EVOLUTION OF THE GROWTH SPEED UP TO THE AGE OF 8 MONTHS OF THE TURCANA X LACAUNE HYBRID YOUNG EWES COMPARED TO TURCANA ONES

EVOLUȚIA VITEZEI DE CREȘTERE PÂNĂ LA VÂRSTA DE 8 LUNI A MIELUȚELORELOR HIBRIDE TURCANA X LACAUNE COMPARATIV CU TURCANA

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This paper aimed the monitoring of the average daily gain, from birth until the age of 8 months, of White Turcana x Lacäune hybrid lambs in comparison with White Turcana lambs. The investigations were performed in S.C.D.C.O.C. Caransebeș. This study emphasized that in the first day of life, at weaning and at the age of 2 months the White Turcana x Lacäune hybrid lambs have not a significant (p>0.05) higher average daily gain in comparison with Turcana lambs. At the age from 2 to 8 months the hybrid lambs reached (113 g/day) a significant average daily gain (p<0.05) higher with 18.9 % comparison with Turcana lamb (95 g/day). It is a suggestion that, Turcana x Lacäune hybrid lambs have a superior growing speed, after pasture carrying and reach at the age of 8 months a body weight of 37-41 kg, being able for reproduction.

Keywords: Lacaune, Turcana, hybrids, average daily gain

Introduction

In the world, only four european countries, Italy, Greece, Spain and France, exports on other continents superior cheese made from ewe milk. (Padeanu, 2003)

On European level, Romania is situated on the fifth place with high possibilities to evolve to a higher place in the top of the ewe milk producers. Because of some important market opportunities (high demand on export for high quality cheese, the lack of the quotes for goat and ewe milk), more of the romanian ovine breeders are orientating to milk production. With a strength of 8 milions ovines, Romania is in the the top of the European countries.
The productive performances realized by this strengths are lower both under the aspect of the medium productions (60-120 kg/lactation) and under hygienic aspect (the high number of total germs and somatic cells).

The major faster amelioration path of the ewe milk production is the hybridization of the native ovine breeds with the ovine breeds specialized for the milk production. One of this breed is the French ovine breed Lacaune with a medium production of 250-270 l/lactation and abilities for the mechanical milking.

In the present paper we’ve proposed to study the growth speed, from birth to the age of 8 months, of the White Turcana x Lacaune hybrid lambs compared with the White Turcana lambs pure breed and if this hybrid lambs are good for reproduction in the first year of life.

**Material and Methods**

The investigations were made in 2008 in the period February – November on the Development Research Station for Ovine and Goat Breeding Caransebes.

After the calving, were studied 14 White Turcana x Lacaune Hybrid females, compared with 35 White Turcana females Creata de Caransebes ecotype, calved in a period of four days. These lambs benefited of maternal milk ad libidum in the suckling period and after three weeks from calving to weaning they received a medium of 250g of crushed concentrates (50% barley, 50% corn).

The weaning was made at a medium age of 60 days, for all the lambs at the same time, and after the weaning, the lambs from the experimental lots consumed only grass from a naturally ameliorated pasture.

The obtained data were processed using for calculation the EXCEL program, and for the testing of the differences signification, were used Mann-Withney test and T test.

**Results and Discussion**

Lacaune ovine breed was and it is used intensely, either in pure breed or to produce hybrids destined for milk production, in all the European countries with important ovine strengths.

In Romania was imported in small strengths, in many areas, but it was used produce hybrids on a great scale only in the area of Sibiu, where are produced thousands of hybrid ewes between local Tigaie and Lacaune rams.

The obtained results regarding the growing speed at Turcana x Lacaune hybrid lambs and pure breed Turcana lambs are presented in table 1.

From the analise of the data from table 1 it is observed that the average daily gain, in the lambing-weaning period (60 days), is very close to 209g on hybrid young ewes and 205g on Turcana young ewes, the 4g difference being insignificant (p>0,05).

The obtained values regarding the absolute growing speed in the suckling period on young ewes (female youth) from the both lots, is situated between the normal limits of Turcana breed (180-210g/day). The obtained results, demonstrates
that in the lambing-weaning period, mother ewes from both lots, in our case, Turcana breed, had trough their milk production and the maternal behavior, had an decisive influence upon their progenies. (Voia, 2005)

This data are in concordance with the ones communicated by Mochnacs, 1978, who finds that the heritability of the lambs growing speed, from lambing to weaning, is very low, only 0.16, as a consequence of the genetic contribution masking of the growing speed by the maternal effect.

After the weaning, the female youth from the both experimental lots, consumed only grass from a natural ameliorated pasture, until the age of 8 months.

In the 2-3 months period, once with the beginning of the pasture period, the average daily gain decrease appreciably to 170g for the hybrid young ewes and 150g on Turcana young ewes. The difference of 20g (13.33%) between the lots in insignificant (p>0,05), mainly because of the growth variability which is 25.06% for the hybrid young ewes lot and 29.75% on Turcana young ewes lot, fact that indicates that the individual characters responsible for the growth speed are starting to impose themselves more striking.

From 3 months to 6 months the growth speed differences between hybrid young ewes and the Turcana ones are accentuating in percentage values to 20%.

For this period that corresponds with the summer months, the absolute growing speed decreased to 120g on hybrid young ewes and to 100g on Turcana young ewes, but the difference of 20g (20%) is significant (p<0.01).

On the next 60 days (6-8 months), the average daily gain decreases to 80g/day on hybrid young ewes and to 70g/day for the Turcana young ewes, the difference of 10g, is representing 14.28% being significant (p<0.05).

On the whole pasturing period (2-8 months), the hybrid young ewes realize an average daily gain of 113g/day, higher with 18g/day (18.9%) compared with Turcana young ewes (95g/day), statically assured difference (p<0.05).

On the base of this data we can conclude that after the weaning the young ewes from the experimental lots start to differentiate regarding the growth speed. This data are confirmed by Haresing, 1988, who says that after the lambs weaning, the heritability increases between 0.32-0.42.

On the whole analyzed period (0-8 months) the average daily gain is 137g/day on hybrid young lambs, and 123g/day on Turcana young lambs, the difference of 14g (11.38%) being significant (p<0.05).

As a result of an superior growth speed the hybrid young ewes had realized at 8 months a body weight of 36.63kg, and Turcana young ewes only 33.12kg. This experimental data, suggests that Lacaune x Turcana hybrid young ewes, can realize at the age of 9-10 months, a body weight of 38-40kg, and can be used for reproduction in the first year of life.

We consider that for a better development, the hybrid young ewes can be kept either on a cultivated lawn with a structure of 30-40% and 60-70 % valuable graminaceae, or by supplementing the grass consume from the natural lawns with forage concentrates (200-300g/day).
Table 1
Average daily gain (g) on Turcana x Lacaune hybrid lambs (F) compared with Turcana lambs

<table>
<thead>
<tr>
<th>Period</th>
<th>White Turcana x Lacaune</th>
<th>White Turcana</th>
<th>Significant differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>$\bar{x} \pm S_x$</td>
<td>CV %</td>
</tr>
<tr>
<td>Lambing-weaning (2 months)</td>
<td>14</td>
<td>209 ± 7,0</td>
<td>14,90</td>
</tr>
<tr>
<td>2-3 months</td>
<td>14</td>
<td>170 ± 10,5</td>
<td>25,06</td>
</tr>
<tr>
<td>3-6 months</td>
<td>14</td>
<td>120 ± 6,8</td>
<td>16,27</td>
</tr>
<tr>
<td>6-8 months</td>
<td>14</td>
<td>80 ± 5,2</td>
<td>23,04</td>
</tr>
<tr>
<td>2-8 months</td>
<td>14</td>
<td>113 ± 6,1</td>
<td>18,70</td>
</tr>
<tr>
<td>Lambing 8 months</td>
<td>14</td>
<td>137 ± 5,4</td>
<td>18,90</td>
</tr>
</tbody>
</table>

Note: NS – insignificant differences (p>0,05)
*** - very significant differences (p<0,001)
- F - females

Conclusions

- The growing speed in the suckling period (0-2 months) does not differ significantly (p>0,05) between the Turcana x Lacaune hybrid young ewes (209g/day) and the Turcana breed (205g/day).
- The growing speed in the pasturing period (2-8 months) is significant higher (p<0,05) with 18g (18,9g/day) on hybrid young ewes (113g/day) compared with Turcana young ewes (95g/day).
- The growing speed from lambing to 8 months is again significant higher (p<0,05) with 14g (11,38%) for hybrid young ewes (137g/day) towards the Turcana young ewes.
References