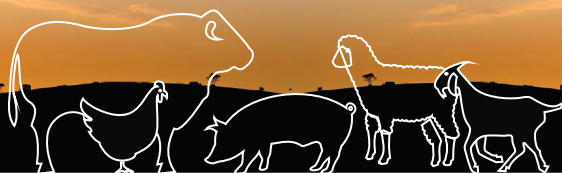


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TREND AND CURRENT SITUATION IN ANIMAL HUSBANDRY OF SERBIA

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Invited paper

Abstract: Despite the very favorable natural conditions, animal breeding in Serbia are still looking for a way to stabilize production. In the last decade of the 20th century, livestock in Serbia almost halved. It reduced the number of animals and total production of all types of meat. The small farms were dominant in Serbian agriculture with an average area between 3 and 4 ha. At the end of 2014, compared to 2006 the number of animals in Serbia reduced by 16.81% in cattle, 19.09% in pigs, and 26.75% in goats. Compared to 2006, we see that the fund sheep in 2014 increased by 10.98%. production of cow's milk at the end of 2014 decreased compared to 2006 by 5.98%. Unlike cattle, in sheep is an evident trend of increase in milk production by as much as 25% in the period. Goat milk from 2006 to 2014, varied and we can say that in 2014 we produced less milk 7.31%, however, shows that the quantity of milk per animal increased, as a result of selection and better growing conditions. The amount of wool decreased by 2,52% in 2014, however, due to the low interest for wool farmers is not recorded, so that the statistical indicators are not entirely realistic. Egg production increased by 21.7%, in line with the growing number of of poultry. Serbia produces 452.000 tons of meat. From that number 73,000 tons of beef, 27,000 tons of sheep meat, 258,000 tons of pork, and 94,000 tons of poultry meat. Total meat production in our country has a tendency of stagnation or slight decline.

Keywords: animal breeding trend, cattle, sheep, pig, poltry, meat, milk, wool, egg

Introduction

In the Republic of Serbia, According to the Statistical Office of country there are 631.122 farms constituting of 2.567 holdings of legal entities and

entrepreneurs and 628.555 family farms/agricultural holdings. The agricultural area covers around 5.100.000 ha, out of which 83% - that is around 4.250.000 ha - is cultivable. In Serbia, farmers comprised 17.3% of the total population. The distributions of the population working in farms in Serbia were as follows: animal production 43%, crop production 42%, production of vine and grapevine 12%, and other crops 3% (*Bogdanovic et al., 2005; Petrovic et al., 2012; 2013*). Republic of Serbia has significant natural resources (agricultural land, air, water, etc.) and very significant capacity and resources (agricultural population, livestock population, manufacturing and processing facilities and techniques, developed educational scientific activities, etc.). The current level of livestock production in Serbia does not provide cost-effectiveness, therefore it is necessary to work more efficiently and to change the same organization to enhance capacity building in qualitative and quantitative term (*Aleksić et al., 2007; 2009; Petrovic et al, 2012*).

Despite the very favorable natural conditions, cattle breeding in Serbia are still looking for a way to stabilize production. In the last decade of the 20th century, livestock in Serbia almost halved. It reduced the number of animals and total production of all types of meat. The small farms were dominant in Serbian agriculture with an average area between 3 and 4 ha. Process of increasing the efficiency of livestock production may also contribute to the linking of stage of production and processing in a single production cycle, which requires forming of the association of producers.

Bearing in mind that Serbia has potential livestock production, special attention should be given and its share in the total increase agriculture as is the case in developed countries. The aim of this study was to assess the trend intensity changes and the current situation in livestock production.

Table 1. The number of heads of all species of domestic animals (000 heads)

Species	2006	2007	2008	2009	2010	2011	2012	2013	2014
Cattle	1106	1087	1057	1002	938	937	921	913	920
Swine	3999	3832	3594	3631	3489	3287	3139	3144	3236
Sheep	1556	1606	1605	1504	1475	1460	1635	1616	1748
Goat	299	275	284	263	237	239	232	225	219
Poultry	16595	16422	17188	22821	20156	19103	18234	17860	17167

From the above table we can see that at the end of 2014, compared to 2006 the number of animals in Serbia reduced by 16.81% in cattle, 19.09% in pigs, and 26.75% in goats. It can be seen that in recent years in cattle and pigs led to a small increase in the number of animals, which is a good sign. Looking at the same table, we can notice that the number of sheep on the rise. Compared to 2006, we see that the number of sheep in 2014 increased by 10.98%. This increase began from 2012 and the measures are the result of governmental stimulation. In poultry, production has also registered an increase of 3.33%. Changes in the breed structure in cattle population raised in Serbia over the past decade have been intense. Breeds that are more intensive have suppressed the extensive breeds and breeds with poor production, so that they had numerically reduced. Now Simmental and Domestic Spotted in Simmental type make up to about 75% of total population, the group of Black-and-White and Red-and-White Holstein-Friesian cattle around 20%, while the primitive races and crosses make up about 5% of the total number of cattle in the Republic of Serbia (*Petrovic et al., 2013*).

In terms of breed structure various strains of Pramenka make up about half of the total number of sheep, various types of crosses - about 25%, Tsigai breed about 5% and about 20% imported pure breeds used as improvement breeds. In the territory of the Republic of Serbia, the following sheep strains reared are: Sjenica, Svrlijig, Piro, Lipska, Krivovir etc., Tsigai breed sheep, various more or less well-established crosses of different strains of Pramenka sheep and Merino breed. For improvement of sheep breeds in Serbia Merinolandschaf sheep flocks are reared (Wurttemberg breed) as a general improver breed of domestic pramenka strains, Ile de France and Suffolk, as domestic sheep breed improvers to increase the yield and quality of meat (*Petrovic, 2007., Petrovic et al., 2013*).

Piggery farms in Serbia are reared meat pig breeds and crossbreds. In our swine herds, Landrace breeds (Swedish, Dutch, German, Belgian, Danish), Large White/Yorkshire, Duroc and Pietrain are reared. The most numerous are the breeds Swedish Landrace and Large White/Yorkshire. The share of meat breeds used as the terminal breeds in crossing (Belgian Landrace, German Landrace, Pietrain, Hampshire, Duroc) is low (less than 1% per individual breed). In addition to pure breeds, crosses are produced which make up more than 60% of the total number of sows (*Petrović et al., 2006*).

The poultry are represented light and heavy hybrids from imports, and only a small number of poultry belonging to indigenous populations.

Table 2. Milk production (million liters), wool (tons) and eggs (million pcs.) per specie

Species	2006	2007	2008	2009	2010	2011	2012	2013	2014
Cow's milk	1587	1571	1561	1505	1485	1462	1465	1451	1492
Sheep milk	15	14	14	10	10	11	12	18	20
Goat milk	41	36	36	28	27	29	33	34	38
Wool	1941	1870	1726	1711	1705	1760	1794	1755	1892
Eggs	1941	1870	1726	1711	1705	1760	1794	1755	1892

Table 2 shows that the production of cow's milk at the end of 2014 decreased compared to 2006 by 5.98%. The reason for this is reduced the number of cows. Unlike cattle, in sheep is an evident trend of increase in milk production by as much as 25% in the period. Here is also the main reason for changes in the number of animals, namely the increased number of sheep. When the amount of Goat milk from 2006 to 2014, varied and we can say that in 2014 we produced less milk 7.31%, however, shows that the quantity of milk per animal increased, as a result of selection and better growing conditions. The amount of wool decreased by 2,52% in 2014, however, due to the low interest for wool farmers is not recorded, so that the statistical indicators are not entirely realistic. Egg production decreased by 2.52%, in line with the growing number of of poultry, but it must be emphasized effect of favorable breeding conditions.

Table 3. Meat production (thousand tons)

Species	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beef	83	95	99	100	96	81	82	70	73
Mutton	20	20	23	24	23	24	22	30	27
Pork	255	289	266	252	269	271	252	249	258
Chicken	70	75	76	80	84	103	94	92	94
Total	428	-	-	-	-	-	-	-	452

From table 3 we can observe that Serbia produces 452.000 tons of meat. From that number 73,000 tons of beef, 27,000 tons of sheep meat, 258,000 tons of pork, and 94,000 tons of poultry meat. Total meat production in our country has a tendency of stagnation or slight decline. Table 3 also showed that dominated pork

meat production with the participation of 57.07% of total production, beef takes 16.15 %, poultry 20.79 % and sheep 5.97 %.

The total average annual production of beef for the past years in Serbia was about 86,000 tones, with a tendency of decline, especially in recent years, and the latest data show that it is about 73,000 tons. Exports of cattle for slaughter and beef dropped drastically to meet less than 20% of its quota to the EU (8700tonnes). Production of this type of meat in the Republic of Serbia has varied from 156,000 in year 1985 to 73,000 t in 2014. This quantity is sufficient meat for the domestic market, as the average consumption per capita is about 12 kg. Lower production of beef compared to Serbia have some Scandinavian countries, Portugal, Bulgaria, Greece, etc. (*Petrovic et al., 2013*).

Conclusion

Despite the great importance and favorable natural conditions in livestock production on the basis of available data, it could estimate as unsatisfactory. In recent years, the number of heads of important species of domestic animals is continuously decreasing. Serbia has granted a candidate status in the European Union (EU). This means that livestock production should prepare for competition on unique developed market, without any state trade barriers. Serbia's membership in international organizations, liberalization of trade in livestock products, low possibility for import protection reduced levels of domestic support, elimination of export subsidies, the great competition on the international market, are still additional challenges faced or will face Serbia livestock breeding. Based on these circumstances, it is necessary to build the principles for the efficient development of livestock production, which may provide greater export opportunities and contributes to the growth of agriculture and national income. The most important partners of Agriculture and Food Industry of Serbia may, in addition to the EU and CEFTA countries, the Russian Federation and the market of the Middle East.

Trend i trenutna situacija u stočarstvu Srbije

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Rezime

Uprkos veoma povoljnim prirodnim uslovima, stočarstvo u Srbiji i dalje traži način da stabilizuje proizvodnju. U poslednjoj deceniji 20. veka, stočarstvo u

Srbiji je skoro prepolovljeno. Smanjen je broj životinja i ukupna proizvodnje svih vrsta mesa. Krajem 2014. godine, u odnosu na 2006. godinu broj životinja u Srbiji smanjen za 16,81% kod goveda, svinja za 19.09% i 26.75% koza. U odnosu na 2006. godinu, fond ovaca u 2014. povećan za 10.98%. Proizvodnja kravljeg mleka na kraju 2014. godine smanjen u odnosu na 2006. godinu za 5,98%. Za razliku od goveda, kod ovaca je evidentan trend povećanja proizvodnje mleka od čak 25% u istom periodu. Kozje mleko od 2006. do 2014. godine, varira, pa je u 2014. godini proizvedeno manje za 7.31%, međutim, pokazuje se da je količina mleka po životinji porasla, kao rezultat selekcije i boljih uslova gajenja. Prinos vune smanjen je za 2,52% u 2014. godini. Proizvodnja jaja porasla je za 21,7%, u skladu sa rastućim brojem živine. Srbija proizvodi 452.000 tona mesa. Od tog broja 73.000 tona junećeg mesa, 27.000 tona ovčijeg mesa, 258.000 tona svinjskog mesa, i 94.000 tona živinskog mesa. Ukupna proizvodnja mesa u našoj zemlji ima tendenciju stagnacije ili blagog pada.

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