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THE INFLUENCE OF SUPPLEMENTARY FEEDING OF LAMBS CONCERNING THEIR BODY WEIGHT AT THE END OF THE LACTATION

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Abstract

The demographic explosion recorded worldwide in the last century and also the increasing level of living had as result the constantly increasing of the meat requirements.The researches were made in a company from the city of Vaslui, on two groups of half-breed lambs obtained from the crossing of females of Merinos de Palas with males of Ile de France.At the first group the supplementary feeding started when the lambs were 10 days old, when in their food it was provided, in specially arranged places, high quality hayand concentrated forage made in the farm, containing 50 % corn, 40 % oat and 10 % pea, ad libitum.The second group was fed supplementary starting at the age of 10 days, when the lams food was provided, in specially arranged places, high quality hay and compound grain forage for lambs given on discretion. In the period of 10-40 days in the lambs food it was administrated compound grain forage "starter" which provides a level of the protein of 16 % and a minimum level of phosphorus of 0, 45 % and in the period of 40-60 days it was administrated in the lambs food compound grain forage "grower" which provides a level of the protein of 15,8 % and a minimum level of phosphorus of 0,40 %. At the age of 30 days as well at the age of 60 days the lambs from the second group had accomplished body weights higher than the lambs from the first group. The average gain in weight made by the lambs in the second group was higher than the average gain in weight of the lambs in the first group. The lambs in the second group had record in the first 30 days of life average gain of 362 g/day while the lambs in the first group recorded a average gain of 224 g/day. In the period of 30-60 days, the lambs in the second group realized an average gain of 322 g/day while the lambs in the first group realized an average gain of 202 g/day. On the whole period of lactation, 60 days, the lambs in the second group realized and average gain of 322 g/day while the lambs in the first group realized an average gain of 213 g/day.

Keywords: *meat , weight gain, forage*

INTRODUCTION

The purpose of breeding of sheep are many (milk, meat, wool, pelts), but worldwide and newer at national level, the main direction and the main purpose of breeding sheep is the production of meat. Even if in our country, the sheep meat it is still a little bit consumed, about 10-20 % of the total meat consumed, Romania can become an important producer of sheep meat for the European market, because of the big and still growing number of reproduction sheep and the wide coverage of paddocks and pastures. The purpose of the researches made is to establish the influence of supplementary food with compound grain forage on the average gain in weight of the lambs in the period of lactation.

MATERIAL AND METHOD

The researches were made in a company form the city of Vaslui, on a group of half-breed lambs obtained from the crossing of females of Merinos de Palas with males of Ile de France.
There were made two experimental groups, each one containing lambs obtained from 40 mother sheep.
The first group was composed of 55 lambs, raised in special made places. The supplementary feeding was made beginning with the age of 10 days, when the lambs received high quality hay, and concentrated

forage made in the farm, containing 50 % corn, 40 % oat and 10 % pea, given on discretion.
The second group was composed of 53 lambs, raised in special made places. The supplementary feeding was made beginning with the age of 10 days, when the lambs received high quality hayand compound grain forage.
The group of the mother sheep was fed in both the periods of mating and gestation and also the period of lactation with the same recipe of forage, made of fibred forages, succulent forages and concentrated forages.
The keeping of sheep was made for 150-160 days in stalls and 205-215 days in paddock. During stalling, the sheep were kept in shelter arranged properly and provided with paddocks. The concern was to make some conditions of comfort for the animals, providing an useful space of accommodation of 1,5 m^2/head of adult sheep in shelters and 2,55 m^2/head in paddock, with a feeding line of 0,5m/head of sheep.

Table 1. The prolificacy and the weightatbirth

Specification	Number of mother sheep	Number of lambs born	Prolificacy %	Weigh of the lambs at birth (Kg)
Group I	40	55	137,50	4,16
Group II	40	53	132,50	4,22

Table 2. The dynamic of the body weight

Specification	Weight of the lambs at birth (Kg) X ± Sx	Weight of the lambs at 30 days (Kg) X ± Sx	Weight of the lambs at 60 days (Kg) X ± Sx
Group I	4,16±0,08	10,88±0,15	16,94±0,24
Group II	4,22±0,08	15,02±0,12	23,54±0,22

To assure the vital functions it was provided in the sheep ratio 2,5-3 kg D.M., 1,5 - 1,6 milk nutritive units, 70-75 PDIN/PDIE, 4-5 g Ca, 2,5-3 g P, for 100 kg weight, supplementary added to these amounts 15-20 % in the period of preparing for mating and with another 25-45 % in the period of gestation and in the first 1-3 months of lactation[1]. The daily ratio administrated was balanced in mineral substances and vitamins, to prevent metabolic disorders. The requirment of vitamins was provided in the season of grazingwith green forages. The feeding in the period of stabulation was made with legume hays, 0,5-1 kg/head/day, with succulent forages, fodder beet 1,5-2 kg/head/day, with fermentedcorn 1,5-2 kg/head/day,with a mixture of concentrated forages, composed of 25-30 % barley, 50-60 % corn, 8-12 % sunflower buns, 1 % salt, 2 % chalk. The using of the cultivated paddocks was made on a large period of time, having benefits upon the health and the productive level of the animals, avoiding long and exhaustive roads.
At the paddocks it was provided water on discretion and a place to rest overlaid with clouds. The necessary of water was 3-4 times bigger than the amount of dry substance ingested, respective 3-6 l/day[2].
A special attention was given to the sheep in lactation, which were administrated forages to stimulate the dairy secretion, succulet forages, fermented corn , fodder beet and green forages[3].
In the grazing period the forage ration was completed with a supplement of fiber and concentrate forages.

RESULTS AND DISCUSSIONS

After the recording of calving, the lambs were weighed at birth, at the age of 30 days and also at the age of 60 days, the age when the weaning happened, the results being presented in the following.
From the information presented in table number 1 the conclusion can be made that the weight of the lambs at birth, but also prolificacy, records at the two groups approximately equal values. The lambs obtained in the first group had the weight at birth of 4, 16 kg, while the lambs obtained in the second group had the weigh at birth of 4, 22 kg.
At the age of 30 days and also at the age of 60 days, the lambs from the second group had the body weight higher than the lambs in the first group.
At the age of 30 days, the lambs in the second group had the body weight of 15, 02 kg while the lambs in the first group had the body weight of 10, 88 kg; at the age of 60 days the lambs in

the second group had a body weight of 23, 54 kg , while the lambs in the first group had the body weight of only 16,94 kg.

Table 3. The dynamic of the averageweight gain

Specification	Average weight gain in the first 30 days (g) X±SxV (%)	Averahe weight gain in the interval 30 -60 days (g) X±SxV(%)	Average weight gain in the first 60 days (g) X±SxV(%)
Group I	224±6 13,60	202±7 14,16	213±7 13,16
Group II	362±6 12,26	284±7 15,86	322±7 14,38

The daily average weight gain recorded by the lambs from the second group was of 362 g/day in the first month of life, 284 g/day in the second month of life, with an average of 322 g/day in the period of lactation(0-60 days), while the average weight gain of the lambs in the first group was 224 g/day in the first month of life, 202 g/day in the second month of life, with an average of 213 g/day in the period of lactation. By calculation, it was found that the differences between the genotypes are significant (The Fisher Test, P< 0,5).
The amount of combined forage, consumed by the lambs in the second group was of 5, 75 kg/head while the lambs in the first group consumed 6,20 kg/head of combined forage form the farm.

CONCLUSIONS

1.The body weight of the lambs in the second group is higher than the one of the lambs in the first group, at the age of 30 days and also at the age of 60 days. Among the lots on the significant differences in the conditions in which the time of formation of the lots were not significant differences found
2. The average weight gain of the lambs in the second group is higher than the one of the lambs in the first group, at the age of 30 days and also at the age of 60 days.
3. Even if the price of the combined grain forage is higher than the price of the combined forage made in the farm, the profit obtained by selling the 6,6 kg (the difference of the average weight of the lambs in the second group and the average weight of the lambs in the first group at the age of 60 days) is superior the supplementary costs made with the forages.

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REFERENCES

[1] TAFTĂ,V., 2008. *Creşterea Ovinelor şi Caprinelor*. Bucureşti: Editura Ceres,.
[2] PÂRVU, Gh.; COSTEA, M.; PĂRVU, M.; NICOLAE, B. 2003. *Tratat de nutriţia animalelor*. Bucureşti: Editura Coral Sanivet,.
[3] VICOVAN, G.; VICOVAN, A.; RADU, R.; ZAMFIR ZOIA CAMELIA; SAUER, W.I. 2009. *Cercetări privind ameliorarea producţiei de carne la rasele autohtone de ovine prin încrucişare cu rasele specializate, A. Creşterea în greutate şi consumul specific de furaje la îngrăşare.* Sesiunea Ştiinţifică ”Zootehnia şi biodiversitatea - bază a agriculturii durabile şi a protecţiei mediului”, USAMV Bucureşti.