

COMPARATIVE ASPECTS ON THE WEIGHT GAIN OF THE KIDS OF ALBA DE BANAT AND CARPATINA BREEDS

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Abstract

The growing process of kids from birth to adulthood is not a uniform process, but has a stage character, in the sense of achievement of more intense or slower growth in different periods. The assessment of growing process of the goat's youth was performed on kids of Alba de Banat and Carpatina breeds, at S.C. Agrofam Holding Fetești, where weighing were made at different stages, namely at birth, at age of 28 days, at weaning (45 days) and at 6 months. The research results show that the weight gain of kids is superior at Alba de Banat compared to Carpatina; also, the males recorded a higher increase in weight than the females in both breeds, and the kids resulting from single births, on total period from birth until 6 months, have a higher growth than those from twin births. The weight gain curve is upward in the period of 28 days – weaning, compared to 0-28 days; in the period after weaning, until 6 months of age, the weight gain decreased at all categories, this may be due to the stress of weaning, transition to the exclusively foddered nutrition, fodders quality compared to nutrients of the maternal milk etc.

Key words: kids, weight, weight gain, youth.

INTRODUCTION

In all the countries, due to the accelerated increase in the number of human population, it practices most efficiently the exploitation of animal resources, applying more efficient technologies for animal breeding. In this context, the goat rising has known recently a remarkable development, both globally and in Romania. The effectiveness of a goat farm is subject also, among other things, of obtaining a weight gain of kids raised, in a short time.

MATERIALS AND METHODS

The assessment of growing process of the goat's youth was performed on kids of Alba

de Banat and Carpatina breeds, raised in semi-intensive system, at S.C. Agrofam Holding Fetești, where the weighing were made at different stages, namely at birth, at age of 28 days, at weaning (45 days) and at 6 months.

RESULTS AND DISCUSSIONS

The main factors influencing the intensity of growth and kid's development are the body weight at birth, the sucked milk quantity and the care and maintenance conditions. In Table 1 are given the weights of kids of Carpatina and Alba de Banat breeds in the farm under study, at different ages.

Table 1. The average weight of the kids, on breeds, at different ages (kg/head)

Breed	Weight at birth		Weight at 28 days		Weight at weaning		Weight at 6 months	
	Average ± standard error of the average	V%	Average ± standard error of the average	V%	Average ± standard error of the average	V%	Average ± standard error of the average	V%
Alba de Banat	2.961 ± 0.117	16.791	6.550 ± 0.173	11.210	8.889 ± 0.174	8.311	24.128 ± 0.268	4.708
Carpatina	2.710 ± 0.099	16.411	6.170 ± 0.087	6.290	8.460 ± 0.096	5.079	23.070 ± 0.211	4.088

From the table above, it appears that the average weight of kids from Alba de Banat breed is superior to those of Carpatina breed, at all the weighing moments, as follows: average weight at birth is higher by 9.26%, weight at 28 days with 6.2%, weaning weight by 5.1% and weight at 6 months by 4.6%.

The research results are within the range of values reported by other authors for these species (Tafta, 2008). In terms of the kids' weight in the two breeds, by gender, this is shown in Figure 1.

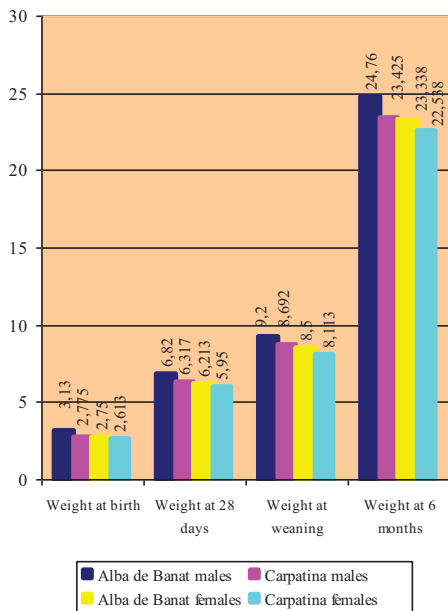


Figure 1. Evolution of the life weight at kids of Alba de Banat and Carpatina, by gender (kg)

The above data show that, by gender, the weight of males is higher than of females in both breeds. Thus, at Alba de Banat breed, the males weigh 13.8% more than the females at birth, with 9.8% more at the age of 28 days, with 8.2% at weaning and with 6.1% more at the age of 6 months.

At Carpatina breed, the males weigh 6.2% more than the females at birth, with 6.2% more at the age of 28 days, with 7.1% more at weaning and with 3.9% more at the age of 6 months.

Between the two breeds, the males of Alba de Banat weigh more than those of Carpatina breed, as follows: at birth with 12.8%, at the age of 28 days with 8%, at weaning with 5.8% and at the age of 6 months with 5.7%. Also, the females of Alba de Banat have a higher weight than the Carpatina breed: at birth with 5.2%, at the age of 28 days with 4.4%, at weaning with 4.8% and at 6 months with 3.5%.

Regarding the of weight gain of the kids from the two breeds, at different ages, it is shown in Table 2.

The results in this table show that average daily gain of kids of Alba de Banat breed is superior to the Carpatina breed kids, in all periods of growth, as follows: from birth to 28 days by 4.9%, from 28 days to weaning by 3%, from weaning at 6 months by 4.8% and from birth to 6 months by 4.5%. The largest increase in weight is recorded during 28 days - weaning, and the smallest increase, from weaning to 6 months.

Table 2. Average daily gain (ADG) of the kids from the two breeds, at different ages (kg/day)

Breed	ADG birth – 28 days		ADG 28 days - weaning		ADG weaning – 6 months		ADG birth – 6 months	
	Average ± standard error of the average	V%	Average ± standard error of the average	V%	Average ± standard error of the average	V%	Average ± standard error of the average	V%
Alba de Banat	0.128 ± 0.003	9.552	0.138 ± 0.003	8.314	0.110 ± 0.001	4.457	0.116 ± 0.001	3.916
Carpatina	0.122 ± 0.002	6.839	0.134 ± 0.003	9.938	0.105 ± 0.001	2.983	0.111 ± 0.001	2.625

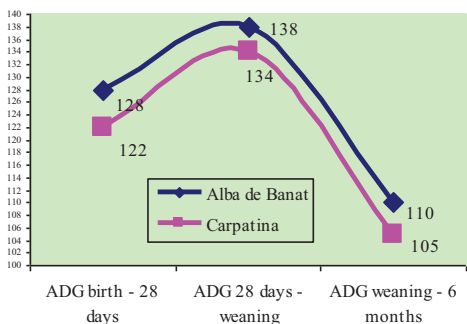


Figure 2. Average daily gain curves at Alba de Banat and Carpatina kids (g/day)

In the Figures 3 and 4, are shown the average daily gain curves, on gender, at the two breeds.

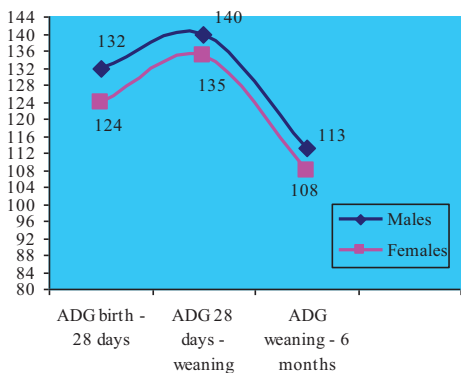


Figure 3. Average daily gain at kids of Alba de Banat breed, by gender (g/day)

The average daily gain of the males of Alba de Banat is larger than of females in the same breed, by 6.5% from birth to 28 days, by 3.7% from 28 days to weaning and by 4.6% from weaning to 6 months.

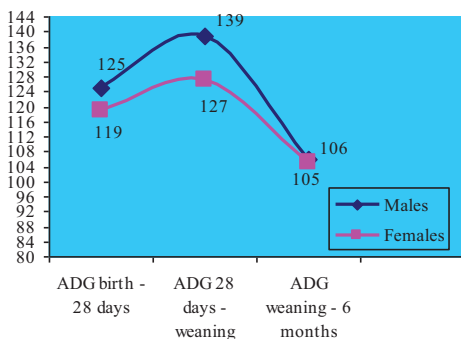


Figure 4. Average daily gain at kids of Carpatina breed, by gender (g/day)

At Carpatina breed, the average daily gain is higher at males than at females by 5% from birth to 28 days, by 9.4% from 28 days to weaning and by 1% from weaning to 6 months. In Figures 5 and 6, are shown the average daily gain curves on simple births and twin births, for the two breeds.

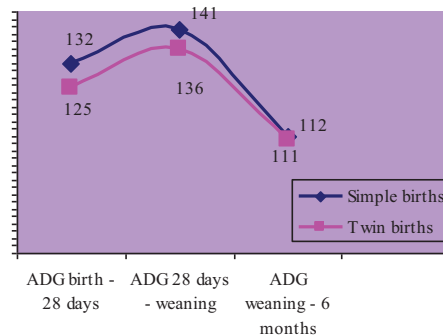


Figure 5. Average daily gain at kids of Alba de Banat breed, on simple births and twin births (g/day)

The data in Figure 5 shows that the kids of Alba de Banat breed from simple births record higher weight gains than those from twin births, as follows: from birth to the age of 28 days with 5.6%, from 28 days to weaning by 3.7% and from weaning to 6 months by 1%.

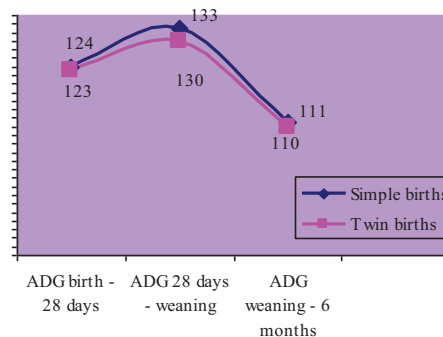


Figure 6. Average daily gain at kids of Carpatina breed, on simple births and twin births (g/day)

Also, at Carpatina breed, there are differences in the weight gain of kids, those from simple births recording increases higher than the twins: from birth to 28 days by 0.8%, from 28 days to weaning by 2.3% and on the entire period from birth until the age of 6 months, by 1%.

CONCLUSIONS

In terms of weight gain of kids, it is superior at Alba de Banat breed, compared to Carpatina; also, the males record an increase in weight larger than the females in both breeds and the kids resulting from simple births have higher weight gains than those from twin births. The weight gain of kids is conditioned by genetic factors, birth weight, gender, individual, type of birth (single or twin) feeding conditions (the mother's milk production and nutrition after weaning) and maintenance etc. It requires the application of amelioration programs in goat breeding in our country, both for milk and meat production, being needed to close the gaps between the results obtained in this field by farmers in Romania and those from European Union countries.

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