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RESEARCH ON THE GROWTH AND CARCASS CHARACTERISTICS OF THE LAMBS FROM THE LOCAL BREED TELEORMAN BLACK HEAD AND FROM THE HYBRIDS WITH SUFFOLK BREED

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Introduction

In Romania, the suckling lamb meat is the preponderant type of production demanded on the market for sheep products. Quality carcass in suckling lambs depends on many factors such as breed, slaughtering weight, sex, feeding and weaning age. Lambs slaughtering at low weights is unprofitable because it is unusable just during the period when the lambs have the highest growth speed (large weight gain), limiting largely the profits of producers.
Because the aptitudes of the Romanian breeds for meat production are lower than those of the specialized breeds, we undertook to improve the meat production of the local Teleorman Black Head sheep by crossing it with rams from a meat breed.

OBJECTIVE
The purpose of the paper was to study the growth performance and carcass traits in F1 hybrid (nursing) lambs produced by the cross of local Teleorman Black Head (TBH) ewes with British Suffolk meat rams.

Material and Methods

The research was conducted in the experimental farm of INCDBNA, where the Teleorman Black head sheep were assigned to two groups. The ewes from the first group were mated to a local ram, while the ewes from the second group were mated to a Suffolk ram. The progeny were assigned to two groups: group 1 consisting of 24 lambs of the local Teleorman Black head breed and group 2 consisting of 24 TBH x Suffolk hybrids. All lambs were weighed at lambing, one month and two months, when they were weaned. After weaning, control slaughtering were performed and the slaughtering yield and the commercial yield were calculated; carcass measurements were performed and the meat to bone ratio was calculated, as well as the chemical composition of the meat, the fatty acids and cholesterol level, separately for each group.
The carcasses were cut according to the French method which uses the following parts leg, loin, rack, shoulder, flank and neck.

F1 hybrids (TBH x Suffolk) lambs

Teleorman Black head lambs

Results

TBH (1, 2) and hybrids (3, 4, 5, 6) lambs carcass

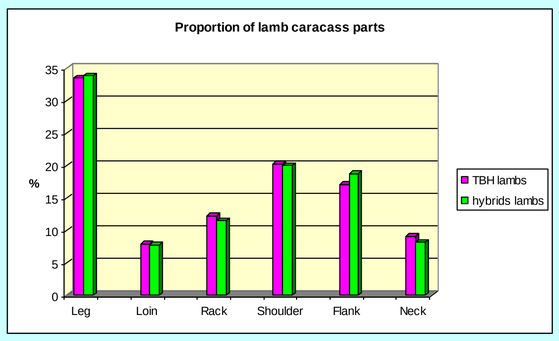
Weight gain of the lambs from birth to weaning

Items	Teleorman Black head		F1 hybrids (Teleorman Black head x Suffolk)	
	$\bar{X} \pm S_{\bar{X}}$	C%	$\bar{X} \pm S_{\bar{X}}$	Cv%
Weight at birth, kg	4.936±0.162 ns	13.91	5.131±0.196 ns	18.77
Weight at one month, kg	12.25±0.533 ns	18.47	14.343±0.784 ns	26.78
Weight at two months, kg	19.085±0.950**	17.95	23.795±0.988**	18.09
Weight gain,kg	13.996±0.931	23.98	18.365±0.849	20.16
Average daily weight gain,g/day	0.233± 0.015**	23.98	0.306±0.014**	20.16

ns – p>0.05; ** p<0.01

Specific carcass measrements (cm)

Items	Teleorman Black head		F1 hybrids (Teleorman Black head x Suffolk)	
	$\bar{X} \pm S_{\bar{X}}$	Cv%	$\bar{X} \pm S_{\bar{X}}$	Cv%
Large trunk length	66.4±1.122	3.78	63.8±0.489	1.71
Small trunk length	54.4±2.064	8.48	54.4±0.748	3.07
Inner length of the leg	27.2±1.392	11.45	22.8±0.583	5.71
Outer length of the leg	43.2±1.019	5.27	42.6±0.60	3.14
Carcass width at the leg	17.0±2.129	28.01	23.6±0.509	4.83
Thorax width	16.5±0.387	5.24	19.4±0.812	9.36
Breast width	14.4±0.244	3.80	16.6±0.748	10.08
Thorax depth	22.5±0.547	5.44	23.4±0.400	3.82
Thorax perimeter	58.2±1.199	4.61	60.2±1.356	5.03
Thigh perimeter	35.5±3.485	21.95	47.8±1.113	5.20



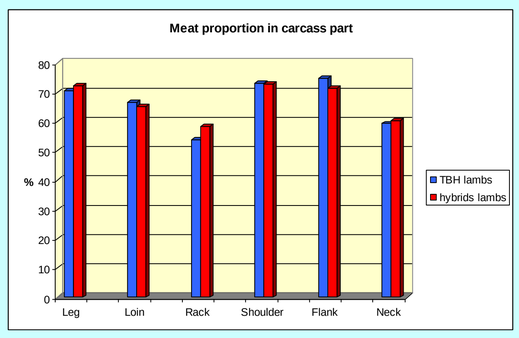
TBH (1, 2) and hybrids (3, 4, 5, 6) lambs carcass

Live weight, slaughtering yield and proportion of the different carcass parts

Items		Teleorman Black head		F1 hybrids (Teleorman Black head x Suffolk)	
		$\bar{X} \pm S_{\bar{X}}$	Cv%	$\bar{X} \pm S_{\bar{X}}$	Cv%
Live weight. kg		21.42±0.928	9.69	23.83±1.171	10.99
Carcass weight. kg		10.14±0.653	14.42	11.96 ±0.81	15.31
Slaughtering yield %		47.21±1.381	6.54	49.99±1.319	5.90
Commercial yield %		51.75±1.364	5.89	54.72±1.286	5.25
Head	kg	0.89±0.061	14.99	1.01±0.045	9.93
	%	4.18±0.136	7.29	4.26±0.142	7.47
Organs	kg	0.97±0.069	15.92	1.12±0.0485	9.62
	%	4.53±0.167	8.22	4.74±0.173	8.18
Full digestive tract	kg	4.89±0.285	13.03	4.89±0.289	13.24
	%	22.97±1.562	15.20	20.68±1.389	15.02
Hide	kg	2.55±0.130	11.37	2.66±0.132	11.09
	%	11.94±0.374	7.01	11.21±0.516	10.28
Legs	kg	0.57±0.034	13.14	0.66±0.045	15.04
	%	2.66±0.076	6.43	2.79±0.097	7.79
Losses	kg	1.30±0.202	33.70	1.38±0.141	22.79
	%	6.28±0.951	33.84	5.76±0.429	16.68

Meat to bone ratio

Items	Teleorman Black head		F1 hybrids (Teleorman Black head x Suffolk)	
	$\bar{X} \pm S_{\bar{X}}$	Cv%	$\bar{X} \pm S_{\bar{X}}$	Cv%
Meat to bone ratio	2.193±0.13	13.14	2.349±0.11	11.40



Conclusions

- The weight at birth of the hybrid lambs was higher (5.13 kg) than the weight at birth of the local lambs (4.94 kg), but the differences are not significant. The difference between the two groups increased during the suckling period, so that the weaned hybrid lambs weighed 23.79 kg, while the weaned local lambs weighed *19.08* kg and the differences were distinctly significant.
- The average daily weight gain throughout the nursing period was 0.306 kg for the hybrid lambs and 0.233 kg for the local lambs; the differences were significant;
- The slaughtering yield and the commercial yield were higher in the hybrid lambs;
- The carcass measurements have shown that the width and depth of the carcasses were higher in the hybrid lambs than in the local lambs, while the lengths were higher in the TBH breed.
- The meat to bone ratio was better in the hybrid lambs, 2.35/1, compared to 2.19/1 in the TBH lambs;
- This experiment proved that the Suffolk rams transmitted to their progeny a higher speed of growth and the specific conformation of the meat breeds, with a better dressing of muscles particularly in the higher quality buthcer parts, the leg and rack, a better slaughter yield and a better meat to bone ration than TBH lambs.

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