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CHEMICAL COMPOSITION OF MEAT IN INTENSIVE FATTENING YOUNG SHEEP

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Abstract. The sheep youth of and Corriedale breeds have had a significant higher weight of protein such in cutlet as in ham comparatively to that of Tsigai breed. The breed youth has recorded a higher significant weight of fat such in cutlet as in ham comparatively to the and Merino of Cluj breeds. The ashes weight to the three breeds was closely as value, the differences between them not being significant statistically.

INTRODUCTION

The chemical composition of meat was determined for samples taken from cutletn Longisimus dorsi muscle and ham, from Biceps femoris muscle in sheep youth from Tsigai, Merino of Cluj and Corriedale breeds. To the taken samples it was established the proportion of dry substance, water, protein fat and ashes trough well-known methods used for determination of these parameters.

The analysis of chemical composition values to cutlet meat in sheep youth, points out a significant higher weight of protein to Corriedale and Merino of Cluj breeds comparatively to Tsigai. Regarding the fat it is ascertaining that this one is in a higher proportion to Tsigai breed, the differences between the high value to Tsigai and those obtained in the case of Merino of Cluj and Corriedale breeds being statistically significant.

To the ham level it is ascertaining a significant higher proportion of protein for Corriedale and Merino of Cluj breeds comparatively to Tsigai breed.

The meat chemical composition varies function of breed, age, fattening degree and body region from which is coming (2;3).

The main meat components are: water, protein, fats, mineral salts and different vitamins (4;6).

The water is included into the meat under free from, contributing to express his tenderness and succulence being in a higher quality in sheep youth comparatively to adult sheep (3).

The nitrogenous substances are represented by proteins form by different aminoacids, peptides, polipeptides such as by unproteic substances as: urea and guanidian. The principal component of tissulary protein is the globulins.

The fats from meat include phosfatides and sterins which take part to the muscle fibre in fact structure and neutral fats which detain an important weight into the fat tissue (6). Into the fats are included a series of vitamins: A, D and E.

After some authors (4;5;6) the fat of infiltration has an apart importance in the determination of meat quality because this one offers taste and succulence.

MATERIAL AND METHOD

The investigations were done on 30 heads fattening youth sheep herd including by 10 individuals from Tsigai, Merino of Cluj and Corriedale breeds.

The meat chemical composition was determined to the taken samples from Longisimus dorsi muscle cutlet and Biceps femoris muscle ham. To the taken samples was established the proportion af dry substance, water, protein, fat and ashes trough well- known methods. The obtained data were processed through usual statistic methods.

RESULTS AND DISCUSSIONS

Doing the analysis of chemical composition values of cutlet meat in sheep youth for study (table 1) it is ascertaining a significant higher weight of protein to Corriedale and Merino of Cluj breeds comparatively to Tsigai.

Table 1

The average results and the signification differences for chemical composition of the young fattened lamb meat, by breeds, cutlet -% -

n=10

Chemical composition	Breed	X±sx	Signification differences		
			Tsigai	Merino of Cluj	Corriedale
			d Sd sign.d.	d Sd sign.d.	d Sd sign.d.
Water	Tsigai	72.50 ± 0.40	-	-1.30 0.57 x	-0.85 0.64 ns
	Merino of Cluj	73.80 ± 0.41	1.30 0.57 x	-	0.45 0.65 ns
	Corriedale	73.35 ± 0.50	0.85 0.64 ns	-0.45 0.65 ns	-
Dry matter	Tsigai	27.50 ± 0.40	-	1.30 0.53 x	0.85 0.49 ns
	Merino of Cluj	26.20 ± 0.35	-1.30 0.53 x	-	-0.45 0.43 ns
	Corriedale	26.65 ± 0.27	-0.85 0.49 ns	0.45 0.43 ns	-
Protein	Tsigai	18.00 ± 0.32	-	-1.95 0.6 xx	-2.80 0.47 xxx
	Merino of Cluj	19.95 ± 0.50	1.95 0.60 xx	-	-0.85 0.61 ns
	Corriedale	20.80 ± 0.35	2.80 0.47 xxx	0.85 0.6 ns	-
Fat	Tsigai	8.40 ± 0.31	-	3.22 0.37 xxx	3.65 0.26 xxx
	Merino of Cluj	5.18 ± 0.29	-3.20 0.37 xxx	-	0.43 0.32 ns
	Corriedale	4.75 ± 0.20	-3.65 0.26 xxx	-0.45 0.32 ns	-
Ash	Tsigai	1.10 ± 0.02	-	0.03 0.05 ns	-
	Merino of Cluj	1.07 ± 0.01	-0.03 0.05 ns	-	-0.03 0.03 ns
	Corriedale	1.10 ± 0.03	0.03 0.03 ns	0.03 0.03 ns	-

ns=P>0.05; x=P<0.05; xx=P<0.0l; xxx=P<0.00l

Concerning the fat it is ascertaining that this one is in a much higher proportion to Tigaia breed, the differences between the high value of Tsigai and those obtained in the case of Merino of Cluj and Corriedale breeds being statistically significant.

To the ham level it is ascertaining a significant higher proportion of protein for Corriedale and Merino of Cluj breeds (table 2).

Table 2

The average results and the signification differences for chemical composition of the young fattened lamb meat, on breeds, on ham - % -

n=10

Chemical composition	Breed	X±sx	Signification differences					
			Tigaia		Merino of Cluj		Corriedale	
			d	Sd	d	Sd	d	Sd
			sign.d.		sign.d.		sign.d.	
Water	Tsigai	74.30 ± 0.37	-		-0.45	0.54	-0.15	0.66
	Merino of cluj	74.75 ± 0.34	0.45	0.54	ns		ns	
	Corriedale	74.75 ± 0.52	ns		-		0.30	0.62
			0.15	0.66	-0.30	0.62	ns	
			ns		ns		-	
Dry matherials	Tsigai	25.70 ± 0.27	-		0.45	0.40	0.15	0.43
	Merino of cluj	25.25 ± 0.27	-0.45	0.40	ns		ns	
	Corriedale	25.55 ± 0.31	ns		-		-0.30	0.41
			-0.15	0.43	0.30	0.41	ns	
			ns		ns		-	
Protein	Tsigai	17.65 ± 0.39	-		-1.25	0.53	-1.75	0.55
	Merino of cluj	18.90 ± 0.35	1.25	0.53	x		xx	
	Corriedale	19.40 ± 0.39	x		-		-0.50	0.53
			1.75	0.55	0.50	0.53	ns	
			xx		ns		-	
Fat	Tsigai	6.92 ± 0.20	-		1.59	0.32	1.88	0.27
	Merino of cluj	5.23 ± 0.24	-1.59	0.32	xxx		xxx	
	Corriedale	5.04 ± 0.17	xxx		-		0.19	0.32
			-1.88	0.27	-0.19	0.3	ns	
			xxx		ns		-	
Ash	Tsigai	1.13 ± 0.01	-		0.01	0.03	0.03	0.03
	Merino of cluj	1.12 ± 0.02	-0.01	0.03	ns		ns	
	Corriedale	1.10 ± 0.03	ns		-		-0.02	0.03
			-0.03	0.03	-0.02	0.03	ns	
			ns		ns		-	

ns=P>0.05; x=P<0.05; xx=P<0.01; xxx=P<0.001

CONCLUSIONS

1. The sheep youth of Merino of Cluj and Corriedale breeds have had a significant higher weight of protein such in cutlet as in ham comparatively to that of Tsigai breed.
2. The Tsigai breed youth has recorded a higher significant weight of fat such in cutlet as in ham comparatively to the Corriedale and Merino of Cluj breeds.
3. The ashes weight to the three breeds was closely as value, the differences between them not being significant statistically.

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