

STUDY ON THE BODY DEVELOPMENT AND CONFORMATION-CONSTITUTION OF THE TIGAIE RUSTY VARIETY POPULATION FROM BACAU COUNTY AREA

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Abstract

This study aimed to determine the current level of development of conformation-constitution and body development in the population of Tigaie sheep Rusty variety population bred and exploited within the Research-Development Station for Goat and Sheep Breeding Secuieni-Bacau. The investigations were carried out on the Izvoru Berheciului farm, targeting a number of 140 sheep from Tigaie rusty variety. There were run mass measurements during 2010 mating season. After the statistical processing of data, it was found that the average weight of sheep bred and exploited in Bacau SCDCOC-Secuieni was 40.35 kg, 4.56% higher value compared with the data mentioned in the literature-38.51kg. The results of research indicate that the eumetric appearance of Tigaie breed and the upward dynamics of body development certify the selection and breeding works carried on within SCDCOC Secuieni-Bacau.

Key words: Tigaie, body development, sheep

INTRODUCTION

Improving sheep growth in Romania is a necessary action given the fact that this activity plays an important role in Romanian livestock growth, so this paper aimed to study the morphological characteristics of the Tigaie from studied zone coming to the sheep breeders support. Updating data on body development and conformation to this race but also to establish this dynamics are necessary and actual given the productive potential of this race and by the fact that many sheep-breeders are start to be interested on this race. Increased production is made by improving the genetic potential of animals, which can be done by exerting a high selection pressure by using improved value rams for breeding. The improvement value of the rams is determined by testing their performance and the performance of their descent [1].

MATERIAL AND METHODS

The research was conducted in Izvoru Berheciului farm S.C.D.C.O.C Secuieni-Bacau, targeting a total of 140 adult sheep generation, 2004, 2005, 2006, 2007, 2008, 2009, Tigaie race, rusty variety, in which mass measurements were conducted during the artificial insemination season of 2010. To elaborate this study we appeal the biometric method, using body measurements and weighings, so for the measurements results to be accurate and true they need to be made on lawn animal, with a normal state of maintenance put in "placed" position [4].

The data from surveys were statistically processed using the method ANOVA (unifactorial dispersion analysis) [6].

RESULTS AND DISCUSSIONS

Assessing the development of Tigaie sheep rusty variety body was made by weighing them at the beginning of mating season and making measurements, determining: height at withers, height at rump, trunk length, chest depth, chest and whistle area.

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Table 1 Weight and body size in Tigaie sheep rusty variety

Specify	N	UM	Medien \bar{X}	Inferior limit	Superior limit	Standard deviation s	Variability V %	Average standard error $\pm s\bar{X}$
Corporal weight	140	kg	40.36	28.40	51.70	6.70	16.62	0.57
Height at withers	140	cm	62.50	57.00	68.00	2.57	4.11	0.22
Height at croup	140	cm	63.99	58.50	69.50	2.54	3.97	0.21
Trunk length	140	cm	65.56	60.00	72.00	2.55	3.88	0.22
Chest depth	140	cm	29.35	27.00	32.00	1.24	4.21	0.10
Chest area	140	cm	82.13	77.00	87.50	2.55	3.10	0.22
Whistle area	140	cm	7.88	7.10	8.70	0.30	3.76	0.03

As seen from the recorded values for body size variability at studied sheep, we point out that variability is small between

analyzed individuals, phenomenon justified by intense heritable character of corporal development in sheep.



Fig. 1 Dynamic of corporal weight with age

Analyzing data on studied corporal size of Tigaie sheep population, we find that they were slightly higher compared with existing literature, so the average height at withers was 62.50 cm while the literature mentions 60.23 cm [5], 60.20 cm [2], rump height average was 63.99 cm, the literature mentions 62.48 cm [5], 62.45 cm [2]. Lower

values of corporal size have been determined and the average length of the trunk and the average depth of the chest - 65.56 cm and 29.35 cm while the literature values mentioned data were 68.15 cm [5], 68.00 cm [2] and 29.67 cm [5]. These differences can be explained by selection and improvement work carried out within S.C.D.C.O.C.

Secuieni-Bacău, but also from particularities of maintenance and operating existing on Izvoru Berheciului farm.

CONCLUSIONS

The data obtained show that the studied sheep population is dynamic, selection and improvement works carried out over time result the increasing of corporal size.

The obtained results show that selection and improvement works must continue, so size and weight of Tigaie sheep to grow, creating premises for higher production as corporal development is positively correlated with the production of wool, meat and milk.

The analysis of variance in body size of studied animals shows that differences between them are relatively small, process

explained by intense heritable character of corporal development in sheep.

REFERENCES

- [1] Ivancia Mihaela: Ameliorarea animalelor, Ed. Alfa, Iași, 2005
- [2] Miclea M., Zăhan M., Rău V., Nagy Al., Dărăban S., Miclea Ileana: Morphological and productive characteristics of two tsgaie ecotypes, used as genetic stock. *Lucrări științifice Zootehnie și Biotehнологii*, vol. 42(2), Timișoara, 2009.
- [3] Pascal C-tin.: Creșterea ovinelor și caprinelor, Ed. Pim, Iași, 2007
- [4] Pascal C-tin.: Tehnica aprecierii și evaluării performanțelor productive la ovine și caprine, Ed. Alfa, Iași, 2007
- [5] Pascal C.: Rase autohtone de ovine și caprine. Editura Pim, Iași, 2003
- [6] Sandu Ghe.: Modele experimentale în zootehnie, Ed. Coral Sanivet, București, 1995