

**RESEARCH REGARDING THE GROWING SPEED OF
CROSSBREED SUCKLING LAMBS CHAROLAIS X
MERINOS DE TRANSILVANIA, IN BANAT AREA**

**EVOLUȚIA VITEZEI DE CREȘTERE DE LA FĂTARE LA
ÎNȚĂRCARE A MIEILOR HIBRIZI CHAROLLAISE X
MERINOS DE TRANSILVANIA, ÎN ZONA BANATULUI**

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In the last ten years the milk lambs were very demanded on the west European market, especially at the beginning of December and early spring. In this researches was followed the growing speed evolution on crossbreed Charollais x Merinos de Transilvania lambs, from lambing to weaning (70 days). Mother sheep were well prepared before get trough a normal nutrition, depending on the phase of gestation and adequate sheltering conditions. At lambing, sheep had a very good condition and a normal milk production. Crossbreed lambs had maternal milk on ad libitum and from the age of 10 days got in separated enclosures, quality after-grass and granulated combined feeder with 14% PDI in the first 30 days and 12% between 30-70 days. After the evaluation of the growing speed it was determined that lambs from single lambing, both sexes (F-female, M-male), realize a growing speed, between lambing to weaning (70 days) superior (370g/day), the ones from twin lambing (F-F couple 286g/day, F-M couple 299g/day, M-M couple 302g/zi). The growing speed is significantly higher ($p < 0.01$) in 30-70 days period, compared with 10-30 days period, both in lambs from single and twin lambing. On the base of this study, we suggest that for obtaining milk lambs with a higher body weight and quality meat, realization of crossbreed lambs between breeds Charollais and Merinos de Transilvania, is opportune. This should be raised with maternal milk and strong feeder, at least until the age of 70 days.

Key Words: sheep, meat crossbreeds, average daily gain.

Introduction

The orientation of the direction of exploitation from wool production, considered most important in Romania until the year 1990, had changed to meat and/or milk production, tendency that is expected to accentuate even in the next

years. The actual prognosis on the European Union market, on short and medium term, emphasizes that the demand of ovine meat on EU market will grow, over the limit of 300 million tons annually.

With a number of 8 millions ovine, Romania is on the top among the European countries. The productive performances realized by this effective are lower, both under the aspect of the growing speed and specific consumption, and under the aspect of the carcass conformation and meat quality. The major way of quick amelioration of the growing speed and the meat quality, is hybridization of local breeds ovine, with ovine breeds specialized on meat production.

By this study we intended to evaluate the dynamic on Charollais x Merinos de Transilvania suckling lambs, from simple and double lambing average daily gain to the typical age of 70 days.

Materials and Methods

The investigations were carried out during 2005-2006, on ovine from Charollais breed, imported to SC. EMILIANA SRL., Valcani ovine farm. On this unit, in October 2003 were imported from the south of France, the Bresse Plain area (near to the Central Massive), 237 female lambs and 20 male lambs, from the Charollais breed, having the age of 9 months.

On Charollais breed lambs obtained from simple or double lambing, the average daily gain of the lambs was evaluated at lambing and at the age of 30 and 70 days.

The obtained data were processed with biostatistics methods, using for calculation EXCEL program. For testing the differences significance, Mann-Whitney test was used, non parametrical test.

Results and Discussions

The growing speed and the fodder specific consumption are the most important growing parameters, and together with the survival rate, influence the biological and economical growing efficiency on lambs until ablactation.

At the moment we've oriented after the French evaluation system of milk lambs, by which the growing speed is determined between 10-30 days to estimate the lactation capacity of mother sheep and between 30-70 days to determine the individual growing speed. The results obtained in our study are presented in tables 1. 2.

From the analyze of the information presented in table 1. it is observed that crossbreed Charolais x Merinos de Transilvania lambs from simple gets, both sexes (M – male, F - female), realize in 0-10 days period an medium daily spore raised, of 252,2g/day, that goes up to 286,6g between 11-20 days from lambing, reaching very high values (450,4g/day), once with the increasing of the concentrated consumption in 31-70 days period. Totally, the period from lambing to weaning (70 days), the growing speed is 370g/day, comparable with the meat advanced

breeds suggesting that crossbred Charolais x Merinos de Transilvania lambs displays an obvious heterozis.

The medium daily gain on twin lambs from F-F couple is minor, but in the same time, is glowing once with the age advancing to lambing (70 days). So between 0-10 days the medium daily gain is 174,6g and grows up to 258,3g in 11-30 days period, growing speed that is kept to in the 31-70 days period, and rising to 323,5g/zi.

Twin lambs from F-M couple and M-M couple displayed a lower growing speed, between 0-10 days (F-M couple – 168g/day; M-M couple – 167,5g/day), but surprisingly much lower between 11-30 days (F-F couple – 206g/day, M-M couple – 237,6g/day, compared with F-F couple – 258,3g/day). In the 31-70 days period the situation is changing and the medium daily gain increase appreciable (F-M, 377,5g/day; M-M, 366,9g/day) toward the F-F couple (323,5g/day).

This increase on both couples can be explained by on the better growing speed of male lambs. On the whole period, like it was expected, the twin lambs from M-M couple have the highest growing speed (302,7g/day), followed by lambs from F-M couple (299,6g/day) and on the last place, the female twin lambs from F-F couple (286,5g/day), but this differences are not relevant ($p < 0,05$).

Analyzing the signification of the differences for the body weight medium daily gain in the two periods (table 2) it was determined that on lambs from simple lambing both the lambs from double lambing, this was significant ($p < 0,01$) higher in the 30-70 days period, compared with the 10-30 days period. This data are in concordance with the ones obtained by the sheep breeders Charollais from France and other countries that had imported this breed.

Table 1

Evolution growing speed of suckling lambs crossbreed Charollais x Merinos de Trasnilvania

Specificare	n	Growing speed at:								
		0 – 10 days		11 – 30 days		31 – 70 days		0 – 70 days		
		$\bar{x} \pm Sx$	CV %	$\bar{x} \pm Sx$	CV %	$\bar{x} \pm Sx$	CV %	$\bar{x} \pm Sx$	CV %	
Lambs from simple lambing	F-M	10	252.2±21.72	25.81	286.6±4.56	4.7	450.4±10.33	6.8	370.0±7.58	6.1
Lambs from twin lambing	F-F	20	174.6±4.87	10.7	258.3±10.42	14.5	323.5±16.95	17.3	286.5±13.10	15.7
	F-M	20	168.0±5.36	12.7	206.0±4.37	8.1	377.5±9.17	9.40	299.6±9.03	11.6 7
	M-M	20	167.5±6.74	16.0	237.6±5.10	8.3	366.9±5.61	5.72	302.7±4.36	5.39

Note: F-Female; M - male

Table 2

Growing speed of suckling lambs crossbreed Charollais x Merinos de Trasnilvania and diferend signification

Lambing	Sex	n	Body weight kg	Average daily gain (g)				Diferend		Test (t)
				10-30 days		31-70 days		absolute (g)	relative (%)	
				$\bar{x} \pm Sx$	CV %	$\bar{x} \pm Sx$	CV %			
Simple	M	5	3.27	281.00±11.57	10.14	444.00±14.30	8.54	14.9 ^{NS}	3.35	0.47
	F	4	3.37	293.75±12.25	8.95	458.90±17.30	9.25			
	Total	9	3.31	286.67±4.56	4.78	449.44±10.33	6.88	173***	36.35	
Twin	F-F	8	2.40	258.33±10.42	14.52	323.55±16.95	17.39	66**	25.58	2.53
	F-M	9	2.95	206.07±4.34	8.14	377.57±9.17	9.40	172***	83.49	9.80
	M-M-	10	3.00	237.67±5.10	8.30	366.93±5.61	5.72	129***	54.20	12.16

Note: NS = p>0,05; *** p<0,001

Conclusions

- In the lambing to weaning period (70 days) the body weight medium daily gain on crossbreed Charollais x Merinos de Transilvania lambs is significantly higher on lambs from simple lambing, compared with the ones from double lambing (F-F, M-F, M-M couples; M = male, F = female).

- In the 10-30 days period body weight medium daily gain is significant ($p < 0,01$) lower (286,6g/day on lambs from simple lambing; 258g/day on female lambs from F-F couple, 237,6g/day on M-M couple and 206,09g/day on F-M couple), toward the 30-70 days period (450,4g/day on lambs from simple gets, 377,5g/day at F-M couple, 366,9g/day on M-M couple and 323,5g/day on F-F couple).

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