

## **ANALYSIS OF INDIVIDUAL CHARACTERISTICS IN PRODUCTION ON A SHEEP FARM IN THE MUNICIPALITY OF ROGATICA AND FOCA**

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### **Abstract**

Analysis was conducted on the territory of Rogatica and Foca. The analysis included 30 randomly selected farms. Twenty sheep farms raising Pramenka different strains (Vlasic and Herzegovinian strain), while the other ten sheep farms raising sheep Württemberg race and crossed Tsigai, Romanovska and Texel sheep breeds. were analyzed by the following characteristics: number of household members, the total number of sheep, the total area of agricultural land, the selling price of 1 kg of lamb and the average weight of lambs during the sale and conducted a descriptive analysis of the results. Depending on the features found numerous smaller or larger variations. The greatest differences were recorded with the characteristics of the soil, bares the herd and the number of household members. The selling price and weight of lambs in the sale of unique values and indicate the possibility of a unique production technology and the natural and market conditions.

**Key words:** sheep production, characteristics, strains of sheep race, Württemberg, Tsigai, Romanovska, Texel.

### **Introduction**

Thanks to favorable natural resources, Republic of Srpska has excellent conditions for the development of animal husbandry. One of the most important is underutilized acreage. Agricultural land as one of the strategic potential represents an extremely relevant resource in the Republic of Srpska belongs primarily among the primary resources for its development. The total area of agricultural land in the Republic of Srpska amounts to 1.25 million hectares, compared to the population makes one hectare per capita, which is above the world average.

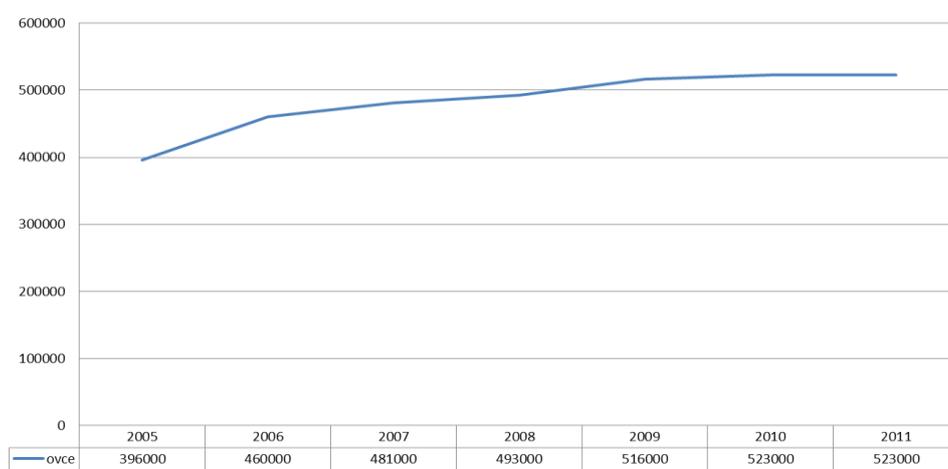
Sarajevo-Romanija region, which is located in the central part of Bosnia and Herzegovina and the eastern part of the Republic of Srpska, in terms of geographical regionalization belongs Mountainous Basin region or subregion of East Bosnia and Central Bosnia. Conditions in the Sarajevo-Romanija region represent a limiting factor for certain areas of agricultural production, but has great importance in livestock production. From the branches of livestock production emphasis is placed on

sheep farming. Sheep production is an important branch of livestock production. The characteristic of sheep production in the mentioned areas is representation races combined type of productivity, meat-milk or milk-meat. Genetic basis is indigenous breeds pramenka or refined pramenka, which is significantly represented in the eastern part of the Republic of Srpska and in lowlands of increasingly develop farms engaged in herding breed specialist focused on the production of meat. When it comes to diet, during the summer and autumn the sheep are fed only by pastures and hay during the winter. The most important strains of sheep in the Republic of Srpska combined route for the production of milk-meat are vlašička, kupreška, podveleška (mountain Herzegovina), Stolac and Sjenicka pramenka.

The most important race for meat production, or production type of meat-wool are Württemberg, Tsigai, Romanovska, Il De France, Texel (<http://www.rzs.rs.ba>)

Overall it is estimated that the genetic productive potential of certain races today largely unused (about 60% to 70%). This is connected with the problems of malnutrition and accommodation sheep, which leads to low yields and milk and meat. After some relevant assessment improved production conditions on some farms suggest the possibility of increasing the yield of meat and milk for 30-40%. The nutrition of the population of mountainous regions of the Republic of Serbian, sheep and lamb meat occupies a special place (Krajinović and Savić, 1992). It

also has certain religious and cultural significance. However, in this post sheep was significantly reduced, although the tendency of slight increase in the number of sheep. According to the Institute for Statistics (<http://www.rzs.rs.ba>) numerous state, we can not be satisfied (graph. 1), as well as the productivity and quality of products Sheep as a branch is not organized nasavremen way, and is still Extensive and poorly developed due to poor racial composition, low production of meat, milk and wool.



Graph. 1 - Numerical strength sheep in the Republic of Srpska  
(Source: Republican Bureau of Statistics, <http://www.rzs.rs.ba>)

In the former state dominated by meat production. To confirm the findings Joksimovića and Čauševića (1981), which states that meat production accounted for 75.07%, while milk production represented with 20.91% and wool with only 4.02%. It should be noted that the relatively low production, especially lamb meat, the result of slaughtering young lambs, and an average weight of about 25 kg, thus, at the national level, are losing significant amounts of meat and funding. Zivkovic *et al.* (1969) research on dreams in the territory of the former Yugoslavia, found that the average body weight of lambs Württemberg was 3.87 kg in female lambs and 4.04 kg in male lambs, or an average of 3.95 kg. Body mass weaning from breast at the age of 90 days is 20.92 kg and 22.76 kg or an average of 21.84. A big problem in the development of sheep production in this region represents a significant representation Extensive or semi-intensive production technology to largely remained, private sheep farms.

The aim of this study was to provide an analysis of the studied characteristics on sheep farms in the municipalities of Rogatica and Foca, as a region, which is characterized as livestock region.

### Material and method

The research was conducted in the area of Rogatica and Foca. Included are pramenka and Württemberg. The sample consists of 30 randomly selected farms. Twenty farms raising sheep pramenka (Vlasicka and Herzegovina), while the other ten farms raising sheep Württemberg, i sporadic crossbreeds Tsigai, Romanovska i Teksel. We investigated the characteristics are: the number of household members, the total number of sheep, the total area of agricultural land, the selling price of 1 kg of lamb and average weight of lambs during the sale. In presenting and defining analysis was applied to the basic statistics, ie descriptive analysis included features (Maletić, 2005).

In the descriptive analysis were used measures of central tendency and measures of variation. The arithmetic mean ( $\bar{X}$ ) was used as an indicator of central tendency included features. As indicators of variations were used: the minimum, maximum, variation interval, standard deviation (SD) and coefficient of variation (CV%).

## Results and discussions

### Basic exteriors and production characteristics represented strains and breeds

Table 1 shows the basic exterior and production characteristics, in relation to sex throat, different strains of sheep combined direction of production (milk-meat), where the emphasis is placed on the production of milk (milk recording heads) and meat (lamb body weight).

The biggest strain on the format of the tested strains of sheep's Vlasic (both sexes), as well as with the largest body weights of adult specimens, while strain smallest body frame. When it comes to milk production, Vlasic and Kupres strain'll receive following similar results, as governed by the Sjenica strain. With 90 days of age Vlasic, Kupres and Sjenicka lambs were aged an average of about 25 kg, and the lowest weight lambs Herzegovina Pramenka (Table 1).

Table 2 outlines the basic exterior and production characteristics, in relation to sex and throat races represented in the territory of the municipality of Foca and Rogatica combined direction of production (meat-wool), with emphasis on the achieved weight lambs.

Table 1. Exterior and production characteristics of different strains of sheep in the municipality of Rogatica and Foca (milk-meat)

Breed/ Gender	Exterior and production traits						
	The height of the ridge, cm	Milk yield, kg	Body weight, kg	Body weight lambs		Wool quality, $\mu$	Yield wool, kg
				Age, days	Weight, kg		
<b>Vlasicki</b>							
♂	75		80-100	90	25	42-44	2,0-2,5
♀	67	90-120	60-70				1,5-2,0
<b>Herzegovina</b>							
♂	55		40	90	22	42-46	1,0-1,5
♀	50	70-90	35				2,0-2,5

Table 2. Exterior and productive traits of different breeds of sheep (meat-wool) in the municipality of Foca and Rogatica

Race/ Gender	Exterior and production traits					
	The height of the ridge, cm	Milk yield, kg	Body weight lambs		Wool quality, $\mu$	Yield wool, kg
			Age, days	Age, days		
<b>Württemberg</b>						
♂	80	100-120	90	31	30-33	6,5-8,0
♀	70	70-75				4,0-4,5
<b>Tsigai</b>						
♂	70-85	110-120	90	31	20-45	3,5-5,0
♀	60-76	70-75				2,5-4,0
<b>Romanovska</b>						
♂	63	70-80	90	23-25	37	2,0-3,0
♀	60-62	50-60				1,4-1,6
<b>Teksel</b>						
♂	75-80	120-130	90	30-35	23-27	7,0-10,0
♀	68-72	65-70				4,5-6,0

Of the analyzed breeds in the municipalities Texel sheep breeds has the largest body measurements (height) and weight, so it gives a linear largest of lambs at 90 days of age (31 kg). Also in the dressing quasi-wool Texel breed is the best. Very similar performance has Ile de France sheep breeds. A smallest and lowest weight of lambs gives Romanovska sheep breeds, but on the other hand belongs to a group of sheep with high fertility.

#### Characteristics of test

Table 3 shows the average values and variability testing the characteristics of farms, a total of 20 farms, which are grown on different strains of sheep, with the direction of production aimed at milk-meat. Table 4 provides average values and variability characteristics of farms, a total of 10 farms, where it is grown Württemberg sheep breeds, with the direction of production focused on meat-wool.

Table 3. Average values and variability testing the characteristics of the farms (20 in total) with different strains of sheep

Parameter	Measure of variation					
	$\bar{X}$	Sd	CV (%)	Variation interval	Min	Max
Number of members households	5,20	1,15	22,15	4,00	3,00	7,00
Number sheep	124,00	37,60	30,33	148,00	52,00	200,00
Agricultural land	10,50	5,36	51,04	17,30	3,70	21,00
The price lamb meat (KM/kg)	5,84	0,10	1,79	0,40	5,80	6,20
Tha mass of lamb (at birth)	37,50	1,47	3,92	4,50	35,00	39,50

Table 4. Average values and variability testing the characteristics of the farms (10 in total) with Württemberg sheep breeds

Parameter	Measure of variation					
	$\bar{X}$	Sd	CV (%)	Variation interval	Min	Max
Number of members households	4,10	21,36	22,15	4,00	2,00	5,00
Number sheep	118,00	22,26	30,33	80,00	80,00	160,00
Agricultural land	8,35	54,55	51,04	13,90	2,10	16,00
The price lamb meat (KM/ kg)	5,26	2,40	1,79	0,30	5,20	5,50
Tha mass of lamb (at birth)	42,75	2,77	3,92	3,00	41,00	44,00

Herd size farms that grow pramenka varied from 52 to 200 head (table 3), and the size of herds on farms that grow Württemberg breed of sheep varied from 80 to 160 heads (Table 4). Compared to the average number of household members, with farms that produce different strains of sheep, the average household has 23 members in relation to the number of sheep or two members in relation to the available land. For farms that produce different breeds of sheep, on average, 28 family members in relation to the number of sheep or two members in relation to the available agricultural land. Prices vary at least farms that bred race pramenka vary and range

from 5.80 to 6.20 KM, and in households with race Württemberg from 5.20 to 5.50 KM (CV = 1.79%). The weights vary by farms with pramenka from 35 to 39.50 kg, a weight in farms with Vittemberg from 41 kg to 44 kg.

#### Conclusions

The part with the basic exterior and production characteristics in terms of a body frame of the analyzed strains of sheep in the municipality of Rogatica and Foca, it was concluded that Vlacic strain has the highest format and weight (both sexes), as well as best practice manufacturing Ads (milkiness, weight lambs

90 days old, the yield of wool), in accordance with the direction of production, milk-meat.

Of the analyzed breeds in the municipalities Texel sheep breeds has the largest body measurements (height) and weight, so it gives a linear largest of lambs at 90 days of age (31 kg) and yield quasi wool.

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