Preliminary Results on the Growth-Rate Dynamics of Crossbred Suffolk X Turcana Lambs, Bred in the Sibiu Area

Doina POPA, COTIRLEA Dorina, C. BOZDOG, RUSU Mariana

The Institute of Development-Research for Montanology Cristian-Sibiu, Cristian, XIII street, CP 557085, jud. Sibiu; icdmcristian@clicknet.ro

Abstract The experimental populations of crossbred Suffolk x Turcana lambs and purebred Turcana lambs were created in order to increase the number of sheep so as to improve both the quantity and the quality of meat production under the guidance of ICDM Cristian-Sibiu. The weight at the lambs’ birth was recorded and after that the lambs were weighed at 30, 60 and 90 days. During the period of confinement, the lambs also received supplements consisting of proteins, vitamins and minerals.

Key words: sheep, average daily increase

INTRODUCTION

Sheep breeding is a traditional economic activity with multiple social implications. For a long time, this specific activity has represented not only a food source for farmers but also raw material for meeting the needs of their families and for trading. In Romania, Sibiu county is situated in the second place as far as the sheep herds are concerned. Usually, sheep are bred more for milk and meat and less for wool. Sheep breeding is a traditional economic activity in Sibiu county and it also represents the main activity for the area known as Marginimea Sibiului (the villages which surround the city of Sibiu). In this area, the greatest preponderance is that of the Turcana breed, the rustic breed which best exploits the food resources offered by the mountainous pastures, it is well-adjusted to the harsh environmental conditions and it has a great level of endurance as far as diseases and climatic events are concerned.

MATERIALS AND METHODS

The experimental populations of crossbred Suffolk x Turcana lambs and purebred Turcana lambs were created in order to increase the number of sheep so as to improve both the quantity and the quality of meat production under the guidance of ICDM Cristian-Sibiu. The experiment had as a starting point the mating of Turcana ewes with rams belonging to the complementary strength breed Suffolk in order to optimize the efficiency of meat production. The experimental populations of lambs were fed in confinement and after weaning they were allowed to graze on the pastures. The weight at the lambs’ birth was recorded and after that the lambs were weighed at 30, 60 and 90 days. The results obtained were statistically processed and compared. During the period of confinement, the lambs also received supplements consisting of proteins, vitamins and minerals. The same factors were taken into consideration for the experimental population of lambs belonging to the Turcana pure breed.
RESULTS AND DISCUSSIONS

Literary references contain little information about the performances recorded by the purebred Turcana lambs and their half-breeds obtained through crossbreeding with strength breeds in order to optimize the efficiency of meat production (1,2,3,5). The majority of studies show that lambs coming from this kind of mating have better performances in comparison to the pure breed.

Our studies and research experiments on the growth-rate dynamics of crossbred Suffolk x Turcana lambs as compared to Turcana pure bred lambs can be observed in the following table:

<table>
<thead>
<tr>
<th>No.</th>
<th>Genotype</th>
<th>Sex</th>
<th>Body weight-kg</th>
<th>Average daily increase - kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Birth 30 days 60 days 90 days From From From</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>From From From</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>birth to 30 days 30 to 60 days 60 to 90 days</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Suffolk x TA</td>
<td>M</td>
<td>4,333±0,408 11,933±0,623 19,200±0,727 25,033±0,790 0,253 0,242 0,199</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>4,000±0,463 11,567±0,651 18,400±0,949 23,967±1,109 0,252 0,228 0,186</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Turcana</td>
<td>M</td>
<td>3,633±0,399 9,600±0,431 14,567±0,495 18,700±0,493 0,199 0,166 0,138</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>3,300±0,368 8,400±0,431 13,233±0,417 16,500±0,535 0,170 0,161 0,109</td>
<td></td>
</tr>
</tbody>
</table>

The analysis points out that the F1 male lambs weighed 4,333 ± 0,408 kg at birth, while the F1 female lambs weighed 4,00 ± 0,463 kg at birth. As far as the control population of purebred Turcana lambs is concerned, the male lambs weighed 3,633 ± 0,399 kg at birth, while the female lambs weighed 3,300 ± 0,368 kg.
Average comparative values in lambs (males) - ICDM Cristian -Sibiu

- Kg-

Average comparative values in lambs (females) - ICDM Cristian -Sibiu

- Kg-

Chart no. 1

Chart no. 2
Comparative SMZ dynamics in lambs (males)
ICDM Cristian-Sibiu

Comparative SMZ dynamics in lambs (females)
ICDM Cristian-Sibiu

Chart no. 3

Chart no. 4
The average daily increase for the crossbred F1 Suffolk x Turcana is higher during the first cycle (0-30 days): 253g/head/day as far as male lambs are concerned and 252g/head/day for female lambs. After the first cycle, the average daily increase is lower, as shown in table no. 1.

For the purebred Turcana lambs as well, the average daily increase is higher during the first cycle (199g/head/day for male lambs and 170g/head/day for female lambs). After 30 days, the average daily increase is lower, as shown in table no. 1.

As the analysis indicates, the crossbred F1Suffolk x Turcana lambs have higher average daily increase as compared to the purebred Turcana lambs. The average daily increase recorded by the crossbred F1Suffolk x Turcana male lambs up to 90 days is 30% higher than purebred Turcana male lambs of the same age.

Literary references show that the crossbred lambs present a higher yield when they are slaughtered, a larger quantity of meat in the carcass and a very good percentage of meat as opposed to fat. All these qualities contribute to the increase of the price, therefore the farmers become more efficient and, at the same time, they have the possibility of trading their merchandise in the European countries. This trend towards increasing meat production, through crossbreeding local breeds with complementary strength breeds, may represent a golden opportunity for the sheep breeders to increase and streamline their business.

The farmers’ receptivity differs as far as the trend based on meat production is concerned. Some of them do not wish for the local populations to be replaced with populations exploited for meat, even though they admit that the production of meat brings about great benefits and profits. There are other farmers who would accept the implementation of some programmes which should improve the local populations’ meat-production performances, under the condition of leaving their milk production unaltered.

CONCLUSIONS

The analysis points out that:

1. The crossbred F1Suffolk x Turcana male lambs weighed 4,333 ± 0,408 kg at birth, a weight which is higher than that of the purebred Turcana male lambs, which weighed 3,633 ± 0,399 kg at birth.

2. The crossbred F1Suffolk x Turcana female lambs weighed 4,00 ± 0,463 kg at birth, as compared to the purebred Turcana female lambs, which weighed 3,300 ± 0,368 kg at birth.

3. The average daily increase is higher during the first 30 days in both the crossbred F1Suffolk x Turcana lambs (253g/head/day for males and 252g/head/day for females) and purebred Turcana lambs (199g/head/day for males and 170g/head/day for females). After the first 30 days, the average daily increase suffers a decrease.

4. As the analysis indicates, the average daily increase recorded by the crossbred F1Suffolk x Turcana male lambs up to 90 days is 30% higher than purebred Turcana male lambs of the same age.

5. The differences of weight recorded both at the female and at the male crossbred Suffolk x Turcana lambs, during various cycles of their lives, confirm the Suffolk breed’s precocity.
REFERENCES