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STUDY ON THE MEAT SECTOR IN THE EUROPEAN UNION

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Abstract

Agricultural and food sectors worldwide are affected by globalization, the changes in the rules governing international trade and national and international policies regarding agriculture and competition. These sectors face on one side with a glut of food markets, and on the other hand, with an increase in consumer requirements regarding the quality of the final product. Consumer requirements may include food safety or some social aspects (protecting the environment, promoting biodiversity, improvement of animal welfare, fair trade, etc.). This study analyzes the meat market in the European Union, namely the development and availability of meat average consumption per capita in the period in which these indicators have declined. In the 27 European Union member states (EU-27), the year 2013 marked the lowest average consumption of meat per capita in the last decade, 64.7 kg, respectively, 10.7 kg / capita beef, 30.8 kg / capita pork, 21.3 kg / capita poultry meat and 1.9 kg / capita sheep and goat meat. The level of meat consumption was influenced by the decrease in meat production and the high costs of feed in the first half of the year which rose to a record high price of meat, coupled with decreases in revenue due to the economic crisis. Due to economic recovery and slightly downwards of prices, total meat consumption per capita in the EU has rebounded slightly, rising by 1.95 kg per capita by 2015.

Key words**:** *agricultural sector, requirements, availability, consumption, prices*

INTRODUCTION

In society, the role of livestock production has changed in recent years and this change continues to intensify.

Globally, livestock production plays an important role in ensuring food security, in particular through the provision of food with a rich protein content. In addition, the demand for animal products is increasing, especially in developing countries.

A major social aspect is associated with competitiveness meat supply chain. Ensuring a minimum income for meat producers is vital to support rural communities given that most producers are from rural areas. [10]

On the other hand the introduction of modern technologies in animal farming have raised questions about animal production systems, including animal welfare.

With the Treaty of Amsterdam (1997), the EU recognizes that animals are sentient beings and provides that, in agriculture, animal welfare must be taken into account and the EU consumers supports the improvement of raising conditions of livestock. The objective was to improve the overall level of animal welfare by introducing welfare standards. [1]

On the other hand, another major problem for agriculture are the new challenges, global impact on climate change, in terms of carbon footprint, in particular for the production of beef. [13]

More specifically, the development of livestock sector should ensure environmental sustainability and the animals used to adapt easily to these challenges. [6]

In the livestock sector, awareness of environmental problems should prompt a series of best practices to assess the impact of agricultural systems on the environment in parallel with their economic performance. [14] More specifically, methods of evaluating environmental footprint on the ground of the products of animal origin should be developed and applied to all types of production. [7]

Reducing emissions of greenhouse gases, especially methane from livestock production can be achieved by improving existing agricultural development of new innovative systems that minimize waste and by reducing the production of methane during digestion. [8]

Intensification of farming systems induced an increase in emissions of nitrogen in soil-crop-animal interaction. For the future, the strategy should aim at closing the nutrient cycle at the farm level, which can be achieved only if it is envisaged an integrated approach to the whole agricultural system. [9]

Within agricultural systems, the main objective is to maintain (or even increase) competitiveness of animal production systems in order to ensure sufficient income for farmers and maintaining a degree of autonomy of the farm. Worldwide, opening a market for animal products has changed considerably the goals in European livestock production system and producers have had to adapt to this situation. [11]

For consumers, a major requirement is the need for products of animal origin (eg, fresh meat or meat already prepared) to provide essential elements for life but do not exceed human needs, thus avoiding health problems that have emerged in modern society (for example, obesity, cardiovascular risk, cancer). The controversial association between meat consumption and incidence of certain cancers needs clarification, although recent studies suggest that this is of utmost importance for processed red meat compared to the white meat. [14]

The European meat market is very fragmented due to the presence of national or European labeling index related to quality, origin or provenance, which coexist. This wealth of schemes and labels creates an extremely complex situation and a risk of overloading consumers with information. [5]

In addition, the price level has always been one of the reasons that led to the purchase of food in Europe and will continue to have greater importance than the origin, brand, quality, or a combination thereof. [2]

MATERIALS AND METHODS

This study aims to analyze the meat sector in the European Union, namely the development and availability of meat average consumption per capita in the period in which these indicators have declined.

The methodology of this study is based on qualitative and quantitative analysis of the following indicators: livestock, domestic production gross, net production, imports, exports, domestic availability, consumption and the degree of self-sufficiency.

Data collected by the European Commission, Eurostat database and DG-AGRI, for the period 2009 – 2013, were statistically processed and interpreted.

For the introduction to the paper were consulted a number of scientific papers which have provided important information regarding the animal production.

RESULTS AND DISCUSSIONS

In the case of food products of animal origin, the production achieved at EU level is correlated with the existing livestock. The production of meat is closely linked to the dynamics of the animal production sector, public policies in agriculture and the prices of crops for animal production.

Meat production has a diverse structure among EU Member States, through the size of farms and livestock and productivity of the sector.

In recent years, the context in which meat is produced has changed considerably due to issues relating to animal welfare, environmental protection and consumer safety.

At the level of EU-27, 2012-2013, the total number of cattle has increased slightly, respectively by 0.6% in herds of dairy cows and 1.1% for the meat animals.

If we analyze the data from Table. 1. observe that domestic production of beef and veal increased by 3.9% in 2013 compared to 2012, growth that influenced the domestic availability of this product.

On the other hand, imports of beef rose by 0.3% in 2013 compared to 2012, while

exports fell by 32% due to a small amount of beef to the EU market,due to high prices and not least the loss of two major export destinations (Turkey and Russia).

The average per capita consumption of beef has recorded a downward trend since 2011. In total, the European Union is deficient in beef.

At the level of EU-27 total herds of pigs fell by 1.3% in 2013 compared to 2012, the main EU producers recording negative developments of this indicator: Germany -1.6%, Spain -2.9%, Denmark -1.2%, France -0.6% -6.6% and Italy.

In correlation with the total decrease in the number of pigs, also decreased the total amount of pork produced in the EU-27 (-0.1%) in 2013 compared to 2012 (table no. 2).

As regards the imports of pork, they increased in 2013 over the previous year. Also the pigmeat consumption is affected by low internal availability and higher prices for this product, for the third year in a row, per capita consumption declines by 0.3%. However the EU is self-sufficient in pork.

Table 1. Balance of supply for beef and veal in the EU-27

EU-27	***Tons ****					***Variation (%)***			
	2009	***2010***	***2011***	***2012***	***2013***	***10/09***	***11/10***	***12/11***	***13/12***
Gross internal production	7,779	7,813	7,706	7,387	7,676	0.4	-0.1	-0.4	3.9
Net production	7,717	7,917	7,846	7,531	7,555	2.6	-0.1	-0.4	0.3
Imports - live animals	0.1	0.2	0.1	0.1	0.1				
Exports - live animals	104	116	156	161	121	11.5	34.5	32.1	-24.8
Imports**	420	374	318	302	303	-11	-15	-0.5	0.3
Exports**	117	277	356	242	164	136.7	28.5	-32	-32
Internal Availability (total)	8,020	8,013	7,808	7,592	7,694	-0.1	-2.6	-2.8	1.0
Consumption (kg / capita/ year)	11.2	11.3	11.2	10.9	10.7	1.0	-0.1	-0.3	-0.2
The degree of self-sufficiency (%)	96	99	100	99	98.2				

Source: European Commission (Eurostat and DG Agri.); * Weight of carcase** Total trade, except live animals.

Table. 2: Balance of supply for pork in the EU-27

EU-27	***Tons ****					***Variation (%)***			
	2009	***2010***	***2011***	***2012***	***2013***	***10/09***	***11/10***	***12/11***	***13/12***
Gross internal production	21,567	22,295	22,617	22,171	22,152	3.4	1.4	-0.2	-0.1
Net production	21,449	22,219	22,551	22,135	22,127	3.6	1.5	-1.9	-0.1
Imports - live animals	0.15	0.12	0.02	0.02	0.01				
Exports - live animals	118.1	75.5	66.2	36.6	25	-36.1	-12.3	-12.4	-31.7
Imports**	34	22	15	16	17	-34.3	-31.9	6.6	6.3
Exports**	1,540	1,839	2,175	2,182	2,164	19.4	18.2	0.3	0.2
Internal Availability (total)	19,943	20,402	20,392	19,969	19,980	2.3	0.1	-2.1	0.1
Consumption (kg / capita/ year)	31.2	31.8	31.7	30.9	30.8	1.9	-0.3	-0.3	-0.3
The degree of self-sufficiency (%)	108.1	109.3	110.9	111.0	110.7				

Source: European Commission (Eurostat and DG AGRI.); * Weight of carcase** Total trade, except live animals.

In the European Union total herds of sheep and goats decreased by 0.8%, the increasing total herds in the UK (+ 4.4%) and Romania (+ 3.5%) was not sufficient to offset the decline in Spain (-4%), France (-2.2%) and Greece (2%). However the total production of sheep and goat meat in the EU-27 increased by 6.6% in 2013 compared to 2012 (table no. 3).

On the basis of increasing imports by 9.5% in 2013 compared to 2012, was an increase of 5.6% in the availability of domestic

consuption in meat of sheep and goats.
Average consumption per capita fell from 2012, EU-27 still remaining weak on these products.
Production of poultry meat increased by 2.5% in 2013 compared to 2012, this growth should partially offset the decline in production from other sort of meat (table no. 4). The main producing countries that generated this increase are: the United Kingdom (+ 3.6%), Germany (+ 0.4%) and to a lesser extent France.
In the period 2012-2013, both imports and exports of poultry meat increased by 4.9% and 0.2% respectively.
Regarding the consumption of poultry meat per capita, it remains in an upward trend since 2010. The internal availability of consumption rose by 2.9% in 2013 compared to 2012, EU27 maintaining self-sufficient in this product.

Table. 3: Evolution supply balance for sheep and goats in the EU-27

EU-27	***Tons ****					***Variation (%)***			
	2009	***2010***	***2011***	***2012***	***2013***	***10/09***	***11/10***	***12/11***	***13/12***
Gross internal production	987	915	933	894	953	-0.7	1.9	-4.2	6.6
Net production	983	904	912	868	913	-8.1	0.9	-4.2	5.2
Imports - live animals	-	-	-	-	-				
Exports - live animals	9	11	22	27	39	22.2	100	22.7	44.4
Imports**	271	239	222	189	207	-11,2	-7,1	-4,9	9,5
Exports**	8	13	16	25	30	62.5	23.1	56.2	20
Internal Availability (total)	1,247	1,130	1,118	1,032	1,090	-9.4	-1.1	-7.3	5.6
Consumption (kg / capita/ year)	2.2	2.0	2.0	1.8	1.9	-0.9	0	-10	-5.5
The degree of self-sufficiency (%)	79.1	81.0	83.5	86.7	83.7				

Source: European Commission (Eurostat and DG AGRI.); * Weight of carcase** Total trade, except live animals.

Table. 4: Evolution supply balance for poultry meat in the EU-27

EU-27	***Tons ****					***Variation (%)***			
	2009	***2010***	***2011***	***2012***	***2013***	***10/09***	***11/10***	***12/11***	***13/12***
Gross internal production	11,926	12,245	12,430	12,398	12,706	2.6	1.5	-0.3	2.5
Net production	11,917	12,237	12,423	12,391	12,697	2.7	1.5	-0.3	2.5
Imports - live animals	0.3	0.7	1.0	1.3	1.0				
Exports - live animals	8.8	8.3	7.8	8.3	10	-5.7	-6.1	6.4	20.5
Imports**	848	782	819	818	858	-7.8	4.7	-0.1	4.9
Exports**	928	1,149	1,288	1,324	1,327	23.8	12.1	2.8	0.2
Internal Availability (total)	11,837	11,870	11,954	11,885	12,228	0.3	0.7	-0.6	2.9
Consumption (kg / capita/ year)	20.9	20.7	20.8	21.1	21.3	-0.1	0.5	1.4	0.9
The degree of self-sufficiency (%)	100.8	103.2	104.0	104.3	103.8				

Source: European Commission (Eurostat and DG AGRI.); * Weight of carcase** Total trade, except live animals.

In the 27 European Union member states (EU-27), 2013 meant the lowest average consumption of meat per capita in the last decade, 64.7 kg, respectively, 10.7 kg / capita beef, 30.8 kg / capita pork, 21.3 kg / capita poultry meat and 1.9 kg / capita sheep and goat meat. The level of meat consumption was influenced by the decrease in meat production and the high costs of feed in the first half of the year that rose the price of meat to a high record, coupled with decreases in revenue due to the economic crisis.
The purchasing power of consumers is a determinant factor for the level of meat consumption per capita. This is especially true in the beef sector where prices are generally

higher than those for other forms of animal protein. The low competitiveness of beef is mainly due to the length of the production cycle for meat in bovine and lower feed efficiency compared to pigs or poultry.

Meat consumption depends not only on economic considerations:

-Religion and faith have a significant impact on the food choices of the citizens (consumption of pork is prohibited in Islam, animals are sacred in Hinduism). In the EU, these considerations are not as important as in countries such as India, Indonesia and Saudi Arabia.[12]

-Cultural and educational reasons influence the changes in lifestyle by internationalization of the national customs for food.

-Consumers are also more or less susceptible to outbreaks of animal diseases which can affect their health. For example, in Germany, outbreaks of bovine spongiform encephalopathy in 1996 and 2001 led to a significant decline in the consumption of beef.

-Moreover, some ethical considerations (eg, animal welfare, animal slaughter) and environmental (eg, water quality and biodiversity) are taken increasingly into account by European consumers.[4]

Due to economic recovery and slightly downwards of prices, the total meat consumption per capita in the EU has rebounded, increasing by 1.95 kg per capita in 2015.

According to forecasts of economic analysis department of the Agricultural Directorate of the European Commission (DG AGRI), the consumption of beef and sheep will drop in the next 10 years, according to the trend observed in the last decade. Sheep meat is consumed in the lowest amount in the EU, representing only 2.7% of total meat consumption. Forecasts also show reduced production of beef, up 7% from the average in 2010-2012 period, reaching a total volume of 7.6 million tonnes in 2023. [3]

Pork will remain preferred for Europeans for the next 10 years, but pork production will grow by only 2.8% over the next 10 years, up to a total annual average of 23.4 million tonnes in 2023. Production will suffer some environmental restrictions in some of the countries with the highest production of pork, such as the Netherlands and France.

The most dynamic market in the meat sector will be the poultry because it is considered cheaper and healthier than others. Consumption of poultry meat will increase by 1.5% each year, while poultry meat production could reach 13.6 million tonnes annually, increasing by 0.8% every year until 2023, as the forecasts show.

CONCLUSIONS

At the World level, agricultural sectors are affected by globalization, the rules governing the international trade and the national and international policies regarding agriculture and competition.

Important issues concerning the animals production refers to the competitiveness of supply chain for meat and to ensure a minimum income for producers subject to the standards of animal welfare.

Meat production has a diverse structure among EU Member States, through the size of farms and livestock and productivity of the sector.

The production of meat is closely linked to the dynamics of the livestock sector, public policies in agriculture and the prices of crops for animal production.

Even if the domestic availability recorded higher values in 2013 compared to 2012, per total the EU remains weak for the beef, sheep and goats meat.

The purchasing power of consumers is a determinant factor of the level of meat consumption per capita.

At the level of EU-27 in 2013 was recorded an average consumption of meat per capita of 64.7 kg, the lowest level in a decade.

The level of meat consumption was influenced by the decrease in meat production and the high costs of feed related to revenue declines caused by the economic crisis.

Amid economic recovery and slightly downwords of prices, the total meat consumption per capita in the EU has rebounded, increasing by 1.95 kg per capita by 2015.

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