

EVOLUTION OF THE LIVESTOCK NUMBER IN THE ARAD COUNTY, ROMANIA

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Abstract: Animals play an essential role in humans' life: the evolution of the human species has had tight connections with animals' evolution. Nowadays, animals are and will be indispensable due to the large number of benefits for the human species. In the Arad County, Romania, there has been lately an important increase of the numbers of livestock except for the cattle where increases have been lower.

Keywords: animals, numbers, Arad County.

INTRODUCTION

Animals have been there ever since the beginning of the development of human civilisation when humans domesticated the first bird and mammal species. The fact that the humans managed to domesticate animals was a step forward for the improvement of life quality through the development of science and technology [2,5,9].

Animal husbandry is an important sector of agriculture. Developed countries have known an unprecedented expansion of this sector particularly due to global population growth. They have carried out studies that estimate that meat production per capita is expected to increase with 50% between 2002 and 2020. World demand for eggs is expected to increase with 35% and the demand for milk is expected to increase with 25% during the same period [1,4,7,8].

There has been increased pressure on natural resources because of the increasing number of animals. Technologies that ensure efficiency in feed conversion and reduce nutrient losses from animal feed are also necessary [2,6].

Evolution of animal numbers

All domestic animals that are raised for production, traction and reproduction are collectively known as livestock. Animals not only produce food, skins, fertilisers and a means of locomotion: they are also a solution for capital accumulation, which ranges them in the category "very productive animals".

Below are described the most important animal species:

- Cattle are represented by all bovines and cattle, males and females, including buffalo and cattle females that have farrowed only once;
- Swine are represented by all the pigs on households, no matter the gender, weight or economic destination, including reproduction sows and young sows;
- Sheep are represented by female sheep and ewes;
- Goats are represented by all goats no matter the age, gender, place where they live or are encountered, or economic density, including females that have farrowed only once;
- Equines are represented by labour horses and stallions, including race horses and riding horses used for entertainment;
- Poultry are represented by all the birds on households such as chickens, duck, quails, turkeys, geese, guinea fowls, etc., including adult egg-laying birds aged over 24 weeks exploited for egg production;
- Bees are organised as bee families and are destined to honey production;
- Rabbits are represented by all the rabbits raised for meat and fur.

MATERIAL AND METHOD

The study we have carried out aims at analysing the evolution of livestock numbers in the Arad County, Romania, using data from the county office for statistics.

RESULTS AND DISCUSSION

The evolution of the livestock numbers in the Arad County, Romania, based on the data from the County Office of Statistics of Arad is presented in Table 1 below.

Table 1

Livestock numbers in the Arad County, Romania (2000-2013)

Year s	Bovines		Swine		Sheep		Goats
	Total	Of which cows, buffalo cows and heifers	Total	Of which reproduction sows	Total	Of which sheep and ewes	
2000	63491	35515	218677	14535	229221	171075	8434
2001	58812	35115	183765	14455	225040	177935	7859
2002	59565	35941	217613	15799	232205	181273	7631
2003	59570	35653	225717	15361	248131	181116	8872
2004	58487	35183	238429	18798	303746	243591	3423
2005	61464	38264	250798	28422	308699	247284	3168
2006	62344	38379	256348	27089	300622	237050	6240
2007	57319	35720	232097	15787	211818	174241	6276
2008	57478	34922	231956	14894	238481	195237	7003
2009	45230	29949	184860	9810	264593	209433	8214
2010	41052	26661	247710	14457	345544	285649	11211
2011	25394	21657	234806	13576	340188	277953	10161
2012	36525	21257	239116	14399	361432	294059	11004
2013	38259	24079	239732	13798	361189	295234	11610

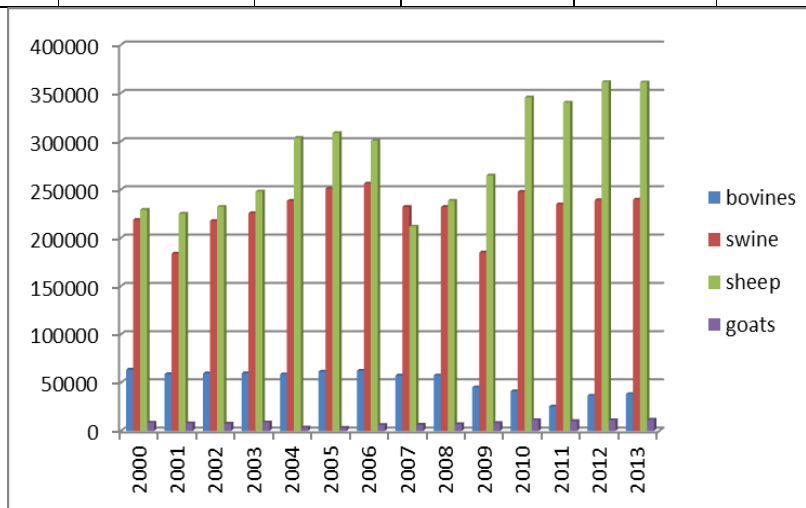


Figure 1. Livestock numbers in the Arad County, Romania (2000-2013)

Below is an analysis of the evolution of livestock numbers per species in the Arad County, Romania.

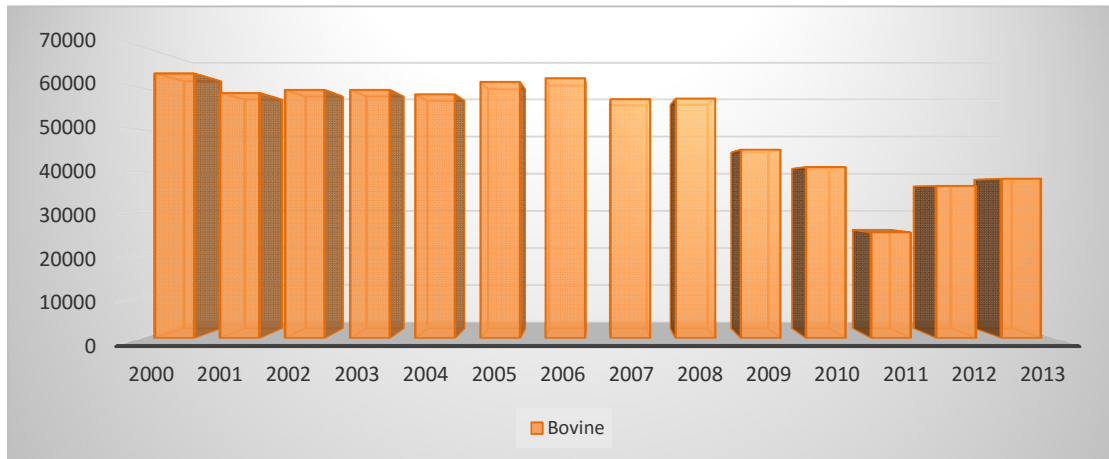


Figure 2. Cattle numbers in the Arad County, Romania (2000-2013)

Figure 2 shows that, in the Arad County, Romania, bovine numbers are slightly decreasing from 2000 until 2004, followed by a slight increase in 2005 and 2006. The years 2007 and 2008 marked a decrease of the bovine numbers, followed a drastic decrease that culminated in 2011 when there was the smallest number of bovines in the last 11 years (25,394 heads). The years 2012 and 2013 marked the evolution of the bovine numbers that started to increase.

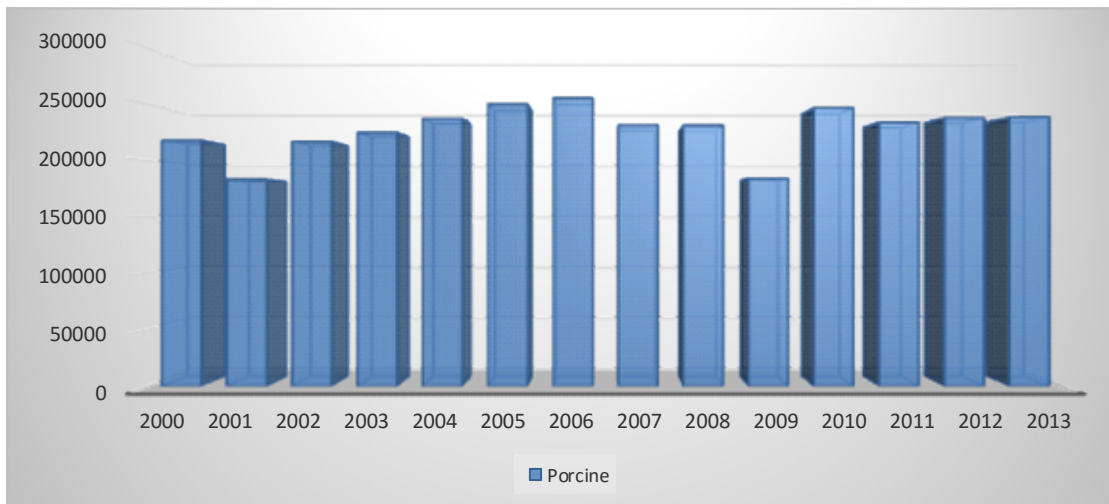


Figure 3. Swine numbers in the Arad County, Romania (2000-2013)

In the case of the swine, the figures are as follows: after a decrease of the swine numbers in 2001, there was a period of increase until 2006, when they reached the maximum of the 14 years. Then, there was a period of 3 years of constant decrease until 2009, when it reached 184,860 heads. From 2010 to 2013, the swine numbers in the Arad County, Romania, knew a significant increase compared to 2010 and kept constant at about the same level.

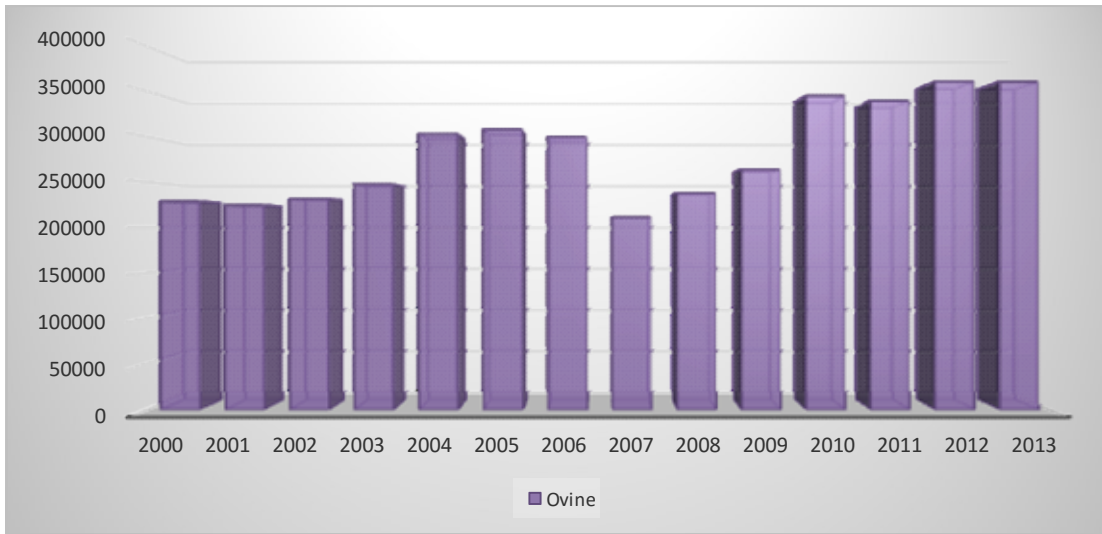


Figure 4. Sheep numbers in the Arad County, Romania (2000-2013)

Figure 4 above shows that the numbers of sheep in the Arad County, Romania, have been increasing in the last seven years after the significant decrease in 2007 compared to 2006. From 2010, there has been a slight constant increase of the number of sheep.

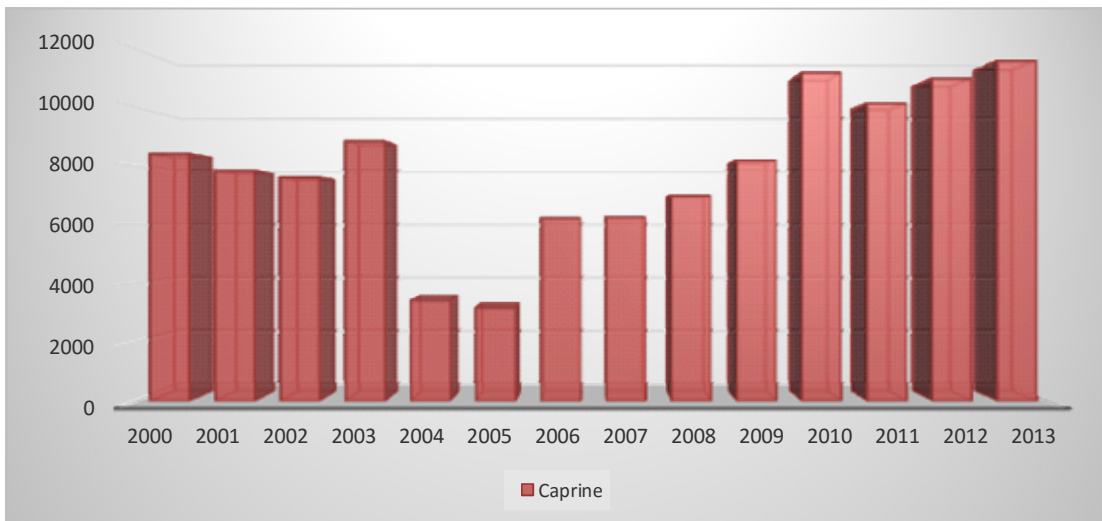


Figure 5. Goat numbers in the Arad County, Romania (2000-2013)

In the case of the numbers of goats, in the Arad County, Romania, the evolution per capita is as follows: after a slight decrease until 2002, there was an obvious increase in 2003 compared to 2000. After this increase, the goat numbers have decreased significantly in 2004, followed by another decrease in 2005. Since 2006, there has been a significant increase, reaching 11,610 heads in 2013, i.e. almost the double of the year 2006.

CONCLUSIONS

In the species analysed, most livestock numbers increased, except for bovines that are decreasing. The slight increasing trend of the numbers of bovines points to a future evolution capable of ensuring the necessary milk and meat.

Swine numbers have kept relatively constant since 2010, but they have not reached the maximum value of 2006 when they were the highest.

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