SUSTAINABLE USE OF RESOURCES IN SHEEP AND GOAT PRODUCTION IN SERBIA AND EU COUNTRIES¹

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Abstract

The goal of this paper is to present the main features of sheep and goat production in Serbia and compare results with EU countries. The most important sources of data were statistical data (from statistical yearbooks and agricultural census) as well as FADN data for the European Union. It was determined that number of sheep in Serbia increases in recent years while number of goats declines. Sheep and goats are breed mostly in statistical region Serbia South. In the paper are discussed the most important features of these productions and it was determined that other counties in region share the same challenges. Situation in sheep and goat production in EU countries significantly varies concerning many factors such as stocking density, average number of livestock units, subsidies and value of milk production.

Key words: *sheep, goats, subsidies, sustainability*

Introduction

Sheep and goat production had been developed branches of livestock production before the World War II; however, after the WWII, i.e. the law on placing a ban on keeping goats had been passed in 1954, by which enactment the goat production had practically been destroyed.

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Thereby the basic factors, which prevent faster development of forests, have not been taken into consideration, so enactment of the mentioned law had, in fact, meant destroying domestic goat as a very useful domestic animal. About three decades after the enactment of this law, there has become clear enough that some other factors had an effect on our forests destruction: torrent, flood, erosion, wild-fires, and at the most a man by his irrational management of forests, quality of forests had not been improved, although goats had been destroyed (Ziani, 1964).

In Serbia the greatest significance, concerning sheep production, is given to meat production, first of all lamb meat, while production of milk and wool is significantly below this level. As Petrovic et. al. (2010) stated, in Serbia, as well as in the most of European countries, stress is laid on lamb meat, where in the structure of mutton total production, about 70% are slaughtered lambs, and the rest are ewes and rams. They were also mentioned that sheep breeding is mostly extensive and insufficiently organized. The most of sheep population in Serbia is Pramenka (80%), of who the most represented races (breeds) are: Pirot, Svrljig, Sjenica, while the rest 20% are: Tsigai (5%) and hybrids of Pramenka with foreign breeds (15%), primarily Wurttemberg.

When breeding sheep and goats, it is necessary to pay attention to selection of a breed. As Matejas cites (2004), the selection of sheep depends on several factors:

- 1. Aim of production,
- 2. System of production,
- 3. Available agricultural areas,
- 4. being familiar with sheep production,
- 5. Facilities for breeding,
- 6. Areas where sheep are bred,
- 7. Tradition,
- 8. Market.

All of these mentioned factors are inter-connected, i.e. they affect mutually to the selection of a breed.

In recent years, in goat production in Serbia has increased a number of producers, who are engaged with the intensive goat production, and first of all, the production of goat's milk, and the producers accordingly purchase the heads of dairy goats, as Alpine and Sana goats.

The Balkan goats is an autochthonous breed of cattle and, as Bogdanovic and others (2008) state, it is well adjusted to modest feeding, keeping and caring conditions, and that robustness can use as the one of the important functional characteristics in the overall improvement of this breed.

Sheep and goat production in Serbia

According to data of the Census of Agriculture, which had been conducted from October 1st to December 15th 2012, a total number of sheep in Serbia was 1,736.440 heads of animals, of which in the north region 348,685 heads, and in the south region 1,380.593 heads.

In Serbia, sheep breeds in 154,972 holdings, of which the largest number of holdings has 3-9 heads of cattle, i.e. 53.21% of the total number of holdings.

There is significantly less holdings with 1-2 heads of sheep, i.e. 8.23%, while 27.27% of the total number of holdings has 10—19 heads of sheep. The holdings which have 20-49 heads of sheep participate with 9.26%, and with further increase of a number of heads per a holding, there comes to reduction of a number of holdings.

Thereby the holdings with 50-99 sheep participate with 1.39%, while the ones with 100-199 sheep have 0.47% in the structure of a total number of holdings. The holdings which have 200-499 sheep are negligible, only 0.15%, while only 33 holdings in Serbia, i.e. 0.02% are those who have over 500 sheep.

A total number of goats in the Republic of Serbia, according to the Census of Agriculture (October 1st – December 15th 2012) was 231,837 heads, of which 25.91% of the total number is in the region of Vojvodina, i.e. 60,063 heads of goat.

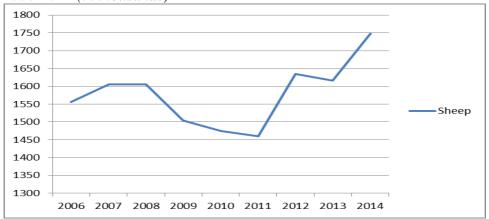
A total number of holdings, in which goats are kept, is 62,930, whereat a largest number of holdings with 1-2 goats (even 54.21%), and together with increase of a number of heads per a holding, the same as concerning the sheep production, there comes to reduction of a number of holdings that breed goats. In the total number of holdings which are engaged with this type of production (40.55%) participate holdings with 3-9 heads, while a share of holdings in which 10-19 heads are kept, is 3.76%.

Holdings, which have 20-49 heads of cattle, have a share of 1.20%. It is meaningly a low share of holdings, which have 50-99 heads (0.18%) and in the entire area of the Republic of Serbia, there are 115 of these holdings. Fifty six holdings breed a hundred (100) and more goats in the area of the Republic of Serbia, i.e. only 0.09% of the total number of holdings that breeds goats.

Aiming to a better review of the situation in sheep and goat production, there were analyzed a certain number of sheep and goats in the time period 2006-2014.

A number of sheep in Serbia, in the previously stated nine-year-lasting period, had an increasing tendency at the beginning, and then was realized a significant decrease of sheep number, while just before the end of the period had come to the increasing tendency of heads of cattle (Chart 1).

Chart 1. A number of sheep in the Republic of Serbia in the time period 2006-2014 (in thousands)

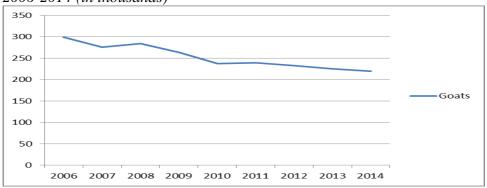


Source: http://webrzs.stat.gov.rs

A fluctuating number of sheep has been substantially a result of unfavourable conditions in the market, unsafe sale of sheep dairy products and inability to collect sold products, which represents a limiting factor for development, as sheep, as well as goat production.

A number of heads of goats in the period 2006-2014 had been in steady decline, so their number had been decreased from 299 thousands to 219 thousands (Chart 2).

Chart 2. A number of goats in the Republic of Serbia in the time period 2006-2014 (in thousands)



Source: http://webrzs.stat.gov.rs

The analysis of a number of sheep and goats by the regions was shown in the table 1.

Table 1. A number of sheep and goats in Serbia by the regions (on December 1^{st}), in thousands

Voor	SERBIA -	NORTH	SERBIA - S	RBIA - SOUTH*	
Year	Sheep	Goats	Sheep	Goats	
2006	287	93	1268	205	
2007	298	86	1308	189	
2008	319	89	1286	195	
2009	312	82	1192	181	
2010	314	74	1162	163	
2011	286	75	1174	164	
2012	-	73	-	159	
2013	319	58	1297	167	
2014	324	60	1424	158	

Source: http://webrzs.stat.gov.rs

Note: *Without data for AP Kosovo and Metohija. The data refers to the state on December 1st. Revision of the time series 2006-2012 was done, in accordance to the data in the Census of Agriculture (2012). The revised time series was shown for the first time in a database. The data for 2012 were taken on the Census of Agriculture.

Analyzed by the regions, we notice that a number of sheep and goats is significantly larger in the region of Serbia south, regardless to a fact that larger areas of arable agricultural land is in the north region. The largest number of producers in these fields of livestock production deals with extensive production, and therefore such territorial distribution of sheep and goat production results from the production intensity.

Of the total slaughtered cattle in sheep production on the territory of the Republic of Serbia, only small part of it was slaughtered in slaughterhouses and that part is 4.72% of the total slaughtered mass (Table 2). Except this small part, all the rest quantity of slaughtered cattle in sheep production is slaughtered in the agricultural producers' holdings, i.e. outside slaughterhouses.

Table 2. Gain in weight and slaughter of cattle – according to the origin of slaughtered cattle and the place of slaughter, 2014

	Republi	c of Serbia	
Indicator	Gross weight	Net weight	
Sheep			
Gain in live weight, t	62944		
Totally slaughtered cattle on the territory of the			
Republic of Serbia, t	51925	26816	
Gross domestic production*), t	54037	27907	
Slaughtered cattle in slaughterhouses, t	2452	1266	
Average weight of slaughtered cattle in			
slaughterhouses, t	34	18	
Goats			
Gain in live weight, t	6698		
Slaughtered cattle on the teritory of the Republic			
of Serbia, in total, t	7240	4017	
Gross domestic production*), t	7253	4024	
Slaughtered cattle in slaughterhouses, t	3	2	
Average weight of slaughtered cattle in			
slaughterhouses, kg	29	16	

Source: http://webrzs.stat.gov.rs

Only 0.04% of the total slaughtered mass of goat heads on the territory of the Republic of Serbia, almost negligible part, slaughters in slaughterhouses. An average mass of slaughtered heads of sheep in slaughterhouses amounts 34 kg, while an average mass of slaughtered goats is slightly less and it amounts 29 kg. Areas under forage crops and their share in the used agricultural area is of great significance for breeding of all livestock species. In the total area of used agricultural area, a share of areas under forage crops in the period 2006-2013 wasn't peculiarly varying, and it was ranged from 8.7% to 9.2% (Table 3).

^{*)}Totally slaughtered cattle on the territory of the Republic of Serbia – import of livestock + export of livestock

Table 3. Areas of forage crops and used agricultural areas in the

Republic of Serbia, in thousands ha

Year	Used agricultural area	Forage crops
2006	5066	458
2007	5053	457
2008	5055	466
2009	5058	455
2010	5051	460
2011	5056	455
2012	5052	456
2013	5069	442

Source: Yearbook of the Republic of Serbia 2007-2014

Producers who are engaged in goat production meet certain problems during the production process. As the most important problems the producers see in sale of milk and dairy products, low purchasing price of milk and inability to collect sold products.

In order to improve the current situation in goat production, as it is stated in the Program of Goat Breeding and Selective Breeding in the AP Vojvodina (2010), it is necessary to:

- Provide sufficient quantities of pastures, basic energy and protein fodder (maize, soy ground grain, sunflower ground grain and other fodder,
- Setting up a satisfying health status of heads of animals and providing their upkeep, as the basic preconditions of continuous goat production,
- Adaptation of the current and building some new facilities for goat breeding,
- Ensure the operation of the Commodity Reserves,
- The state incentive measures, primarily the measures of a creditmonetary policy in order to increase goat production,
- Increase the level of correlation among the primary production and processing industry and trade,
- Set the standards and to determine the quality of products based on them, along with the application of paying based on quality,
- In all these segments, all forms of production should treat uniformly. In the neighbouring countries, the situation concerning development of sheep and goat production is similar as in the Republic of Serbia. The authors Antunovic et.al. (2012) state the significant imperfections in the Republic of Croatia, first of all, fragmentized land, primarily thinking on

pastures, as well as the unregulated property-rights relations, and problem of goat's milk purchase and milk processing and difficult sale of breeding animals. Both in sheep and goat production are identical problems, but it is inevitable to mention the several-years-lasting problem in sheep production – purchase of wool.

As the authors Grgic et.al. (2009) state, almost every of the main goals of agricultural policy in the Republic of Serbia, can be related to goat production. There are especially related in our region, due to particularity of goats breeding:

- providing the adequate life standard and creating stability of agricultural income.
- preserving natural resources, by improvement of the sustainable, especially ecological agriculture, and
- sustainability and progress of rural areas and values.

Antunovic and others (2012) state that the perspective of sheep and goat production in the Republic of Croatia is good and it reflects in improvement of sheep and goats breeding and adjusting to the market demands, as well as their products branding in conventional and ecological systems of production, which will contribute to increase in economic profit of farmers.

Support to holdings for engaging in sheep and goat production is provided by the Ministry of Agriculture of the Republic of Serbia and within the direct payments, it provides support to the holdings that have the registered sheep and goats through the incentive for high-quality breeding sheep and goats in the amount of 7,000 RSD per a head of animal.

In addition, by the Rulebook on Incentives for Preservation of Animal Genetic Resources are determined the maximum amounts of incentives by a type of incentive. The incentives for the Balkan goat are given (heads of animals older than twelve months) in the amount of 4, 500, 00 RSD/head of animal. There motivates also sheep production, the breed Pramenka (Pirot's, Krivovir's, Bardoka, Lipska, Vlasic, Karakachan) and Cokan Tsigai.

The production development of these two branches of livestock production has been stimulated by the state, applying the specific measures, as the bidding for awarding loans for purchase of a breeding livestock in sheep and goat breeding in 2014, announced by the Provincial Fund for Development of Agriculture, by which had financed

the purchase of the Alpine breed. An annual interest rate for this loan was amounted 2%, with a term of payment of 18 months and a grace period of one year. The funds were set aside for agricultural holdings – legal entities and physical persons on the territory of the AP Vojvodina, registered in the Records of Agricultural Holdings.

Until 2015, the Ministry of Agriculture of the Republic of Serbia had paid incentives for young cattle fattening, pig fattening and lamb fattening. However, since the year 2015 have been paid off the incentives for goatlings fattening, which have been regulated by the Rulebook on conditions and entitlement of the incentives in livestock production, for fattening of young cattle, fattening of pigs, fattening of lambs ("Official Gazette of RS", no. 50/2015). The incentives for lamb fattening pay off in the amount of 2.000 RSD/head of animal.

Sheep and goat production in the European Union

In 2012, in the EU countries were averagely 32.65 hectares of agricultural area, and 13.36 hectares in which forage crops are produced (Table 4).

Table 4. Total agricultural area and forage crops (in average in the EU, in 2012) expressed in ha

Year	2012	
Country	Country Total Utilized Agricultural Area (SE025)* (SI	
(BEL) Belgium	49.14	28.29
(BGR) Bulgaria	35.71	4.17
(CYP) Cyprus	9.04	2.74
(CZE) Czech Republic	227.86	89.14
(DAN) Denmark	95.26	21.68
(DEU) Germany	85.57	35.58
(ELL) Greece	9.29	2.61
(ESP) Spain	38.65	12.44
(EST) Estonia	125.87	47.85
(FRA) France	85.36	38.69
(HUN) Hungary	46.26	9.35
(IRE) Ireland	50.27	45.34
(ITA) Italy	15.34	5.85
(LTU) Lithuania	48.49	18.74
(LUX) Luxembourg	85.95	63.07
(LVA) Latvia	68.93	29.92

Year	2012	
Country	Total Utilized Agricultural Area (SE025)*	Forage crops (SE071)
(MLT) Malta	2.62	1.21
(NED) Netherlands	35.65	23.34
(OST) Austria	31.46	18.62
(POL) Poland	18.84	4.58
(POR) Portugal	24.19	11.44
(ROU) Romania	10.05	2.89
(SUO) Finland	54.73	22.07
(SVE) Sweden	101.27	48.21
(SVK) Slovakia	521.5	247.98
(SVN) Slovenia	11.57	7.68
(UKI) United Kingdom	161.13	109.21
Average per holding	32.65	13.36

Source: http://ec.europa.eu/agriculture/rica/database/database_en.cfm
Note: *Total utilized agricultural area of holding - does not include areas used for mushrooms, land rented for less than one year on an occasional basis, woodland and other farm areas (roads, ponds, non-farmed areas, etc.). It consists of land in owner occupation, rented land and land in share-cropping.

Table 5. Stocking density (including cattle, sheep and goats) and production of cow's milk per a cow in the EU countries, in 2012

Year	2012	
Country	Stocking density (SE120)	Milk yield (SE125)
(BEL) Belgium	2.32	7046.49
(BGR) Bulgaria	1.26	3021.66
(CYP) Cyprus	2.94	7088.08
(CZE) Czech Republic	0.8	7285.08
(DAN) Denmark	1.9	8567.68
(DEU) Germany	1.54	7556.21
(ELL) Greece	1.81	6035.26
(ESP) Spain	0.84	7104.47
(EST) Estonia	0.56	7657.92
(FRA) France	1.25	6981.32
(HUN) Hungary	0.89	6724.59
(IRE) Ireland	1.3	5227.95
(ITA) Italy	1.52	6185.37
(LTU) Lithuania	0.57	5521.67
(LUX) Luxembourg	1.53	7466.75
(LVA) Latvia	0.5	5637.82

Year	2012	
Country	Stocking density (SE120)	Milk yield (SE125)
(MLT) Malta	6.39	6941.98
(NED) Netherlands	2.24	7937.47
(OST) Austria	0.78	6545.55
(POL) Poland	1.51	5069.05
(POR) Portugal	0.71	7241.66
(ROU) Romania	1.45	3261.11
(SUO) Finland	1.11	8647.96
(SVE) Sweden	1	8540.96
(SVK) Slovakia	0.47	6170.17
(SVN) Slovenia	1.18	5331.59
(UKI) United Kingdom	0.98	7200.81
Total (Country)	1.2	6605.38

Source: http://ec.europa.eu/agriculture/rica/database_database_en.cfm
Note: *Stocking density – "Density of ruminant grazing livestock: average number of bovine LU (except calves for fattening) and sheep/goat LU per hectare of forage UAA. Forage area includes fodder crops, agricultural fallows and land withdrawn from production (except when non food crops are cultivated), permanent pasture and rough grazing. Stocking density is calculated only for holdings with corresponding animals and with forage area."

The largest areas of total agricultural area per a holding are in Slovakia, the Czech Republic, Great Britain, Estonia and Sweden (over 100 ha), while the least are on Malta, Cyprus and Greece (less than 10 ha). However, a share of areas in which produce coarse fodder in the total agricultural area, varies depending on a country.

The highest share of all EU countries, of areas under forage crops in the total agricultural area, has Ireland, with the share of 90.19%, and then comes Luxemburg (73.38%), Slovenia, while the lowest share have Bulgaria (11.68%) and Hungary (20.21%).

An average number of livestock units of cattle, sheep and goats per a hectare of agricultural area, used for production of coarse fodder, at the level of all EU countries, amounts in average 1.2 livestock units (LU). This indicator is the highest on Malta (6.39%), Cyprus (2.94%), Belgium (2.32%) and Norway (2.24%), while the lowest is in Slovakia, 0.47% (Table 5).

An average production of cow's milk per a cow in the EU countries in 2012 was amounted 6,605.38 litters. The biggest milk production per a cow was realized in Finland (8,647.96) and Sweden (8,540.96), while the countries in which an average production of milk is the lowest in Bulgaria (3,021.66), Romania (3,261.11) and Poland (5,069.05).

In the year 2012, in the EU countries were 26.05 livestock units of cattle in a holding, of which 18.5% of dairy cows, 30.98% of other cattle, 10.86% of sheep and goats, 27.29% of pigs and 11.71% of poultry (Table 6). The significance of sheep and goat production in livestock production can see also through a share of livestock units of these productions in the total number of livestock units. In the structure of livestock units per a holding, a share of sheep and goats varies significantly by states, and in most of countries, it is lower than a share of cattle and pigs in the total number of livestock units. The most important is a share of small-size ruminants in the total number of livestock units in Greece, where it achieves even 73.20%, Romania 44.99%, while in Bulgaria, Cyprus, Portugal and Great Britain it is less than 20%. The lowest share of this indicator is in Denmark (0.05%), Luxemburg (0.19%) and Belgium (0.37%).

Table 6. The average number of livestock units in a holding, in total and by types of livestock in the EU countries, in 2012

Year	2012					
Country	Total livestock units (SE080)	Dairy cows (SE085)	Other cattle (SE090)	Sheep and goats (SE095)	Pigs (SE100)	Poultry (SE105)
(BEL) Belgium	132.63	18.65	46.91	0.49	56.14	10.23
(BGR) Bulgaria	10.7	2.66	1.36	2.37	1.91	2.25
(CYP) Cyprus	15.89	1.96	1.26	3.8	5.64	3.24
(CZE) Czech Republic	100.78	25.81	42.98	1.06	18.76	11.53
(DAN) Denmark	156.75	20.49	20.62	0.08	108.58	5.94
(DEU) Germany	89.42	22.27	25.55	0.69	35.76	4.96
(ELL) Greece	6.12	0.31	1.06	4.48	0.07	0.15
(ESP) Spain	22.71	1.63	5.23	4.19	8.67	2.87
(EST) Estonia	38.64	12.86	12.13	1.34	10.74	1.27
(FRA) France	73.16	12.46	31.59	3.56	11.25	14.08
(HUN) Hungary	18.04	2.63	3.1	1.21	5.02	5.96
(IRE) Ireland	59.37	13.57	39.14	6.08	0.19	0.03
(ITA) Italy	12.95	2.33	3.37	1.17	3.53	2.37

Year	2012					
Country	Total	Dairy	Other	Sheep	Pigs	Poultry
	livestock	cows		and goats	(SE100)	(SE105)
	units	(SE085)	(SE090)	(SE095)		
	(SE080)					
(LTU) Lithuania	13.66	5.38	5.06	0.1	2.54	0.54
(LUX)	112.85	26.89	68.48	0.22	15.95	0.97
Luxembourg						
(LVA) Latvia	20.46	7.11	6.54	0.31	6.17	0.22
(MLT) Malta	14.46	2.23	1.92	0.48	6.15	3.58
(NED)	129.4	30.41	24.39	2.55	49.29	21.95
Netherlands						
(OST) Austria	24.76	5.87	8.27	0.69	8.2	1.37
(POL) Poland	13.02	3.14	3.03	0.07	5.88	0.76
(POR) Portugal	14.3	1.91	5.38	2.88	0.82	3.2
(ROU) Romania	6.69	1.39	.63	3.01	0.73	0.78
(SUO) Finland	27.98	7.58	10.23	0.61	7.73	1.7
(SVE) Sweden	65.61	13.57	32.59	1	17.07	1.17
(SVK) Slovakia	136.44	45.46	56.38	11.63	14.55	8.05
(SVN) Slovenia	12.61	3.03	5.76	0.38	2.5	0.59
(UKI) United	131.05	19.78	52.95	33.01	10.36	14.48
Kingdom						
Total (Country)	26.05	4.82	8.07	2.83	7.11	3.05

Source: http://ec.europa.eu/agriculture/rica/database/database_en.cfm

At the level of all EU countries, the average subsidies in livestock production per a holding were amounted 552 EUR in 2012, while the subsidies for sheep breeding and goat breeding were 80 EUR (Table 7).

Table 7. Average subsidies per a holding in cattle breeding, in total and subsidies for sheep and goat production (EUR) in the EU countries for the year 2012

Year	2012				
Country	Total subsidies on livestock (SE615)	Subsidies dairying (SE616)	Subsidies other cattle (SE617)	Subsidies sheep & goats (SE618)	
(BEL) Belgium	3748	0	3745	0	
(BGR) Bulgaria	512	181	10	321	
(CYP) Cyprus	439	0	0	431	
(CZE) Czech Republic	2064	1278	719	67	
(DAN) Denmark	468	-14	482	0	
(DEU) Germany	104	-47	0	0	
(ELL) Greece	88	0	25	59	

Year		201	12	
Country	Total subsidies on livestock (SE615)	Subsidies dairying (SE616)	Subsidies other cattle (SE617)	Subsidies sheep & goats (SE618)
(ESP) Spain	754	68	555	61
(EST) Estonia	621	202	307	112
(FRA) France	2935	133	2139	463
(HUN) Hungary	744	402	238	40
(IRE) Ireland	297	-99	85	311
(ITA) Italy	90	33	41	4
(LTU) Lithuania	363	0	0	3
(LUX) Luxembourg	46	-1	0	
(LVA) Latvia	1718	872	382	17
(MLT) Malta	0	0	0	
(NED) Netherlands	147	-85	3	
(OST) Austria	724	-51	732	2
(POL) Poland	51	49	0	3
(POR) Portugal	1304	339	645	282
(ROU) Romania	101	0	0	70
(SUO) Finland	10124	5453	3135	355
(SVE) Sweden	1691	1078	0	0
(SVK) Slovakia	4311	3875	162	119
(SVN) Slovenia	279	81	198	
(UKI) UK	337	0	322	0
Total (Country)	552	106	306	80

Source: http://ec.europa.eu/agriculture/rica/database/database_en.cfm

A significant number of countries, the EU member-countries, do not have the subsidies for sheep and goat production, or their number in negligible. The highest subsidy amounts for sheep and goat breeding per a holding have producers in France, on Cyprus, in Finland, Bulgaria and Ireland.

Table 8. Value of cow's milk, goat's milk and sheep-milk and dairy products in average in all EU countries in 2012

Year	2012		
Country	Cows' milk & milk products (SE216)	Ewes' and goats' milk (SE245)	
(BEL) Belgium	40197	302	
(BGR) Bulgaria	2467	710	
(CYP) Cyprus	7334	3903	
(CZE) Czech Republic	57850	366	
(DAN) Denmark	62782	0	

Year	2012	
Country	Cows' milk & milk products (SE216)	Ewes' and goats' milk (SE245)
(DEU) Germany	56637	226
(ELL) Greece	860	2823
(ESP) Spain	3612	2518
(EST) Estonia	28959	13
(FRA) France	28769	2801
(HUN) Hungary	5461	15
(IRE) Ireland	21562	0
(ITA) Italy	6828	736
(LTU) Lithuania	7555	1
(LUX) Luxembourg	61957	642
(LVA) Latvia	10600	32
(MLT) Malta	7399	1507
(NED) Netherlands	89842	5761
(OST) Austria	12989	694
(POL) Poland	4354	5
(POR) Portugal	3992	394
(ROU) Romania	1402	1014
(SUO) Finland	28575	14
(SVE) Sweden	43047	0
(SVK) Slovakia	87081	3951
(SVN) Slovenia	4976	40
(UKI) United Kingdom	48448	0
Total (Country)	10857	1123

Source: http://ec.europa.eu/agriculture/rica/database/database_en.cfm

Analyzing a share of subsidies for sheep and goat breeding in the total amount of subsidies in livestock production per a holding, there notices that 98.18% of subsidies on Cyprus is for sheep and goat production. In Romania, Greece and Bulgaria, a large amount of subsidies for livestock production is in the sheep and goats production sector. In Ireland, the amount of subsidies for sheep and goats breeding per a holding is higher than the total subsidies for livestock production, due to the negative amounts of subsidies which refer to cattle production.

At the EU level, there produces in average the value of 10,857 EUR of cow's milk and dairy products per a holding, and the value of 1,123 EUR of goat- and sheep-milk and dairy products per a husbandry (Table 8).

The highest value of goat's and sheep-milk and dairy products per a holding was realized in the Netherlands (5,761 EUR), in Slovakia (3,951 EUR) and finally on Cyprus (3,903 EUR).

According to the data described above and the indicators based on them, there can see that, in the EU countries, the most developed and the most significant sheep and goat production is on Cyprus, in Greece and the Netherlands.

Conclusion

A number of sheep in the Republic of Serbia has been increasing latterly, while a number of goats have been decreasing; however, the producers engaged in sheep and goat production meet many business problems, like the problem of selling products, inability to collect the sold products and their low prices.

In the EU countries has been expressed a variance of all analyzed indicators by the states, and the largest number of livestock units of sheep and goats per a holding is in Greece and Romania.

Association of agricultural producers, application of the new systems of production and increase of subsidies for sheep and goat production would improve the results of producers business and would provide development of sheep and goat production in Serbia.

Literature

- Agriculture and Rural Development, Farm Accounting Data Network http://ec.europa.eu/agriculture/rica/database/database_en.cfm
 (15.10.2015)
- 2. Antunović Zvonko, Novoselec Josip, Klir Željka (2012): Ovčarstvo i kozarstvo u Republici Hrvatskoj stanje i perspektive, Krmiva 54 (2012), Zagreb 3: 99-109
- 3. Bogdanović, V., Đorđević, I., Đurđević I. (2008): Osobine mlečnosti balkanske koze upoluekstenzivnim uslovima gajenja, Biotechnology in Animal Husbandry 24 (1-2), p 59-67,Institute for Animal Husbandry,

 Belgrade-Zemun,

 http://www.doiserbia.nb.rs/img/doi/1450-9156/2008/1450-91560802059B.pdf

- 4. Grgić Zoran, Šakić Bobić Branka, Očić Vesna (2009): Kozarska proizvodnja i gospodarski položaj proizvođača u Republici Hrvatskoj na putu prema EU, Tranzicija, Vol.11 No.23-24, Prosinac 2009. Str. 71-76.
- 5. Matejaš Damir (2004): Pasmine ovaca, Hrvatski zavod za poljoprivrednu savjetodavnu službu, Zagreb, http://www.savjetodavna.hr/adminmax/publikacije/o_pasmine.pdf
- 6. Petrović Milan, Ružić-Muslić Dragana, Maksimović Nevena, Žujović Miroslav, Smiljaković Tatjana, Bijelić Zorica (2010): Novi tehnološki postupak za proizvodnju kvalitetnog jagnjećeg mesa, Biotechnology in Animal Husbandry 26 (spec.issue), p 1-10, Institute for Animal Husbandry, Belgrade-Zemun
- 7. Republički zavod za statistiku, Republika Srbija http://webrzs.stat.gov.rs (17.10.2015.)
- 8. Poljoprivreda u Republici Srbiji (2013), Popis poljoprivrede 2012, Knjiga II, Republika Srbija, Republički zavod za statistiku. http://pod2.stat.gov.rs/ObjavljenePublikacije/Popis2012/PP-knjiga2.pdf
- 9. Program odgajivanja i selekcije koza u AP Vojvodini (2010): Poljoprivredni fakultet, Departman za stočarstvo, Novi Sad
- 10. Pravilnik o podsticajima za očuvanje životinjskih genetičkih resursa ("Sl. glasnikRS", br. 83/2013 i 35/2015)
- 11. Pravilnik o uslovima i načinu ostvarivanja prava na podsticaje u stočarstvu za tov junadi, tov svinja, tov jagnjadi i tov jaradi, ("Sl. glasnik RS", br. 50/2015)
- 12. Ziani Petar (1964): Problemi uzgoja koza u Jugoslaviji, Šumarski list, 7-8 srpanj-kolovoz, Zagreb.