

**PHENOTYPIC PARAMETERS IN THE TSURCANA BREED-
RAMS AND DAMS, FROM S.C. EXIM AGRO. OVIS MPS. SRL
FIBIȘ –TIMIS COUNTY**

**PARAMETRII FENOTIPICI LA RASA ȚURCANĂ-BERBECI
ȘI OI MAME, DE LA S.C. EXIM AGRO. OVIS MPS. SRL
FIBIȘ –JUDEȚUL TIMIȘ**

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Sheep are a multi-purpose animal, raised for meat, milk, and wool. They are also valued for their skins and hides. Increasingly, sheep are being used to control unwanted vegetation. Sheep can use practically all types of forage, including crop residue and even ditch banks. An abundance of forage is one key to profitable sheep production. In Romania Tsurcana breed is ancient and it is still bred by the farmers being rustic and eat almost any fodder. In the Tsurcana rams from S.C. Fibiș S.A Timis County, the body weight in 2006 was on average of 59.8181 ± 0.07264 kg. The same 66 studied rams had a wool production of 3.80 ± 0.056 kg/ ram, while the staple length range between 27 and 32 cm, with a mean of 29.4769 ± 0.204 cm. The lower value of the variability coefficient of only 5.60% was registered for the staple length of the rams, which means that the genetic structure of this population is homogeneous.

Key words: rams, body weight, wool production, fleece length

Introduction

The aim of this work was to estimate the phenotypic parameters in Tsurcana rams and ewes from S.C. Fibiș S.A, Timiș County.

In Romania, sheep breeding is an ancient occupation. Tsurcana was the first breed that has been raised by the people of our country. The raw wool production in this breed is low, but the yield or percentage of clean fleece is over 60%. The fiber is thick and excellent for carpet industry. From the Tsurcana breed can be also obtained hides and skins.

Sheep are easy to handle and generally require little input and does not require elaborate facilities and equipment. Also, sheep consume roughage as their primary feed, help control weeds, provide two sources of cash income: lamb and wool, require a minimum amount of supplemental feeding and can provide a quick return on investment.

Wool was the first commodity to be traded internationally, and is the product the public most commonly associates with sheep. However, the importance

of wool (as a product) relative to meat has declined dramatically. In the early 1900's, the majority of income from a sheep operation was from the sale of wool. Today, it is the other way around. While wool tends to be more important in range-type operations and there is a subsidy for wool, lambs still contribute the majority of income to the operator.

Material and Methods

Researches were made at the S.C. Fibiş S.A. in Tsurcana breed for the following categories: rams and ewes. There were randomly selected 66 ram and 100 dams. Phenotypic parameters body weight and grease fleece weight were estimate by using the weighing machine in kg, while the staple length was determined by measuring with a ruler in mm.

Data obtained were statistical processed by Statistics for Windows vrs 4.5.A and Microsoft Excel vrs 2002 programs.

Results and Discussions

For the Tsurcana rams, the mean and variability indicators for the three traits: body weight, grease fleece weight and staple length, are rendered in the table 1.

Table 1

Mean and variability indicators for body weight, grease fleece weight and staple length in Tsurcana rams, from S.C. Fibiş S.A.

Parameter	n	UM	Mean x	Min	Max	Variance $\pm S^2$	Standard deviation $\pm s$	Variability coefficient Cv%	Standard error $\pm S_x$
Body weight	66	Kg	59.8181	48.0	72.0	34.8279	5.9015	9.86	0.7264
Grease fleece weight	66	Kg	3.80909	3.20	4.80	0.21253	0.46101	12.10	0.05674
Strand length	66	cm	29.4769	27.0	32.0	2.7221	1.6498	5.60	0.2046

From data results that the mean of the body weight in Tsurcana rams in 2006, was 59.8181-kg \pm 0.7264 kg. Maximum value was of 72.0 kg and minimum of 48.0 kg, with the lowest weight of 48.0 kg and the highest 72.0 kg, more than half of the rams (35 individuals) were over 60 kg. The value of variability coefficient is low for the body weight, being only of 9.86%, and a value under 10% which mean that the variability for this character is also low.

For the grease fleece weight in the 66 rams was registered a mean of 3.775 \pm 0.073 kg. The lowest production registered was of 3.200 kg and the highest of 4.800 kg. Fifteen rams had over 6 kg of grease fleece weight and sixteen over 7 kg.

The value of the variability coefficient for this parameter was 12.10% indicated a relative good uniformity in the herd.

Fleece weight is dependent on the density (number of follicles producing fiber and the number of fibers per inch of skin), the diameter of the individual fibers, and the length of the fiber. Genetics and nutrition during late gestation will determine the number of follicles present. Other important influences on the weight are the body size of the animal and impurities that might be present, like grease, dirt, vegetable matter, and water. In grease fleece weight the value for the variability coefficient was of 12.10% being situated at the minimum bound of the mean for this coefficient, which indicates a uniformity relative good for the value of this character in the analyzed population of rams. The mean of the staple length in rams was 29.476 ± 0.2046 cm. The shorter staple was 27 cm and the longest of 32 cm. Thirty of those 66 rams had the staple length over 30 cm. The lowest value of the variability coefficient for this parameter was of only 5.60 %, which mean that the genetics of the rams is homogeneous. The phenotypic parameters: body weight, grease fleece weight and staple length for the ewes are rendered in table 2. The mean body weight for the 100 ewes herd was 46.81 ± 0.252 kg. The lowest body weight registered was 43 kg and the highest of 52 kg, 20 ewes having over 50 kg. The variability coefficient for the body weight parameter in dams of only 5.40% shows that yearlings can easily inherit this trait. The grease wool weight in dams was low, the mean in the herd being of 2.42 ± 0.027597 kg, only four ewes having over 3 kg. This value is a little over the data of the specialty literature of 1.8 –2.2 kg. For the grease wool weight in dams the variability coefficient was 11.40%, which mean that the value obtained for this coefficient is medium and the character can be propagate with accuracy in the next generations.

Table 2

Mean and variability indicators for body weight, grease fleece weight and staple length in Tsurcana dams, from S.C. Fibiş S.A.

Parameter	n	UM	Mean x	Min	Max	Variance $\pm S^2$	Standard deviation $\pm s$	Variability coefficient Cv%	Standard error $\pm S_x$
Body weight	100	kg	46.81	43.0	52.0	6.39	2.529	5.40	0.252
Grease fleece weight	100	kg	2.42	2.0	3.2	0.07	0.275	11.40	0.027
Staple length	100	cm	28.48	26.0	31.0	2.85	1.690	5.93	1.690

The mean length of the staple in 100 Tsurcana dams was 28.48 ± 0.1690 cm. The shorter strand was of 23 cm and the longest of 31 cm, thirty ewes having a staple length over 30 cm. For this parameter, the value of the variability coefficient

was 5.93%, which is considered a low value, which indicate the homogeneously of the gene and genotypes frequency in the population.

Only for the grease fleece weight the value of the variability coefficient is over 10% being of 11.40%, which mean that for this trait there is a good homogeneously for the genes and genotypes frequency.

Conclusions

Rely on the data statistical processed we can conclude that:

1. The mean of the body weight in Tsurcana rams from S.C. Exim Agro. Ovis MPS. SRL Fibiș was in 2006 of kg 59.81 ± 0.726 kg with the highest weight of 72 kg and the lowest weight of 48 kg.
2. The mean for the grease fleece weight in rams was 3.80 ± 0.56 kg, the lowest production being 3.2 kg and the highest of 4.8 kg.
3. Staple length mean in rams was $29. \pm 0.202$ cm. The shorter staple was 27 cm and the longest 32-cm.
4. The mean body weight in the 100-dams' herd was 48.81 ± 0.252 kg. The lowest weight was 43 kg and the highest of 52 kg.
5. For the grease wool weight in the dams the mean value was 2.42 ± 0.027 kg, with a minimum of 2.0 kg and maximum of 3.2 kg.
6. Mean value for the staple length in dams was 28.48 ± 0.169 cm. The shorter staple had 26 cm and the longest 31-cm.

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Ovinele sunt animale care pot fi exploatare în mai multe direcții: carne, lapte și lână. Sunt de asemenea apreciate pentru piei și pielicele. Din ce în ce mai mult ovinele sunt folosite pentru controlul vegetației nedorite. Ovinele pot valorifica practic orice fel de furaje, inclusiv pe cele reziduale sau chiar vegetația de pe diguri. Furajarea la discreție constituie cheia succesului în creșterea ovinelor. În România, Țurcana este o rasă străveche și se crește încă datorită faptului că este foarte rezistentă și nepretențioasă la hrană. La berbecii reproducători Țurcană de la S.C. Fibiș S.A. județul Timiș, greutatea corporală medie în 2006 a fost de 59.8181 ± 0.7264 kg. Aceiași 66 de berbeci luați în studiu au avut o producție de lână de 3.80 ± 0.056 kg/berbec, în timp ce lungimea șuviței de lână a oscilat între 27 și 32 cm, cu o medie de 29.4769 ± 0.204 cm. Valoarea scăzută a coeficientului de variabilitate de numai 5.60% s-a înregistrat pentru lungimea șuviței berbecilor, ceea ce înseamnă că structura genetică a acestei populații este omogenă.

Cuvinte cheie: berbeci, greutate corporală, producție de lână, lungimea șuviței