

RESEARCH REGARDING THE PRODUCTIVE PERFORMANCES OF YOUTH SHEEP FROM THE POPULATIONS REARED AT S.C. AGROIND BEREZENI S.A., VASLUI COUNTY

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Abstract

The current study present the obtained results for rearing and development of female youth sheep belonging to breeds Merinos de Suseni and Polwarth and also of the half blood obtained through crossbreeding of Ile de France males and Polwarth females. The three female youth sheep batches were weighted and measured at: birth, 3 months, 6 months, 12 months and 18 months. Based on the obtained data was calculated the mean daily gain and were appreciated the main corporal dimensions. At the end of the study we observe that the best growing rate was recorded at hybrid female youth sheep (Ile de France x Polwarth), at which the mean daily gain was higher with 9.87% face to Merinos de Suseni breed and with 20.27% face to Polwarth breed. Growing intensity of corporal dimensions is gradually decreasing from 6 months till 18 months at all three batches of studied youth sheep.

Key words: youth sheep, growing, development, half blood

INTRODUCTION

In selection works, the establishment of some realistic breeding goals require the knowledge of term balance tendencies regarding the orientation of sheep exploitation and periodic estimation of productive performances, in connection with the assured conditions, which must be always, improved [5], [6], [7] and [8].

In the unit in which research were carried out, S.C. "Agroind" Berezeni, Vaslui County, area reared sheep from breeds Merinos de Suseni, Polwarth and half blood Polwarth with Ile de France, from which the first ones have the higher rate [1], [2], [3] and [4].

Having in view the above mentioned things, in the current paper we aim to present the productive performances of female youth sheep reared in the working unit by analysis of corporal weight and development of corporal development at: birth, 3 months, 6 months, 12 months and 18 months.

MATERIAL AND METHOD

Research was carried out at S.C. "Agroind" S.A. Berezeni on existed individuals, belonging to the above mentioned breeds. To fulfil our goal were realised appreciations regarding: dynamics of corporal development at birth, 3 months, 6 months, 12 months and 18 months; in the same way were made appreciations regarding weight gain increase, corporal development was appreciated at the same time intervals, based on the most important corporal measurements.

RESULTS AND DISCUSSIONS

1. Evolution of corporal weight

Corporal development and its evolution was realised by individual weightings at: birth, 3, 6, 12 and 18 months; the results of those appreciations are given in *table 1*.

From the presented data could be observed the fact that at birth lambs belonging to Merinos de Suseni breed have mean corporal weights higher with 8.90%, face to lambs from Polwarth breed, but lower with 11.95% than the ones recorded at half blood Ile de France x Polwarth.

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The manuscript was received: 15.02.2013

Accepted for publication: 08.08.2013

At the age of 6 months, the differences between those three types of studied youth sheep decrease. So, youth from Polwarth breed realised a mean live weight with 4.95%

lower than for Merinos de Suseni youth breed, and the half blood Ile de France x Polwarth recorded superior values to Romanian youth sheep, with 8.87%.

Table 1 Dynamics of corporal weight till age of 18 months (kg)

Age	Merinos de Suseni			Polwarth			Ile de France x Polwarth		
	$\bar{x} \pm s_x$	S ²	V%	$\bar{x} \pm s_x$	S ²	V%	$\bar{x} \pm s_x$	S ²	V%
Birth	3.93±0.09	0.80	20.96	3.58±0.0	0.66	18.48	4.4±0.16	0.92	20.98
3 months	21.36±0.50	3.02	15.90	19.5±0.5	3.59	12.90	23.5±0.3	4.25	18.80
6 months	34.72±0.53	4.76	11.9	33.0±0.5	4.88	14.81	37.8±0.6	3.12	15.90
12 months	45.60±0.45	4.88	14.81	44.1±0.3	3.46	15.80	49.5±0.2	3.27	20.00
18 months	51.85±0.50	4.30	12.30	47.5±0.7	4.66	10.50	57.9±0.2	3.51	5.10

At the age of 18 months were recorded quite similar differences to the ones recorded at birth. So, youth sheep belonging to Merinos de Suseni breed realised mean corporal weights higher with 8.39%, face to

the weights at the same age of youth sheep from Polwarth breed and with 11.66% lower than the half blood Ile de France x Polwarth.

Growing energy determined at those three types of studied sheep are presented in table 2.

Table 2 Weight gain during growing period

Breed or breed combination	Weight at birth (kg)	Periods							
		Up to 3 months		From 3 to 6 months		From 6 to 12 months		From 12 to 18 months	
		kg	g/day	kg	g/day	kg	g/day	kg	g/day
<i>Merinos de Suseni-Vaslui</i>	3.93	17.35	192	13.44	149	10.86	60	6.25	34
<i>Polwarth</i>	3.58	15.92	176	13.50	150	11.10	61	3.40	18
<i>Ile de France x Polwarth</i>	4.40	19.10	212	13.30	147	11.87	65	8.23	45

Till age of 3 months the best weight gain was realised by the hybrid lambs, the realised gain was 19.10 kg, with 9.16% higher than Merinos de Suseni lambs and with 16.64% higher face to the Polwarth breed lambs.

In the next growing period, 3-6 months, Polwarth youth sheep breed obtained the highest gain (13.50 kg), followed by Merinos de Suseni youth sheep breed and then by the hybrids Ile de France x Polwarth. Explication for this fact could be the one that the youth sheep from Polwarth breed had a faster adaptation to solid food, fact which diminished the weaning stress.

In period 6-12 months, the highest gain was realised by the hybrids Ile de France x Polwarth (IF x P), followed by Polwarth breed youth sheep (-6.48%), and then by the youth sheep from Merinos de Suseni (MS) breed (-8.50%).

In the last period of the study, on first place was Ile de France x Polwarth (IF x P) hybrids, 12-18 months, with 8.23 kg, followed by youth sheep from Merinos de Suseni (MS) breed with a lower gain with 24.05%, and on the last place was placed youth sheep belonging to Polwarth breed with a reduced gain with 58.68% face to hybrid youth breed.

2. Corporal development

To appreciate the development of different corporal parts were made measurements at 3, 6, 12 and 18 months. Measurements were as follows: height at withers and rump, depth of thorax, thorax and shin-bone perimeter.

In table 3 are presented the obtained results for the above mentioned measurements.

At measurements done at lambs' age of 3 months were observed the following:

- regarding height (withers and rump) half blood in IF x P realised the highest values;
- width of torso was bigger at hybrids from imported breeds and at youth sheep

belonging to Polwarth breed;

- thorax depth at hybrids IF x P and at youth sheep from MS breed was superior to the one realised by youth of Polwarth breed;

Table 3 Dynamics of corporal dimensions at female youth sheep

Age	Corporal dimensions (cm)	Merinos de Suseni		Polwarth		Ile de France x Polwarth	
		x ± SX	V%	x ± SX	V%	x ± SX	V%
3 months	height at withers	54.63±0.25	4.10	53.40±0.35	4.15	55.56±0.35	4.25
	height at rump	55.28±0.26	5.50	53.95±0.29	6.05	56.60±0.41	6.15
	length of torso	55.59±0.30	5.45	55.92±0.25	5.90	56.75±0.44	6.10
	width of chest	15.13±0.15	5.55	14.73±0.15	5.55	15.56±0.15	5.90
	width of rump	16.04±0.15	6.10	15.85±0.15	6.10	17.05±0.21	6.23
	depth of thorax	21.05±0.12	5.24	20.81±0.12	4.95	22.93±0.16	5.24
	perimeter of thorax	78.60±0.52	5.50	77.20±0.50	5.50	79.27±0.73	4.95
	perimeter of shin-bone	7.50±0.09	4.20	7.85±0.60	4.20	6.95±0.07	4.50
6 months	height at withers	60.60±0.28	3.94	58.13±0.36	5.72	60.62±0.27	4.01
	height at rump	60.99±0.27	3.50	60.83±0.33	4.91	61.98±0.44	3.90
	length of torso	61.93±0.27	5.68	60.44±0.60	5.68	61.15±0.13	5.56
	width of chest	17.20±0.01	6.36	16.56±0.21	7.36	18.89±0.20	7.50
	width of rump	19.99±0.12	6.88	18.20±0.25	7.88	20.44±0.18	7.10
	depth of thorax	23.90±0.13	4.01	22.38±0.14	5.24	25.45±0.20	4.58
	perimeter of thorax	82.40±0.60	4.49	81.21±0.49	5.54	84.50±0.74	5.01
	perimeter of shin-bone	7.90±0.05	6.48	8.15±0.03	9.86	7.62±0.06	9.90
12 months	height at withers	61.10±0.41	2.90	60.60±0.28	3.10	62.00±0.20	2.80
	height at rump	62.41±0.62	3.70	61.40±0.27	3.91	64.05±0.29	3.90
	length of torso	63.85±0.36	4.40	64.93±0.27	4.40	67.03±0.80	4.40
	width of chest	19.15±0.12	8.90	18.79±0.12	7.50	21.00±0.32	9.00
	width of rump	20.10±0.11	9.10	19.88±0.07	7.10	23.00±0.42	6.90
	depth of thorax	24.25±0.19	4.30	23.61±0.13	4.92	26.05±0.19	4.31
	perimeter of thorax	85.70±0.78	3.45	82.15±0.35	3.10	88.10±0.40	3.10
	perimeter of shin-bone	8.07±0.11	9.10	8.20±0.05	9.15	7.91±0.30	9.10
18 months	height at withers	62.50±0.42	3.10	61.52±0.41	3.50	63.50±0.38	2.80
	height at rump	64.78±0.36	3.75	63.23±0.47	4.15	66.20±0.75	3.80
	length of torso	64.75±0.27	4.50	65.61±0.37	4.90	67.31±0.80	4.40
	width of chest	20.10±0.10	8.90	19.61±0.11	7.90	22.60±0.35	6.90
	width of rump	22.51±0.16	9.25	20.01±0.12	9.50	24.80±0.25	6.70
	depth of thorax	27.10±0.18	4.50	25.07±0.19	5.11	29.44±0.18	5.80
	perimeter of thorax	92.89±0.74	3.80	88.40±0.60	4.10	99.56±0.69	5.92
	perimeter of shin-bone	8.13±0.08	9.25	8.41±0.07	8.25	7.98±0.25	9.15

- regarding perimeters (thorax and shin-bone), we could appreciate that thorax perimeter at hybrid youth sheep and the one belonging to MS breed was higher than the one measured at Polwarth youth sheep breed; perimeter of shin-bone at MS youth sheep was superior to the one of the other studied sheep breed.

At the age of 6 months was observed that youth sheep belonging to Polwarth breed was over-turned, at all effectuated measurements,

except shin-bone perimeter, by IF x P hybrid youth sheep and MS youth sheep breed.

CONCLUSIONS

Female youth sheep belonging to Merinos de Suseni breed realized a live weight at 18 months superior with 8.39% face to the recorded value by ewes from Polwarth breed and 16.66% lower than the half blood Ile de France x Polwarth.

The best growing speed was observed at female youth sheep hybrid (Ile de France x Polwarth), which recorded mean daily gains higher with 9.87% than Merinos de Suseni breed and with 20.27% face to Polwarth breed.

Growing intensity of corporal dimensions is gradually reducing from 6 months till 18 months at all the three sheep studied batches.

Having in view the quality of the hybrids regarding the growing and corporal development, and also the fact that their line has all the necessary qualitative demands could be used in breeding for meat production of Merinos de Suseni-Vaslui by infusion crossbreeding, obtaining generations with 12.5-25% Ile de France breed blood.

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