STRATEGY OF ORGANIZATIONAL-TECHNOLOGICAL SOLUTIONS ON PRODUCTION OF LAMB FOR SALE IN FARMS CONDITIONS

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A R T I C L E I N F O

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A B S T R A C T

Surveys were conducted in the Nisava and Toplica districts in Serbia during 2018. The medium-sized private sheep farm (A) in Držanovac in the Toplica District and the small private sheep farm (B) in Orljan, in the Nisava District are being investigated. The volume and technology of sheep genotype production for lamb production for sale on both farms was monitored and economic results analyzed. During the study period, it was found that on farm A there were 150 heads of Merino breed and on farm B 75 heads. Total profit on Farm A without incentives in crop production: wheat 1,215.0 EUR, maize 1329.7 EUR, barley 1314.60 EUR, triticale 1561,50 EUR and in livestock breeding for 150 heads EUR 16,920, of which 13,500 EUR in lamb production. Also total profit on Farm B in crop production: wheat EUR 2,853.0, corn EUR 1329.6 and livestock production, by 75 heads, EUR 8,460, of which EUR 6,750 in lamb production.

Introduction

The importance of sheep production, among other things, is to enable it to make fuller use of agricultural resources and to realize a large part of crop production. In addition, due to the encompassing production process which has a slight influence of external factors, sheep production significantly affects the overall growth rate of agricultural production. Production of the breed of lambs for the production of lambs for sale has fallen over

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one third of the total production in Serbia, while this share in Vojvodina rises to almost half of the total production. Regardless of the natural indicators in intensively oriented production of Merino sheep, it is very important to provide a thorough insight in the cost of production, which is the basis of economy of the production process of lambs for sale. Unlike a farm that produces sheep for its own purposes and eventually sells the product. Farms or family farms that are permanently oriented to commodity production must pay close attention to the cost of production, and the products obtained must meet quality standards. Research on the economic parameters of sheep production is concerned with determining the cost of producing lambs and sheep in two stages. The analysis deals with the cost of production of sheep in the first stage of the production process, and the determination of the total cost of production of individual product categories by applying divisional calculation in the second stage of calculation Mičić et al., (2018). The cost correction aims to give the results obtained wider applicability to the farms surveyed. In this way, the results obtained are of general and not only local importance, Yusup et al., (2017). Quantity, as part of a strategic effort to provide the required quantities of lambs for sale, wool, and milk, continues to be an important element of production, although its primacy has long been overcome, Saatchi et al., (2010). To increase lamb production in the industry, science has made efforts to successfully manage the sheep breeding process. Today, in many countries, including ours, estrus Synchronization methods are used to control the reproductive properties of sheep, as well as to produce more female lambs at the same stage of estrus and ovulation. This method allowed two or three lambs a year for two years, with the goal of increasing lamb and meat production. Zapletal et al., (2010) point out that the use of proper hygiene in sheep reproduction, breeding, environmental conditions, nutrition, prevention and treatment are key factors. Estrus synchronization successful programs play a key role in lambing and profitability of sheep wearers in semi-intensive production systems, (Cividini et al., 2012; Kukovic, et al., 2013). Sheep farming in Serbia is generally extensive. In Serbia the sheep population is 80%, of which the following strains are: Pirot, Svrljiska, Sjenica, while the remaining 20% are Cigaj, Wirtember sheep, and Australian merino for wool production. Productivity in the population of other breeds is higher, but due to the low participation in the total number of sheep, the effects are insignificant at the national level. The annual weight of sheepmeat in the last decade is below 20,000 tonnes. In Serbia, the consumption of sheep meat is below 3.0 kg per capita, we are among the European countries with the lowest consumption. The basic orientation of farmers in lamb and meat production in Serbia seems to be in the first (F1) generation to achieve better quality of lamb production for sale, etc. According to the latest data from the Statistical Office of the Republic, about 1.7 million sheep are raised. Most, over one million, are grown in central and eastern Serbia, but on the other hand, the largest and most organized farms are located in Vojvodina (Matsushita et al., 2010; Marina et al., 2017).

The following authors have explored this issue, among others: (Kegalj et al., 2011; Mellado et al., 2016; Momoh et al., 2013; Rahimi et al., 2014; Siddalingamurthy et al., 2017; Simeonov et al. al., 2015; Tohidi et al., 2016; Catalan et al., 2018).

Materials and methods

The survey was conducted on a family farm on farm A in Držanovac and farm B in Orljan. Both farms have a closed production cycle. The middle farm (A) has 150 heads of sheep, and the small farm (B) 75 heads of sheep a year. Farm A employed 2 people and Farm B 1 people. Production costs for both households are based on natural indicators established on the basis of a survey conducted in 2018 and all categories of variable costs in accordance with the production process. Material costs refer to the consumption of nutrients and medicines used in the production process. Depreciation expense in 2018 based on space and equipment norms, we approach investment estimates, estimate depreciation costs based on which fixed cost categories are calculated. In determining the cost of production, we start from the price of lamb products for sale. Production parameters are monitored: on farms A and B, food consumption on both farms per 1 kg increment, total growth and food costs on both farms Gbangboche et al., (2006).

The significance of results in lamb production in 2018 was independently monitored on both farms during one research year.

Results

Research on the economic parameters of the production process for lambs for sale was carried out at Medium Sheep Farm A and Small Sheep Farm B. These farms have a closed production cycle which includes the production of lambs, sheep wool and milk. On farm A over 200 lambs a year and farm B about 100 lambs. Fama A produces the most important nutrients for the feeding of cereals. at 10 h and Fama B produces the most important nutrients for the feeding of the cereals, at 5 h. Farm A has two members and Farm B has one member. Based on the recording of production processes on farms A and B, the cost of materials was calculated, which included the consumption of food, medicines, other materials and water. Variable costs account for the bulk of material costs (Archimede et al., 2008; Zaharia et al., 2013).

Discussions

Farm A was monitored for the economics of producing the most important nutrients for the feeding of the cereal group. The economics of wheat, maize, triticale and barley production are still being monitored. The farmer has significant areas and favorable conditions for the said production. Corn covered 2 ha, triticale 3 ha, wheat 2 ha and barley 3 ha. Annual production of 50 tonnes of cereals on farm A farmland in 2018. The aforementioned middle sheep farm as well as crop production was investigated in order to provide nutrients for the feeding of herds on farm A. The natural and financial indicators of cereal production in 2018 are given in the following tables, as follows: calculation of production, maize (Table 1); triticale (Table 2); wheat (Table 3) and barley (Table 4).

Table 1: Calculation of realized economic indicators of maize production per 2 ha for farm A

Row. Number	Production year: 2018	Number of repetitions	Quantity	JM	The price	JM	Amount of EUR / ha / 2
I	Income						
1.	Corn	2	6,5	t/ha	130,0	EUR /t	1690,0 EUR
2.	Corn	2	9	t/ha	17,98	EUR /t	323,7 EUR
A)	Total revenue (1 to 2)						2.013,7 EUR
3.	Costs						
4.	Seeds	1	20	kg	1,50	EUR	30,0 EUR
5.	Fertilizer						
6.	Manure	25%	40	t	1,0	EUR /kg	40,0 EUR
7.	KAN (29% N)		400	kg	0,30	EUR /kg	120,0 EUR
8.	Pesticides						
9.	Guardian		6	L	4,0	EUR /kg	18,0 EUR
10.	Thesis		6	L	2,5	EUR /L	15,0 EUR
11.	Irrigation						
12.	Energent	2	15	L	1,40	EUR /L	42,0 EUR
13.	Diesel fuel		60	L	1,40	EUR /L	84,0 EUR
14.	Maintenance of mechanization		2	ha	15,0	EUR /ha	30,0 EUR
15.	Paid services. mechanization						
16.	Plowing		2	ha		EUR /ha	0 EUR
17.	Land preparation		2	ha		EUR /ha	0 EUR
18.	Sowing		2	ha	30.50	EUR /ha	61,0 EUR
19.	Harvest		2	ha	65,00	EUR /ha	130,0 EUR
20.	Paid labor		5	work day	15,0	EUR	75,0 EUR
21.	Other variable costs						
22.	Storage cost			kg		EUR /kg	0 EUR
23.	Transport to the customer		13	t	3,0	EUR /t	39,0 EUR
B)	Total Cost (3 to 23)						684,0 EUR
II	**PROFIT / LOSS**						
24.	Total No Incentives (A - B)						**1329,7** EUR
25.	Per ha without incentives (24:17)						**664,8** EUR
26.	Price of cereals kg (24: 1)						**0,1** EUR
27.	Economical production (A: B)						**2,94**
28.	Production profitability (24: B) x100						**194,40 %**

Source: Mičić, 2018

Results achieved: The average maize yield on farm A was 6.5 t / ha, ranging from 6.0 t / ha to 7.0 t / ha. Total profit per 2 ha is EUR 1,329.70, production efficiency is 2.94 and production profitability is 19.40%.

Table 2: Calculation of realized economic indicators of triticale production per 3 ha for farm A

Row. Number	**Production year: 2018**	**Number of repetitions**	**Quantity**	**JM**	**The price**	**JM**	**Amount of EUR/ha/3**
I	Income						
1.	Triticale	3	5,0	t /ha	150,0	EUR / t	2.250,0 EUR
2.	Straw	3	5	t/ha	19,5	EUR /t	292,5 EUR
A)	Total revenue (1 to 2)						2.542,5EUR
3	Costs						
4.	Seeds	1	750	kg	0,20	EUR	150,00 EUR
5.	Fertilizer						
6.	Manure	25%	60,0	kg	1,0	EUR/kg	60,00 EUR
7.	Urea		600	kg	0,30	EUR /kg	180,00 EUR
8.	Foliar savings		6	kg	3,0	EUR/kg	18,00 EUR
9.	Pesticides						
10.	Meteor		30	G	0,15	EUR /L	4,50 EUR
11.	Irrigation						
12.	Energent	3	15	L	1,40	EUR /L	63,00 EUR
13.	Diesel fuel		90	L	1,40	EUR /L	126,00 EUR.
14.	Maintenance of mechanization		3	ha	19,00	EUR /ha	57,00 EUR
15.	Paid services. mechanization						
16.	Plowing		3	ha		EUR /ha	0 EUR
17.	Land preparation		3	ha		EUR /ha	0 EUR
18.	Sowing		3	ha	30,5	EUR /ha	91,50 EUR
19.	Harvest		3	ha	52,00	EUR/ha	156,00 EUR
20.	Paid seasonal labor		20	work day	1,50	EUR	30,00 EUR
21.	Other variable costs						
22.	Storage cost			kg		EUR/kg	0 EUR
23.	Transport to the customer		15,0	t	3,0	EUR/kg	45 EUR
B)	Total Cost (3 to 23)						981,0 EUR
II	**PROFIT / LOSS**						
24.	Total No Incentives (A - B)						**1561,50** EUR
25.	Per ha without incentives (24:17)						**520,50** EUR
26.	Price of cereals kg (24: 1)						**0,10** EUR
27.	Economical production (A: B)						**2,59**
28.	Production profitability (24: B) x100						**159,17 %**

Source: Mičić, 2018

Achieved results: The average yield of triticale on the tested farm A was 5.0 t / ha, and ranged from 4.5 t / ha to 5.5 t / ha. Total profit per 3 ha is EUR 1,561.50, production efficiency is 2.59 and production profitability is 159.17%.

Table 3: Calculation of realized economic indicators of wheat production per 2 ha for farm A

Row. Number	**Production year: 2018**	**Number of repetitions**	**Quantity**	**JM**	**The price**	**JM**	**Amount of EUR/ha/2**
I	Income						
1.	Wheat	2	5,0	t/ha	170,0	EUR / t	1700,0 EUR
2.	Straw	2	5.0	t/ha	16,9	EUR /t	169,0 EUR
A)	Total revenue (1 to 2)						1.869,0 EUR
3	Costs						
4.	Seeds	1	500	kg	0,20	EUR	100,00 EUR
5.	Fertilizer						
6.	Manure	25%	40	t	1,0	EUR / kg	40,00 EUR
7.	Urea		400	kg	0,30	EUR / kg	120,00 EUR
8.	Foliar savings		4	kg	3,0	EUR / kg	12,00 EUR
9.	Pesticides						
10.	Meteor		20	g	0,15	EUR /L	3,0 EUR
11.	Irrigation						
12.	Energent	2	15	L	1,40	EUR /L	42,00 EUR
13.	Diesel fuel		60	L	1,40	EUR /L	84,00 EUR
14.	Maintenance of mechanization		2	ha	19,0	EUR / ha	38,00 EUR
15.	Paid services. mechanization						
16.	Plowing		2	ha		EUR /g	0 EUR
17.	Land preparation		2	ha		EUR / ha	0 EUR
18.	Sowing		2	ha	30,0	EUR / ha	60,0 EUR
19.	Harvest		2	ha	55,0	EUR / ha	110,00 EUR

Row. Number	Production year: 2018	Number of repetitions	Quantity	JM	The price	JM	Amount of EUR/ha/2
I	Income						
20.	Paid season. work-force		10	work day	1,50	EUR	15,0 EUR
21.	Other variable costs						
22.	Storage cost			kg		EUR / kg	0 EUR
23.	Transport to the customer		10	t	0,3	EUR / kg	30,0 EUR
B)	Total Cost (3 to 23)						654,0 EUR
II	**PROFIT / LOSS**						
24.	Total No Incentives (A - B)						**1.215,0** EUR
25.	Per ha out of reach (24:17)						**607,50** EUR
26.	Price of cereals kg (24: 1)						**0,12** EUR
27.	Economical production (A: B)						**2,86**
28.	Production profitability (24: B) x 100						**185,78 %**

Source: Mičić, 2018

Results achieved: The average wheat yield on farm A tested was 5.0 t / ha, ranging from 4.5 t / ha to 5.5 t / ha. Total profit per 2 ha is EUR 1,215.0, production efficiency is 2.86 and production profitability is 185.78%.

Table 4: Calculation of economic indicators of barley production per 3 ha for farm A

Row. Number	Production year: 2018	Number of repetitions	Quantity	JM	The price	JM	Amount of EUR/ha/3
I	Income						
1.	Barley	3	4,0	t/ha	170,0	EUR / t	2.040,0 EUR
2.	Straw	3	5	t/ha	17,04	EUR /t	255,6 EUR
A)	Total revenue (1 to 2)						2.295,6 EUR
3	Costs						
4.	Seeds	1	750	kg	0,20	EUR	150,00 EUR
5.	Fertilizer						
6.	Manure	25%	60,0	t	1,0	EUR /kg	60,00 EUR
7.	Urea		600	kg	0,3	EUR /kg	180,00 EUR
8.	Foliar savings		6	kg	3,0	EUR /kg	18,0 EUR
9.	Pesticides						

Row. Number	Production year: 2018	Number of repetitions	Quantity	JM	The price	JM	Amount of EUR/ha/3
I	Income						
10.	Meteor		30	g	0,15	EUR /L	4,50 EUR
11.	Irrigation						
12.	Energent	3	15	L	1,40	EUR /L	63,0 EUR
13.	Diesel fuel		90	L	1,40	EUR /L	126,00 EUR
14.	Maintenance of mechanization		3	ha	19,0	EUR /ha	57,0 EUR
15.	Paid services. mechanization						
16.	Plowing			ha		EUR /ha	0 EUR
17.	Land preparation		3	ha		EUR /ha	0 EUR
18.	Sowing		3	ha	30,50	EUR /ha	91,50 EUR
19.	Harvest		3	ha	55,00	EUR /ha	165,0 EUR
20.	Paid season. workforce		20	work day	1,50	EUR	30,0 EUR
21.	Other variable costs						
22.	Storage cost			kg		EUR /kg	0 EUR
23.	Transport to the customer		12	t	3,0	EUR /kg	36,0 EUR
B)	Total Cost (3 to 23)						981,0 EUR
II	**PROFIT / LOSS**						
24.	Total No Incentives (A - B)						**1314,60** EUR
25.	Per ha without incentives (24:17)						**438,20** EUR
Row. Number	**Production year: 2018**		**Number of repetitions**	**Quantity**	**JM**	**The price**	**JM**
26.	Price of cereals kg (24: 1)						**0,11** EUR
27.	Economical production (A: B)						**2,34**
28.	Production profitability (24: B) x 100						**134,00 %**

Source: Mičić, 2018

Results achieved: The average yield of barley on farm A was 4.0 t / ha, ranging from 3.5 t / ha to 4.5 t / ha. Total profit on 3 ha is EUR 1,314.60, production efficiency is 2.34 and profitability of production is 134.0%

The economics of feed production for the herd feed were also monitored on the sheep farm B from the cereals group: maize and wheat. The farm has the conditions and areas for crop production. Corn covers 2 ha and wheat 3 ha. Farm B's annual cereal production is 35.5 t in 2018.

The natural and financial indicators are presented in the table below: the calculation of realized economic production, maize (Table 5) and wheat (Table 6).

Table 5: Calculation of realized economic indicators of maize production per 2 ha for farm B

Row. Number	**Production year: 2018**	**Number of repetitions**	**Quantity**	**JM**	**The price**	**JM**	**Amount of EUR/ha/2**
I	Income						
1.	Corn	2	6,5	t/ha	130,0	EUR /t	1690,0 EUR
2.	Corn	2	9	t/ha	17,98	EUR /t	323,6 EUR
A)	Total revenue (1 to 2)						2.013,6 EUR
3.	Costs						
4.	Seeds	1	20	kg	1,50	EUR	30,0 EUR
5.	Fertilizer						
6.	Manure	25%	40	t	1,0	EUR /kg	40,0 EUR
7.	KAN (29% N)		400	kg	0,30	EUR /kg	120,0 EUR
8.	Pesticides						
9.	Guardian		6	L	4,0	EUR /kg	18,0 EUR
10.	Thesis		6	L	2,5	EUR /L	15,0 EUR
11.	Irrigation						
12.	Energent	2	15	L	1,40	EUR /L	42,0 EUR
13.	Diesel fuel		60	L	1,40	EUR /L	84,0 EUR
14.	Maintenance of mechanization		2	ha	15,0	EUR /ha	30,0 EUR
15.	Paid usl. mechanization						
Row. Number	**Production year: 2018**	**Number of repetitions**	**Quantity**	**JM**	**The price**	**JM**	**Amount of EUR/ha/3**
16.	Plowing		2	ha		EUR /ha	0 EUR
17.	Land preparation		2	ha		EUR /ha	0 EUR
18.	Sowing		2	ha	30.50	EUR /ha	61,0 EUR
19.	Harvest		2	ha	65,0	EUR /ha	130,0 EUR
20.	Paid labor		5	work day	15,0	EUR	75,0 EUR
21.	Other variable costs			kg		EUR /kg	
22.	Storage cost						
23.	Transport to the customer		13	t	3,0	EUR /t	39,0 EUR
B)	Total Cost (3 to 23)						684,0 EUR
II	PROFIT / LOSS						
24.	Total No Incentives (A - B)						**1329,6** EUR
25.	Per ha without incentives (24:17)						**664,8** EUR
26.	Price of cereals kg (24: 1)						**0,1** EUR
27.	Economical production (A: B)						**2,94**
28.	Production profitability (24: B) x100						**194,40 %**

Source: Mičić, 2018

Results achieved: The average maize yield on farm B tested was 6.5 t / ha, ranging from 6.0 t / ha to 7.0 t / ha.

Total profit per 2 ha is EUR 1,329.70, production efficiency is 2.94 and production profitability is 19.40%.

Table 6: Calculation of realized economic indicators of wheat production per 3 ha for farm B

Row. Number	Production year 2018	Number of repetitions	Quantity	JM	The price	JM	Amount of EUR/ha/2
I	Income						
1.	Simonida wheat of 3 ha	3	7,5	t/ha	170,0	€/ t	3.825,0
2.	3 ha straw	3	4	t/ha	8,75	€/ t	105,0
3	RS incentives for crop production		3	ha	50,00	€/ ha	150,0
A)	Total income (1 to 2) for 3 ha						4.080,0
4	Costs						
5.	Seed for 3 ha	1	750	kg	0,20	kg	150,0
6.	Fertilizer						
7.	Manure for 3 ha		15	t	4,00	t	60,0
8.	KAN (29% N) 50% + Urea 50%		1500	kg	0,30	kg	450,0
9.	Foliar savings		6	kg	3,00	kg	18,0
Row. Number	**Production year: 2018**	**Number of repetitions**	**Quantity**	**JM**	**The price**	**JM**	**Amount of EUR/ha/3**
10	Pesticides						
11	Meteor		30	g	0,20	€/L	6,0
12	Irrigation						
13	Energy for 3 ha	3	15	L	1,20	€/L	54,0
14	Diesel fuel		90	L	1,20	€/L	108,0
15	Maintenance of mechanization		3	ha	19,00	€/ha	57,0
16	Paid services			ha			
17	Plowing		3	ha		€/ha	0
18	Land preparation		3	ha		€/ha	0
19	Sowing		3/		30,00	€/ha	90,0
20	Harvest		3	ha	55,00	€/ha	165,0
21	Paid seasonal labor		46	work day	1,50	€/h	69,0
22	Other variable costs						
23	Storage cost			€/t		€/t	0
24	Transport to the customer			t		€/t	0
B)	Total Cost (3 to 24)						**1.227,0**
II	**PROFIT / LOSS**						
25	Total with Incentive (A - B)						**2.853,0**
26	Per ha from incentives (25:17)						**951,0**

27	Cost per kg of grain grain (B: 1)					**0,0545**
28	Economical production (A: B)					**3,33**
29	Income Profitability (25: A) x 100					**69,92 %**

Source: Mičić, 2018

Results achieved: The average wheat yield on Farm B was 7.5 t / ha, ranging from 7.0 t / ha to 8.0 t / ha.

The realized profit on 3 ha is 2853,00 €, production economy is 3,33 and profitability of revenue is 69,92%.

Birth weight of lambs in the month of birth showed that most lambs were born in March, with the smallest and highest birth weights, while the smallest lambs were born in April (Table 7).

Table 7. Lamb birth weight, standard deviation, standard average error and deviations in four different months

Month of birth	**Mean**	**N**	**Std. Deviation**	**Std. Error of Mean**	**Minimum**	**Maxi mum**	**Variance**
January	4.88	58	.892	.118	3.12	6.58	.798
March	4.47	238	.978	.065	2.12	6.88	.955
Month of birth	**Mean**	**N**	**Std. Deviation**	**Std. Error of Mean**	**Minimum**	**Maxi mum**	**Variance**
April	4.68	25	.785	.165	3.62	6.12	.615
October	4.32	68	.942	.115	2.52	6.73	.885
Total	4.48	388	.963	.049	2.12	6.82	.927

Source: Mičić, 2018

The mean lambs average weight was the highest in January and the lowest average birth weight in October.

The differences for the average birth weight were 0.44 kg, 0.21 kg and 0.58 kg from January to March, January to April and January to October the month of birth of the lambs.

Analysis of variance showed that birth month had a significant effect on lamb birth weight ($P < .005$).

Based on the presented result for 2018, we can conclude that the production of lambs, on farms A and B is economically justified, the financial indicators are given in tabular form, production of lambs and others. on medium ovary farm A and small ovarian farm B in Serbia (Table 8), Mičić et al., (2017).

Table 8: Economics of production of lambs for sale on medium A and small B sheep farms in Serbia for 2018.

Elements	**THE FARM A**	**THE FARM B**
A) Number of sheep on the farm	150	75
PRODUCTION SCOPE		
1. Total volume	6.750	3.375
2. After a sheep	45	45
REVENUE		
3. Lambs for sale	13.500	6.750
4. Milk incentives	0	0
5. Incentives to die. rejuvenated	3.000	1.500
6. Sheep wool	2.250	1125
7. Lambs for overhauling herds (scraps)	2.250	1.125
6. Wrap milk	9.000	4.500
9. Manure	3.000	1.500
10. Sheep hatched	6.000	3.000
B) Total revenue	38.970	19.485
COSTS		
11. Food	12.000	6.000
12. Veterinary services and medicines	750	375
13. Died	1.500	750
14. Human work	4.500	2.250
15. Energy and fuel	1.500	750
16. Depreciation of facilities and equipment	1.000	500
17. Other	800	400
C) Total cost	22.050	11.025
Elements	**THE FARM A**	**THE FARM B**
INCOME / LOSS		
D) On the farm	16.920	8.460
18. Down the throat D:A	112,80	112,79
19. Economy of production B:C	1,77	1,76
20. Production Profitability D:Bx100	43,42%	43,41%

Source: Mičić, 2018

Based on the result shown, we can conclude that the production of lambs for sale on both farms is economically justified in 2018. (Ripoll et al., 2018).

Conclusions

Based on the analysis of the situation in our economy, and especially in the livestock breeding industry, specifically lambs for sale, it is necessary to draw some conclusions when it comes to access to this type of production. This primarily refers to the food industry in Serbia.

This research came to the following conclusions: a more complex analytical review of the conditions and results of development of the aforementioned industry of Serbia in the last two decades, required a preliminary conceptual (re) definition and systematic classification of the activities covered, as well as methodological problems of their informative monitoring.

Two branches of industrial production (food and livestock) based on the processing of primary agricultural products are linked in the supply chain, ie primary production under farm conditions to farms A and B (wheat, maize, barley, triticale and other fodder), farms A and B are engaged in the production and production of lambs, and around 700,000 farms bring about 40% of gross domestic product in Serbia.

The data presented show that the income from the products, plus the incentives, covered the costs of production and gave the rest of the income on the sheep farm A and B.

The total profit realized in the livestock production on farm A for 150 sheep amounts to EUR 22,340.8.

Economy of production 1,77 and profitability of production 43,42%.

Also on Farm B, the total profit in the livestock production for 75 sheep is EUR 12,624.6.

Economy of production 1.76 and profitability of production 43.41%.

An analysis of variance showed that the month of birth had a significant effect on lamb mass, from the point of view of the influence of the season, the highest body mass was in spring and winter and the lowest in autumn, but despite differences in weight, the season did not show a significant effect on lamb weight (P> .005).

The highest body weight are have single, then twins and triplets.

Conflict of interests

The authors declare no conflict of interest.

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