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Original Scientific Article

INFLUENCE OF SEX, SLAUGHTER WEIGHT AND SEASON ON CARCASS CHARACTERISTICS OF LIKA PRAMENKA LAMBS RAISED UNDER SEMI-EXTENSIVE PRODUCTION SYSTEM

Ana Kaić*, Boro Mioč, Ante Kasap

Address of authors: Department of Animal Science and Technology, Faculty of Agriculture, University of Zagreb, Svetošimunska cesta 25, 10 000 Zagreb, Croatia

*Corresponding author, E-mail: akaic@agr.hr

Summary: The aim of the study was to evaluate effects of sex, slaughter weight and season on carcass characteristics of Lika Pramenka lambs (30 males and 30 females). All lambs were reared traditionally on natural pastures within two seasons and were slaughtered at the age of five months. Male lambs had deeper chests and longer hind legs than females. Furthermore, male lambs had higher proportion of shoulder, hind legs, shank, head, and lower proportion of rack. Female lambs had lower bone and muscle proportions and higher fat proportions in individual cuts. Slaughter weight significantly affected hot carcass weight, dressing percentage, stomach with intestines, lungs with hearth, skin with feet, chest depth, proportion of belly, shank, kidney knob and channel fat. Season affected all slaughter traits, linear measurements and non-carcass components (except spleen and skin with feet). Furthermore, season affected proportion of neck, rack, hind legs, shank, belly, flank, and fat and bone proportions in the carcass i.e. fat proportion in shoulder, rack, loin, hind legs and belly, and muscle proportion in rack and belly. In order to provide more uniform lambs at the market it is necessary to assure typical feeds in unfavourable seasons and slaughter lambs at narrower weight ranges. Since typical and "natural" meat products are gaining popularity it is necessary to conduct more detailed studies with sensory evaluation and consumers included.

Key words: carcass composition; linear measurements; non-carcass components; slaughter traits

Introduction

The Lika Pramenka sheep belongs to a group of indigenous breeds of Pramenka incurred in mountainous region of Lika and Gorski Kotar (Croatia). It is traditionally reared under semi-extensive production system. In the summer period, animals are free-ranged at natural pastures and at the night in the stable. During the winter period animals are kept in stable, fed with hay and occasionally supplemented with concentrate feed. Lambing season occurs during the spring period, from February till the end of May. According to the Annual report of the Croatian Agricultural Agency (3), the estimated population of Lika Pramenka breed is 30,000 individuals, with 8,714 animals under selection control. Despite the fact that is a multi-purpose breed, in the last decade Lika Pramenka breed is primarily reared for meat production. Lambs are slaughtered at the age of approximately 5 months achieving live weight from 25 to 30 kg i.e. carcass weight between 12 and 15 kg. According to native consumers' opinion, this meat is considered as having high edible quality (17).

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In recent years, with increasing emphasis on sustainable farming systems, the use and exploitation of indigenous breeds have elicited particular attention (7). The increasing demand for healthy, safe meat products is stimulating market interest in extensive production as an important part of a sustainable system (13) which can produce a carcass of a superior quality and in accordance with the demands of consumers (15). In contrast to lighter lambs and according to our knowledge from literature reports, carcass characteristics of medium-sized lambs raised in semi-extensive or extensive production system recently has not been widely studied.

Therefore, this study aims to determine the main factors (sex, slaughter weight and slaughtering season) affecting carcass characteristics of Lika Pramenka lambs raised in traditional semi-extensive production system.

Material and methods

The study was carried out during the slaughtering season in years 2010 and 2011 on a single family farm placed in the southern part of the mountain region of Croatia (Gospić). According to Croatian Bureau of Statistics, average monthly air temperatures during the slaughtering season in 2010 ranged from 0.7 to 17.9 °C and in 2011 from 0.2 to 18.4 °C. Average precipitation rates during the slaughtering season in 2010 ranged from 98.4 to 158.6 mm and in 2011 from 18.0 to 57.6 mm. Lambs were born at the beginning of March and kept with their dams till the end of July. All lambs were raised throughout the day with their dams continuously on a pasture, and at the night in the stable. They suckled their dams and grazed until slaughter. No concentrate was available to ewes or lambs. A total of 60 lambs (30 males and 30 females) of Lika Pramenka breed were randomly chosen to represent their typical breed characteristics.

At the age of five months lambs were transported to a local commercial slaughterhouse and fasted for 12 h with free access to water. All procedures with the lambs were carried out in accordance with the animal welfare rules prescribed by Croatian regulations (16). Before the slaughter, lambs were weighted (slaughter weight). Slaughter and dressing methods followed normal commercial procedures (12). All non-carcass components (stomach with intestines, lungs with heart, liver, spleen, testes and skin with feet) were removed from the body, immediately weighted and recorded. Once the evisceration was conducted, the carcasses were weighted (hot carcass weight) and then chilled at 4 °C for 24 h in a conventional cooler. Linear dimensions were measured after cooling on the intact carcasses (12). For linear dimensions calliper and measuring tape were used. Carcass length was measured from the caudal edge of the last sacral vertebra to the dorso-cranial edge of the atlas. Chest depth was measured as the greatest depth of chest in a horizontal plane of the hanging carcass. Chest width and pelvis width were measured as the greatest width of chest, i.e. pelvis in a horizontal plane of the hanging carcass. Hind leg length was measured from the centre of the tuberosity on the proximal end of the tibia to the distal edge of the tarsus. Following that measurements the carcasses were halved throughout the dorsal midline. The left sides were divided into individual cuts: neck, shoulder, rack, loin, hind leg, shank, belly and flank (Figure 1) (21). Dissection of the individual cuts was carried out obtaining muscle, bone and fat (12). Furthermore, less-priced cuts (head, tail, kidney, kidney knob and channel fat) were removed and weighted from the halved carcasses. Each of them was expressed as a proportion of less-priced cuts and was excluded in the calculations related to carcass composition.

All investigated traits were analysed by MIXED procedure of SAS/STAT software package (20) considering sex and slaughtering season as class fixed effects and slaughter weight as linear regression. Differences of last-square means as well as significance of regression slopes were performed by t-test ($\alpha = 0.05$).

Results and discussion

The results of the slaughter traits, non-carcass composition and linear measurements of Lika Pramenka lambs are presented in Table 1. There was no significant effect of sex on slaughter traits and non-carcass components. The results of slaughter weight, hot carcass weight and dressing percentage are in agreement with those reported for Segureña lambs (18) and for Churra da Terra Quente lambs (19). The results obtained for non-carcass components are partially in accordance

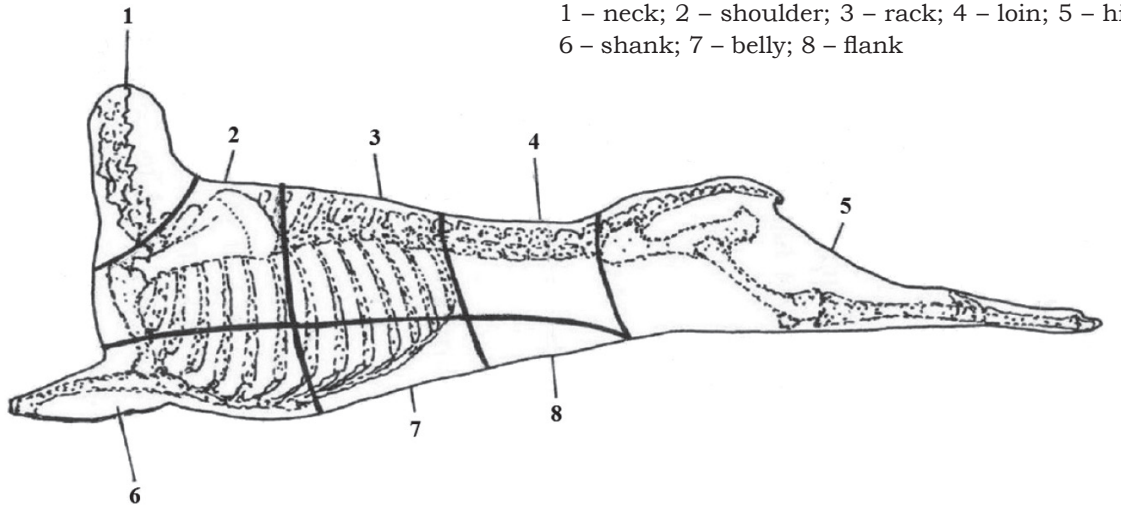

Figure 1: Half lamb carcass with individual cuts (21)

with those reported for improved Jezersko-solčava lambs (24) where male lambs had only significantly higher proportion of liver while difference of any other non-carcass components between male and female lambs was not determined. Since a small increase in lamb slaughter weight may result in higher productivity, and give more flexibility to the production system (19), one of the before mentioned aims was to investigate influence of slaughter weights of Lika Pramenka breed given at the age of 5 months in traditionally rearing system. In the present study increase in slaughter weight from 22.1 to 31.3 kg was followed by increase in hot carcass weight, dressing percentage, stomach with intestines, lungs with hearth and skin with feet ($p \leq 0.01$). Similar results were reported for Awassi lambs (1) where hot carcass weight, dressing percentage and all non-carcass components (except spleen) increased by slaughter weight from 20.9 to 30.5 kg. Slaughtering season significantly affected slaughter weight, hot carcass weight and dressing percentage ($p \leq 0.01$). According to available data from the Croatian Bureau of Statistics, hydro meteorological conditions of the Lika Pramenka breeding area in the present study substantially differed between the slaughtering seasons. These differences in climate conditions indirectly affected food supply via vegetation development which resulted in higher body weight of lambs reared in season 2010. Weight of the stomach with intestines, lungs with heart and liver were also significantly influenced ($p \leq 0.05$) by slaughtering season.

Male carcasses had deeper chests ($p \leq 0.01$) and longer hind leg ($p \leq 0.05$) than female carcasses, while all other measurements were not significantly different. The resulting difference between the overall carcass development in the present study was significantly different from the one reported on the carcasses of Dalmatian Pramenka and Istrian lambs (22). Dalmatian Pramenka and Istrian lambs were reared under semi-extensive production systems and grazed on the natural pastures poorer than those in Lika. The author pointed out that the influence of gender was almost negligible for the most of carcass measurements, and found statistically significant differences only in the width of the chest and pelvis. In Dalmatian Pramenka lambs, females had wider chests while in Istrian lambs males had wider pelvis. Several substantial differences were also reported between carcasses of male and female Segureña lambs (18). Compared to females, males had significantly deeper chest, longer hind leg and wider buttock. Among investigated carcass measurements, it was found that change in slaughter weight significantly affected only chest depth ($p \leq 0.05$) (Table 1). Slaughtering season significantly affected all carcass measurements of Lika Pramenka lambs ($p \leq 0.01$; $p \leq 0.05$). Since the majority of the feeds were supplied from the pasture, it is assumed that the most of these differences in the corpulence between investigated seasons arose due to different forage availability.

Table 1: Slaughter traits, non-carcass components and linear measurements according to sex (S), slaughter weight (SW) and slaughtering season (SS); LSM – least square mean

Trait	Sex (LSM ± SE)		S[1]	b	SW[1]	Season (LSM ± SE)		SS[1]
	Male	Female				2010	2011	
Slaughter weight, kg	27.03 ± 0.12	27.13 ± 0.10	ns	-	-	27.53 ± 0.11	26.62 ± 0.15	**
Hot carcass weight, kg	13.48 ± 0.12	13.54 ± 0.10	ns	0.533	**	13.90 ± 0.11	13.29 ± 0.10	**
Dressing percentage, %	49.87 ± 0.16	49.90 ± 0.12	ns	1.108	**	50.49 ± 0.16	49.92 ± 0.11	**
Stomach with intestines, kg	7.04 ± 0.14	7.07 ± 0.17	ns	0.351	**	7.52 ± 0.17	6.99 ± 0.23	*
Lungs with hearth, kg	0.72 ± 0.01	0.79 ± 0.01	ns	0.019	**	0.85 ± 0.01	0.72 ± 0.01	*
Liver, kg	0.50 ± 0.01	0.57 ± 0.01	ns	-0.008	ns	0.63 ± 0.01	0.43 ± 0.02	*
Spleen, kg	0.13 ± 0.01	0.13 ± 0.01	ns	0.005	ns	0.13 ± 0.01	0.15 ± 0.01	ns
Skin with feet, kg	4.13 ± 0.06	4.15 ± 0.07	ns	0.198	**	4.14 ± 0.07	4.17 ± 0.10	ns
Carcass length, cm	66.26 ± 0.21	66.47 ± 0.23	ns	0.049	ns	66.82 ± 0.23	65.29 ± 0.24	**
Chest width, cm	14.26 ± 0.10	14.16 ± 0.13	ns	0.019	ns	14.32 ± 0.14	13.88 ± 0.17	**
Chest depth, cm	25.77 ± 0.13	24.95 ± 0.16	**	0.110	*	25.67 ± 0.17	25.16 ± 0.20	*
Hind leg length, cm	27.11 ± 0.19	26.45 ± 0.13	*	0.101	ns	27.31 ± 0.29	26.79 ± 0.22	*
Pelvis width, cm	14.45 ± 0.18	14.31 ± 0.10	ns	0.020	ns	14.96 ± 0.11	14.01 ± 0.13	**

[1]Significance level: ns= not significant; *$p \leq 0.05$; **$p \leq 0.01$; b: regression coefficient of slaughter weight

Proportions of individual and less-valuable cuts of Lika Pramenka lambs are presented in Table 2. Male lambs had significantly higher proportion of shoulder ($p \leq 0.05$), hind leg ($p \leq 0.01$), shank ($p \leq 0.05$) and head ($p \leq 0.05$), and significantly lower proportion of rack ($p \leq 0.01$) than females. Higher proportion of neck, shoulder and chuck for males and higher proportion of rack and loin were found for females in improved Jezersko-solčava lambs (24). Higher proportions of neck and shoulder for males were also found in Segureña lambs (18). Differences in other proportions between genders in our and above mentioned studies were found to be non-statistically significant. Among above mentioned studies results vary considerably and could be primarily due to different positions of anatomical cuts or to a different grow rates of each breed.

The change in weight is accompanied by the change of the proportions of individual cuts i.e. the proportion of ribs increases while proportions of the neck, leg and shoulder decrease (14). Nevertheless, for improved Jezersko-solčava lambs was reported that with increased slaughter weight from 29 to 43 kg the percentage of neck, rack and rib with flank increased, and chuck, shoulder and hind leg decreased (24). Additionally, it was reported that increase in slaughter weight of heavier Bafra lambs (30, 35, 40 and 45 kg) was followed by an increase in the proportion of neck, breast + flank and tail, as well as a decrease in the proportion of foreleg and loin (23). In the present study, increase in slaughter weight was followed by a significant increase in proportion of shank ($p \leq 0.05$), belly ($p \leq 0.05$) and less-valuable cuts ($p \leq 0.05$). Among less-valuable cuts proportion of kidney knob ($p \leq 0.05$) and channel fat ($p \leq 0.05$) were also significantly influenced by slaughter weight (Table 2). The remaining individual cuts were not significantly influenced by slaughter weight due to the narrower weight range in the present study. Slaughtering season significantly

Table 2: Proportions of individual and less-valuable cuts according to sex (S), slaughter weight (SW) and slaughtering season (SS); LSM – least square mean

Trait	Sex (LSM ± SE)		S[1]	b	SW[1]	Season (LSM ± SE)		SS[1]
	Male	Female				2010	2011	
Neck	7.72 ± 0.35	7.87 ± 0.41	ns	0.081	ns	7.84 ± 0.39	6.80 ± 0.34	*
Shoulder	14.88 ± 0.28	14.16 ± 0.30	*	-0.172	ns	14.78 ± 0.30	14.26 ± 0.29	ns
Rack	6.85 ± 0.54	8.68 ± 0.56	**	-0.033	ns	7.06 ± 0.57	8.98 ± 0.54	**
Loin	8.55 ± 0.25	8.50 ± 0.26	ns	0.023	ns	8.38 ± 0.26	8.12 ± 0.25	ns
Hind leg	28.22 ± 0.22	27.24 ± 0.23	**	0.112	ns	28.31 ± 0.24	27.19 ± 0.22	*
Shank	14.97 ± 0.36	14.01 ± 0.38	*	0.550	*	13.89 ± 0.34	15.20 ± 0.36	**
Belly	3.90 ± 0.15	4.09 ± 0.15	ns	0.559	*	4.49 ± 0.16	3.42 ± 0.15	**
Flank	2.11 ± 0.13	2.41 ± 0.14	ns	0.025	ns	1.77 ± 0.14	2.81 ± 0.14	**
Less-priced cuts	12.80 ± 0.43	13.04 ± 0.52	ns	0.332	*	13.48 ± 0.35	13.22 ± 0.33	ns
Head [2]	63.51 ± 0.10	62.09 ± 0.11	*	-0.110	ns	62.71 ± 0.25	63.10 ± 0.19	ns
Tail [2]	18.12 ± 0.15	18.19 ± 0.11	ns	0.129	ns	18.11 ± 0.17	18.19 ± 0.16	ns
Kidney [2]	5.50 ± 0.09	5.57 ± 0.10	ns	-0.018	ns	5.41 ± 0.11	5.59 ± 0.10	ns
Kidney knob [2]	7.46 ± 0.18	7.80 ± 0.41	ns	0.433	*	7.43 ± 0.10	7.79 ± 0.10	ns
Channel fat [2]	5.41 ± 0.05	6.35 ± 0.25	ns	0.320	*	6.34 ± 0.05	5.33 ± 0.13	ns

[1]Significance level: ns= not significant; *$p \leq 0.05$; **$p \leq 0.01$; [2]Expressed as a proportion of less-priced cuts; b: regression coefficient of slaughter weight

affected proportion of neck ($p \leq 0.05$), rack ($p \leq 0.01$), hind leg ($p \leq 0.05$), shank ($p \leq 0.01$), belly ($p \leq 0.01$) and flank ($p \leq 0.01$). We assume that the most of these differences arose due to different forage availability and consequently higher or lower physical activity (in search for food).

Proportions of muscle, bone and fat depots of individual cuts and total carcass composition of Lika Pramenka lambs are shown in Table 3. Male lambs had significantly higher proportion of muscle in shoulder ($p \leq 0.05$), rack ($p \leq 0.01$), shank ($p \leq 0.05$), belly ($p \leq 0.001$) and significantly higher bone proportion in loin ($p \leq 0.05$), neck ($p \leq 0.01$) and belly ($p \leq 0.01$) while female lambs had significantly higher fat proportion in all individual cuts (except flank) (Table 3). Lower bone and muscle proportions and higher fat proportions in female lambs indicate that females matured earlier than males. This was also reported in other sheep breeds and at different weight ranges (2, 9, 10). Female Churra da Terra Quente lambs (slaughtered at <8 kg, 8-11 kg and >11 kg) had significantly higher muscle proportion in leg, chump, loin and neck than males (19). On the other hand, no differences were found between gender in intramuscular fat and, except for the shoulder, in bone proportions. Contrary to them, male Manchego lambs (slaughtered at 10, 12 and 14 kg) had higher bone proportion in leg, loin-rib, anterior-rib, shoulder and flank, higher muscle proportion in shoulder and neck, and lower fat proportion in leg, loin-rib, shoulder, flank and neck (9). Nevertheless, it must be considered that it is difficult to compare tissue composition from the individual cuts primarily due to different slaughter weights and dissection methodology. A very accurate method to determine tissue composition of the carcass is the dissection of some individual cuts, such as leg, shoulder and loin (11). Dissection of hind leg and shoulder is more common in the studies due to their high correlation with carcass tissue composition and fact that together constitute over 50% of the lamb carcass (5). According to dissection methodology and slaughter weight, results of our study were comparable with some other reports only in the

Table 3: Proportions of muscle, bone and fat depots of individual cuts and total carcass composition according to sex (S), slaughter weight (SW) and slaughtering season (SS); LSM – least square mean

Trait		Sex (LSM ± SE)		S[1]	b	SW[1]	Season (LSM ± SE)		SS[1]
		Male	Female				2010	2011	
Neck	Muscle	44.19 ± 1.25	44.41 ± 1.59	ns	0.126	ns	44.16 ± 1.61	44.49 ± 1.54	ns
	Fat	21.27 ± 2.15	23.34 ± 2.47	*	0.142	ns	22.74 ± 1.53	22.95 ± 1.47	ns
	Bone	34.54 ± 1.67	32.25 ± 1.92	**	-0.014	ns	33.10 ± 1.19	32.57 ± 1.17	ns
Shoulder	Muscle	50.45 ± 2.42	48.77 ± 2.78	*	0.181	ns	50.48 ± 1.72	50.05 ± 1.65	ns
	Fat	10.76 ± 1.52	12.88 ± 1.74	**	0.127	ns	10.37 ± 1.08	11.41 ± 1.04	*
	Bone	38.79 ± 1.37	38.35 ± 1.57	ns	-0.095	ns	39.15 ± 0.97	38.54 ± 0.96	ns
Rack	Muscle	39.15 ± 2.94	36.66 ± 2.38	**	0.092	ns	37.25 ± 2.10	38.76 ± 2.01	*
	Fat	11.97 ± 1.58	14.81 ± 1.12	**	0.084	ns	14.04 ± 1.55	12.69 ± 1.45	*
	Bone	48.88 ± 1.47	48.53 ± 1.70	ns	-0.014	ns	48.71 ± 1.05	48.55 ± 1.03	ns
Loin	Muscle	38.61 ± 2.23	38.00 ± 2.56	ns	0.072	ns	38.50 ± 1.59	38.10 ± 1.52	ns
	Fat	15.69 ± 1.57	17.83 ± 1.81	**	0.130	ns	16.06 ± 1.12	17.09 ± 1.08	*
	Bone	45.70 ± 1.32	44.17 ± 1.52	*	-0.022	ns	45.44 ± 0.94	44.81 ± 0.93	ns
Hind leg	Muscle	63.57 ± 0.95	63.65 ± 1.09	ns	0.098	ns	63.84 ± 0.67	64.11 ± 0.65	ns
	Fat	7.95 ± 1.04	8.98 ± 1.20	*	0.148	ns	8.93 ± 0.74	7.80 ± 0.71	*
	Bone	28.48 ± 0.70	27.37 ± 0.80	*	-0.089	ns	27.23 ± 0.50	28.09 ± 0.49	ns
Shank	Muscle	45.15 ± 2.44	44.09 ± 2.81	*	0.123	ns	44.24 ± 1.74	44.67 ± 1.67	ns
	Fat	17.07 ± 1.60	18.48 ± 1.84	**	0.315	*	18.38 ± 1.14	18.04 ± 1.10	ns
	Bone	37.78 ± 0.78	37.43 ± 0.90	ns	-0.131	ns	37.38 ± 0.56	37.29 ± 0.55	ns
Belly	Muscle	62.73 ± 2.34	57.62 ± 2.84	***	0.033	ns	60.12 ± 2.29	62.38 ± 2.38	**
	Fat	18.44 ± 2.18	25.82 ± 2.66	***	0.353	*	23.15 ± 2.18	21.56 ± 2.27	**
	Bone	18.83 ± 1.55	16.56 ± 1.78	**	-0.066	ns	16.73 ± 1.08	16.06 ± 1.10	ns
Flank	Muscle	65.48 ± 1.51	65.39 ± 1.22	ns	0.077	ns	65.45 ± 1.72	65.58 ± 1.29	ns
	Fat	34.52 ± 1.68	34.61 ± 1.23	ns	0.080	ns	34.55 ± 1.62	34.42 ± 1.52	ns
Total muscle		59.29 ± 1.04	58.12 ± 1.04	*	0.169	ns	58.60 ± 1.06	59.01 ± 1.05	ns
Total fat		14.49 ± 1.13	16.56 ± 1.15	**	0.262	ns	16.40 ± 1.12	15.46 ± 1.16	*
Total bone		26.22 ± 0.27	25.32 ± 0.38	*	-0.017	ns	25.00 ± 0.39	25.53 ± 0.33	ns

[1]Significance level: ns= not significant; *$p \leq 0.05$; **$p \leq 0.01$; *** $p \leq 0.001$; b: regression coefficient of slaughter weight

hind leg composition. Therefore, in the further text we will discuss about it. Muscle proportion of hind leg in Lika Pramenka lambs was not significantly affected by gender. Contrary to that, male lambs had significantly lower fat proportion ($p \leq 0.05$) and higher bone proportion ($p \leq 0.05$) than females. The difference in muscle proportion of hind leg between male and female improved Jezersko-solčava lambs and their crossbreds with Charollais was also not significant (6). Furthermore, as in the present study, authors reported that female lambs had higher fat proportion and lower bone proportion in the hind leg. Nevertheless, it must be considered that improved Jezersko-solčava lambs and their crossbreds with Charollais, compared to Lika Pramenka lambs, had higher muscle proportion and lower fat and bone proportions in the hind leg. Contrary, male Jezersko-solčava lambs (24) in the hind leg tended to have higher values for muscle and bone proportions, and lower fat proportion than females. Apart from slaughter weight and

dissection methodology these differences may be also due to genetic factors and rearing conditions.

Carcass composition as well as muscle, bone and fat of individual cuts are correlated with carcass weight (8). In accordance with that, numerous researches (1, 10, 18, 23) reported that muscle and bone proportions decreased and fat proportion increased with slaughter weight. In the present study increase in slaughter weight was followed only with fat proportion in shank ($p \leq 0.05$) and belly ($p \leq 0.05$). The non significant differences in carcass composition as well as muscle, bone and fat proportions of individual cuts could be explained because of a narrower range in slaughter weight. Nevertheless, it must be considered that despite of non significant differences, regression coefficients for muscle and fat proportion were positive in all individual cuts while that for bone proportion were negative. Slaughtering season significantly affected ($p \leq 0.05$) fat and bone proportions in the carcass; fat proportion in shoulder, rack, loin, hind leg and belly, and muscle proportion in rack and belly (Table 3). Energy availability, which could be changed throughout different rearing systems and feeds, is highly related with carcass tissue composition (4). Although in the present study rearing system was not changed we assume that different climate conditions within investigated period affected vegetation development and throughout different energy availability influenced the carcass composition.

Conclusions

Results of the present study had evidenced that male and female Lika Pramenka lambs reared under similar conditions and slaughtered at similar age would not have similar expression of all investigated carcass characteristics. Slaughter weight notably affected some of the traits (carcass weight, dressing percentage, fat proportions in shank and belly, kidney knob, channel fat) that could be of interest for buyers. Slaughtering season significantly affected most of the investigated traits. In order to provide more uniform lambs at the market it is necessary to assure typical feeds in unfavourable seasons and slaughter lambs at narrower weight ranges. Typical and "natural" meat products are gaining popularity and have a good acceptance by consumers. Therefore, in the future it is necessary to conduct more detailed studies with sensory evaluation and consumers included.

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VPLIV SPOLA, TELESNE MASE IN SEZONE NA KLAVNE LASTNOSTI JAGNJET PASME LIŠKA PRAMENKA, VZREJENIH V OKVIRU POLEKSTENZIVNEGA PROIZVODNEGA SISTEMA

A. Kaić, B. Mioč, A. Kasap

Povzetek: Namen raziskave je bil oceniti vpliv spola, telesne mase in sezone na lastnosti klavnih trupov jagnjet pasme liška pramenka (30 samcev in 30 samic). Vsa jagnjeta so bila tradicionalno vzrejena v dveh sezonah na naravnih pašnikih in zaklana pri starosti petih mesecev. Moška jagnjeta so imela globlja prsa, daljše zadnje noge, večji delež pleč, zadnjih nog, trupa in glave in manjši delež reber. Jagnjice so imele manjši delež kosti in mišične mase ter večji delež maščobe v posameznih kosih. Klavna teža je znatno vplivala na maso toplega trupa, maso želodca s črevesjem, pljuč s srcem, kože z nogami, na globino prsnega koša ter na delež loja v trebuhu, stegnih in ob ledvicah. Sezona je imela vpliv na vse klavne lastnosti, linearne meritve in netrupne dele (razen vranice in kože z nogami). Poleg tega je sezona vplivala na delež vratu, stegen, zadnjih nog, trebuha, delež kosti in loja, delež maščob v plečih, stegnih, ledjih, zadnjih nogah in trebuhu, ter delež mišic v nogah in trebuhu. Da bi zagotovili enotnejša jagnjeta na trgu, je treba poskrbeti za tipično prehrano v neugodnih sezonah in težo klavnih jagnjet omejiti. Ker so tipični in "naravni" mesni izdelki vedno bolj priljubljeni, je potrebno v študije vključiti tudi senzorično ocenjevanje in potrošnike.

Ključne besede: sestava trupa; linearne meritve; netrupne komponente; klavne lastnosti