PHENOTYPICAL DESCRIPTION OF THE ROMNEY MARSH SHEEP POPULATION FROM S.C.D.P. JUCU

Cighi, V., T. Oroian, S.V. Dărăban, F. Criste, C. Șichet

University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Faculty of Animal Husbandry and Biotechnology, Mănăștur St., no. 3 - 5, 400372 Cluj – Napoca, Romania, e-mail ovineusamv@yahoo.com

Key words: Romney Marsh, sheep, population, phenotype

Abstract. The Romney Marsh breed was brought in our country with the aim of rapid improving, by crossings, the local sheep populations for meat and wool productions. The jucu population, which survived from all imports performed beginning with 30 years ago, is a well adapted population, but reduced body sizes are now recorded. This population still preserve the traits of the meat breeds.

INTRODUCTION

The Romney Marsh breed was obtained from crossings between genuine ewes with long wool, with Leicester, Lincoln, and Costwold meat rams, in Southern England with wet climate and rich vegetation.

It is characterized by high resistance and adaptability to variate conditions of climate, precocity and good quality meat. The body weight of the ewes varies between 60 – 68 kg and of rams between 100 – 120 kg with about 60% slaughter yield in fattening young.

The wool production is of 4 – 5 kg in ewes and 6 – 7 kg in rams, with a satisfactory extent on the body, and wool fineness is of 31 – 37 microns.

In our country a significant number of sheep belonging to this breed were imported with the aim of performing crossings with genuine breeds, Tsigai, especially, for obtaining improvements in wool and meat production.

MATERIAL AND METHOD

In order to perform an up to date phenotypical description of this Romney Marsh sheep population, which remained in Romania, we aimed to perform a study that is presented in this paper.

Body measurements by 30 individuals, representing about 25% of existent effective were performed in order to estimate the main traits of the Romney Marsh sheep effective from Jucu.
The measurements were performed using specific equipment, and data were statistically processed using WINSTAT programme.

RESULTS AND DISCUSSIONS

The adults from the population reared at S.C.D.P. Jucu recorded a body weight of 46.53 kg in females, with about 16 kg lower compared to data obtained by Tafta et al in 1980.

This decrease of weight can be produced by the adaptation crisis submitted by the population during 30 years of living in Jucu conditions. This confirms the theory of Lerner from 1949, which affirms that in adaptation of a population the top disappears and the minus variants of the initial population became the top of the new population. The standard deviation and the coefficient of variation define a homogenous population with a low variability, which allows low selection for this trait.

The trunk length, with an average of 67.13 cm, size with an average of 66.27 cm, and height of 64.20, even 15% lower compared to the initial population, indicate the maintainance of a square body shape, characteristic for meat breeds.

The chest width with an average of 19.83 cm lower compared to initial breed size indicates a body shape specific for meat aptitudes.

In this population, the lambing is EUTOCTIC in 98% of cases. It is due to their size and conformation.

The thorax perimeter is an indicator of the morpho-productive type with an average 94.67 cm with a very good homogeneity (V% = 6.87%). A strong correlation of this trait with thorax depth which in our population recorded average values of 28 cm were recorded.

The values of the the head length in adult population are in average of 20.60 cm and width of 12.07 cm. These values indicate a short head reported to the body weight, which led to a good slaughter yield and easy lambing.

The main parameters concerning the average and the indices of disperssion indices for the main conformation and constitution indices.

<table>
<thead>
<tr>
<th>Trait</th>
<th>n</th>
<th>$\overline{X}$ ± $s_{\overline{X}}$</th>
<th>s</th>
<th>$s^2$</th>
<th>V%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body weight</td>
<td>30</td>
<td>46.53 ± 1.208</td>
<td>6.616</td>
<td>43.775</td>
<td>14.218</td>
</tr>
<tr>
<td>Length of the trunk</td>
<td>30</td>
<td>67.13 ± 0.724</td>
<td>3.963</td>
<td>15.706</td>
<td>5.903</td>
</tr>
<tr>
<td>Size</td>
<td>30</td>
<td>66.27 ± 0.777</td>
<td>4.258</td>
<td>18.133</td>
<td>6.426</td>
</tr>
<tr>
<td>Height</td>
<td>30</td>
<td>64.20 ± 0.892</td>
<td>4.888</td>
<td>23.890</td>
<td>7.613</td>
</tr>
<tr>
<td>Chest width</td>
<td>30</td>
<td>19.83 ± 0.437</td>
<td>2.394</td>
<td>5.730</td>
<td>12.069</td>
</tr>
<tr>
<td>Width</td>
<td>30</td>
<td>19.17 ± 0.477</td>
<td>2.614</td>
<td>6.833</td>
<td>13.639</td>
</tr>
<tr>
<td>Thorax perimeter</td>
<td>30</td>
<td>94.67 ± 1.186</td>
<td>6.498</td>
<td>42.230</td>
<td>6.865</td>
</tr>
<tr>
<td>Thorax depth</td>
<td>30</td>
<td>28.00 ± 0.597</td>
<td>3.270</td>
<td>10.690</td>
<td>11.677</td>
</tr>
<tr>
<td>Head length</td>
<td>30</td>
<td>20.60 ± 0.344</td>
<td>1.886</td>
<td>3.559</td>
<td>9.157</td>
</tr>
<tr>
<td>Head width</td>
<td>30</td>
<td>12.07 ± 0.209</td>
<td>1.143</td>
<td>1.306</td>
<td>9.470</td>
</tr>
</tbody>
</table>
CONCLUSIONS

1. During almost 30 years from the import of this breed, Romney Marsh from the New Zealand, the individuals from S.C.D.P. Jucu recorded a process of decreasing of the main body sizes.
2. The Romney Marsh population from S.C.D.P. Jucu was well adapted to the pedoclimatic conditions from this area.
3. The presence of these traits specific for meat breeds with aptitudes for meat are still present in this population.

BIBLIOGRAPHY