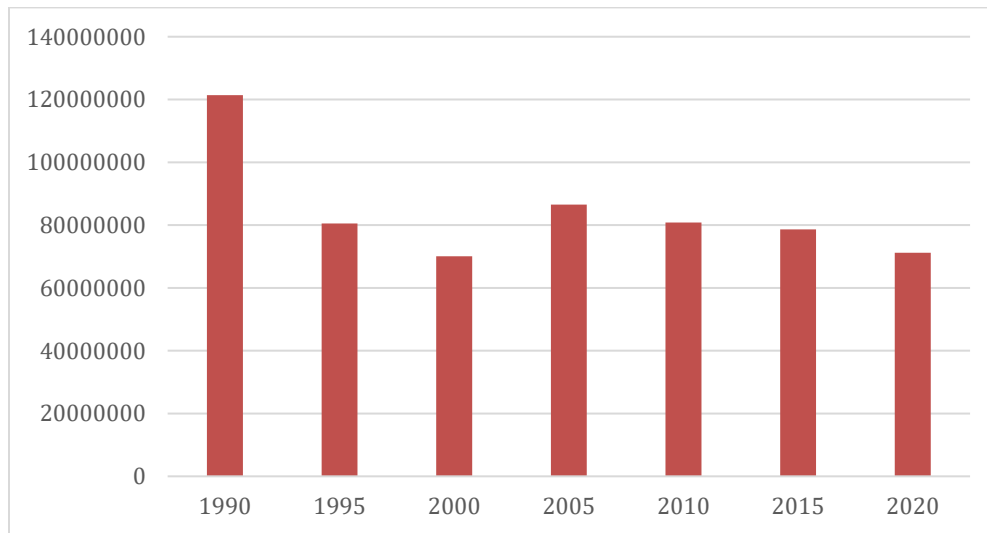


Figure no.2 , Poultry Stocks (1990- 2020)
Source: NIS

Looking at the statistic data, in Romania, after 1990 some of the livestock farms were disbanded or privatized. At that time poultry had the biggest numbers in farms reaching up to 121.378.539 heads. By 2020 these numbers reached 71.183.431. Despite this steep decrease, just like in 1990, this category of livestock maintains first place in 2020 in Romania.

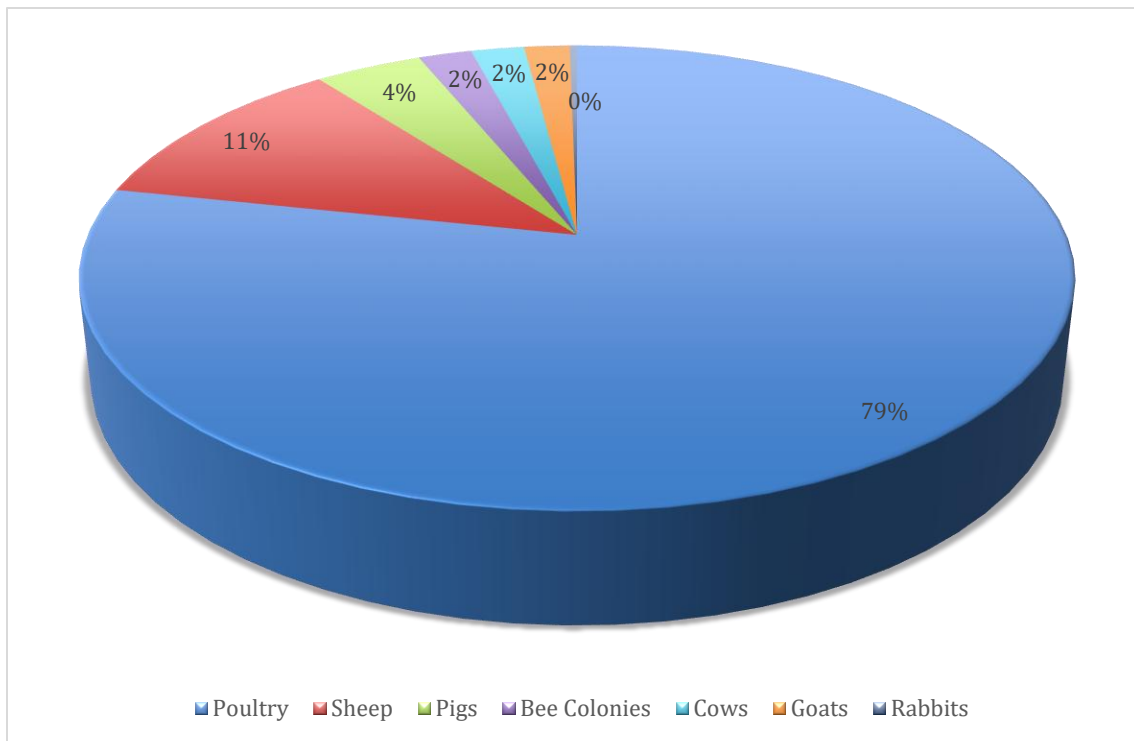


Figure no.3 , Structure of livestock herds, by main categories of animals (2020)
Source: NIS

According to the data presented, in Romania, in 2020, the first place in terms of number of animals is taken by poultry with a percentage of 79%. On the second place we find sheep with 11%, followed by pigs with 4% and in the lowest ranks we find bees, cows and goats. The poultry stock ranks first because birds have low weight 2 - 15kg/bird and in order to obtain a significant quantity of meat, a large number of livestock is necessary.

Table no.2 „Animal origin agricultural production in Romania (tons)

	1990	1995	2000	2005	2010	2015	2020
Beef	316.500	201.781	162.000	190.196	154.464	118.851	87.490
Chicken meat	386.400	286.110	259.414	308.639	349.021	410.783	-
Pork meat	787.835	673.016	502.337	436.424	428.891	470.055	388.170
Sheep meat	101.500	69.172	49.168	48.688	62.552	70.982	50.570
Honey	10.579	10.435	11.746	17.704	22.222	27.893	-
Cow raw milk	3.408.176	4.614.700	4.301.259	5.007.800	3.964.882	4.005.994	-
Sheep raw milk	403.900	406.700	320.800	544.400	651.317	670.633	426.000
Wool	38.167	24.323	17.997	17.600	20.457	-	-
Eggs	385.000	263.150	262.850	355.350	297.535	319.158	260.520

Source: FAO

Conform According to FAO, between 1990 and 2020 the animal origin agricultural production has experienced considerable declines for some of the products (Table no.2 and Figure 4). Beef production recorded 316.500 tons in 1990 and fell down to 87.490 tons in 2020. Pork meat production decreased from 787.835 tons to 388.170 tons in the same period. There have also been increase in the production of some animal origin products like: chicken meat, honey and raw milk from cows and sheep. Although poultry stock decreased chicken meat production increased. This means that the average production increased, from 3,18kg/chicken to 5,22 kg/chicken.

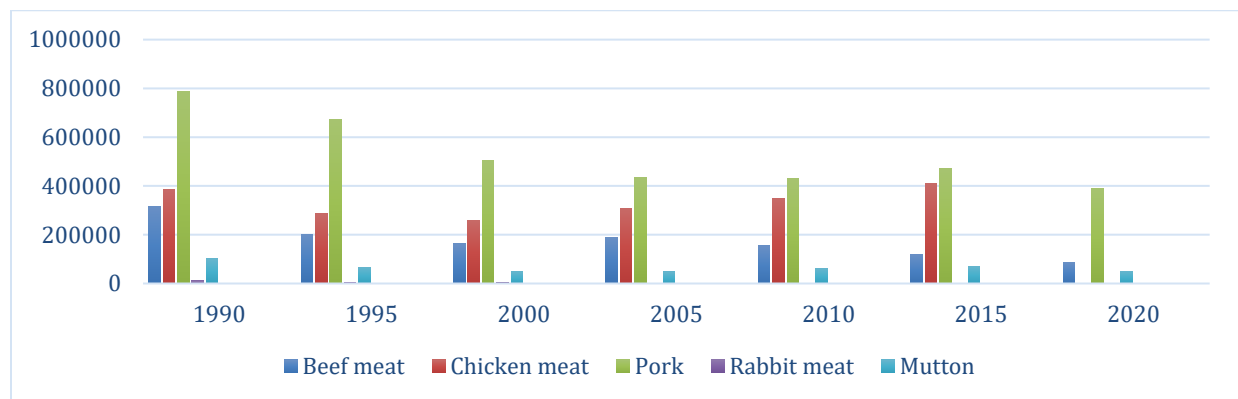


Figure no.4 , Meat production in Romania (tons)

Source: FAO

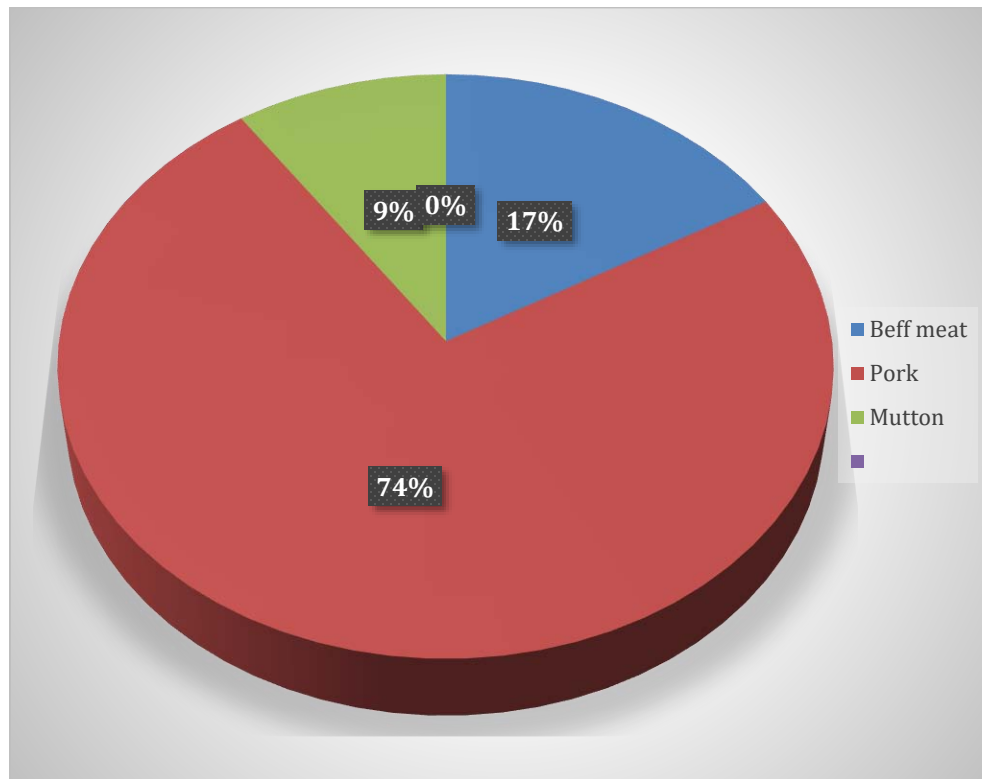


Figure no.5, Structure of meat production (tons) 2020
Source: FAO

In 2020, the main meat production came from swine, 74%, followed by beef with 17% and sheep meat with 9%. One of the reasons pork meat has the biggest percentage is the local demand and the price that is lower than the price of beef and sheep meat.

Table no. 3 Number of livestock farms in 2020

Nuber of farms/Livestock	Poultry	Bee colonies	Goats	Sheep	Swine	Cows
Agricultural holdings without legal personality- Total	1.641.394	65.400	94.810	144.115	774.933	329.438
Individual agricultural holdings	1.625.929	54.594	93.146	138.734	760.601	310.131
Self-employed individuals and individual enterprises	12.721	8.804	1.469	4.929	11.698	16.162
Family enterprises	2.744	2.002	195	452	2.634	3.145
Agricultural holdings with legal personality-Total	775	446	283	757	632	2.185

Source: General agricultural census 2020

According to the General Agricultural Census from 2020, in Romania most of the agricultural holdings or farms have no legal personality. Most of them are individual enterprises, followed by self-employed and family enterprises.

Because of farm fragmentation, starting with 1990, the number of entities mentioned above increased because agricultural lands are worked only by their owners and they use plant-based their own agricultural products to feed animals.

Through the financial intervention DR20 Investments in the Livestock Sector, the aim is to facilitate investments in order to expend, to modernize animals shelter, to build facilities for animal food processing, to impel the distribution of animal food, to connect farms and holdings to utilities, to equip with machinery and also to invest in renewable energy sources and circular economy. The average value of a project is around 2 mil. euros.

4. Conclusions

Between 1990 - 2020, in Romania the livestock sector has recorded significant declines regarding the number of livestock and also regarding the numbers of farms and holdings. According to the National Institute of Statistics from Romania, poultry had the biggest percentage reaching 79%, followed by sheep with 11% and pigs with 4%. The main cause that led to this decrease in livestock is the reduction of farm sizes which further led to increase of the demand for imports of meat and meat products. Even now, when the livestock numbers are so low, small holdings can't sell all of their products due to imports that have lower prices, even though import products have lower quality. The only solutions to improve the development of the livestock sector in Romania are the establishment of agricultural cooperatives and more implication from the authorities to support local farmers. This way the national animal origin agricultural production will increase and will discourage imports. Although until 2020 the livestock sector suffered decrease, by accessing financial aid through the National Strategic Plan (2021 - 2027) DR 20, farmers can modernize both livestock farms and plant-based farms to help a better development of the agricultural industry in Romania. Also, the specific objectives of the Common Agricultural Policy mentioned in the National Strategic Plan, refers to the modernization of the sector by disseminating knowledge, by promoting innovation and digitalization of agriculture in rural areas. They offer priority to projects that that promote associative forms, balanced development of agricultural holdings and that promote modern technologies with low impact on environment.

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