Researches Concerning the Reproduction Parameters in Palas Merino Sheep Crossed with Ile de France Males

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Abstract
This paper mainly aims at highlighting the differences in reproductive parameters of females of a lot of Palas Merino breed crossed with the Merino Palas breed male (group I) and a lot of Palas Merino females crossed with males of breed Ile de France (group II). Research has been conducted in a trading company in Vaslui county, on a herd of 600 female heads. The results showed that reproductive parameters of Merino sheep breed group crossed with rams of the breed Ile de France (group II) where higher compared to the Merino sheep breed group crossed with Merino rams (group I), given that environmental conditions were identical for two lots. So, the index of fecundity determinate had value of 92.00 %from the first batch of sheep and of 92.33 % for the second batch of sheep also The calculated prolificacy for the these two lots had values of 113.40 for the first lot and of 136.69% for the second lot. Note that two reproductive parameters analyzed a very significant difference was found in the prolificacy parameter. Of breeding parameters studied, a very significant difference was found in the prolificacy parameter.

Keywords: breeding, fecundity, fertility, prolificacy

1. Introduction

The higher demand of good quality mutton in the world market determined the sheep breeders in our country to make crossings having in view the improvement of the local breed prolificacy and the obtaining some cross products with good meat features. The main goal of this paper is to emphasize the existed differences between the reproduction parameters of a Palas Merino female batch crossed with Palas Merino Males and another Palas Merino female batch crossed with Ile de France males. These researches go on finding solutions to obtain higher
meat amounts, of superior quality from the local breed, that will be marketed on the European common market at good prices, so that the breeders in our country have profit, develop this occupation and the large areas of pastures in Romania be efficiently exploited.

2. Materials and methods

The research was conducted in a private company from Vaslui zone on reproduction sheep breed distributed in two groups. The first group consisted of reproduction sheeps crossed with rams Merino of Palas and the second group Palas Merino female crossed with Ile de France rams. Each group consisted of 300 Palas Merino sheep breed and 12 rams of the breed Palas Merino rams for group I and 12 rams Ile de France for group II.
The experimental lots were separated from other lots in the overall population. Food administration was followed during the preparation for mating, during gestation, and the first part of lactation. The two experimental groups were fed with the same foods standards [1].

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In the first period of gestation received a ration consisting exclusively of green pasture and salt [2] (Table 1), and in the second part was given a ration according table no. 2

Feed intake during lactation was administered consisting of clover hay, corn silage, and a mixture of concentrated forms of corn and barley in equal proportions (Table 3).

Table 1 Feed rations given in a first gestation period

Feed	-kg-	SU -kg-	UNL	PDIN -g-	PDIE -g-
Pasture	6	0.96	1.00	105	81
Salt	Rock salt				

Table 2 Feed rations given in a second gestation period

Feed	-kg-	SU -kg-	UNL	PDIN -g-	PDIE -g-
Clover hay	1,0	0.85	0.57	79	52
Corn	0.4	0.35	0.52	30	42
Feed chalk	15 g				
Salt	10 g				
Total	-	1.20	109	109	94

Table 3 Feed rations given in a first lactation period

Feed	Kg	SU (kg)	UNL	PDIE
Clover hay	1.10	0.91	0.67	71
Silage	0.55	0.09	0.09	6
Coen+barley	0.50	0.40	0.50	42
Total		1.40	1.26	119

SU- dry substance

UNL-units nutritious milk

PDIN-protein supplied when nitrogen is limited in the rumen

PDIE- protein supplied when energy is limited in the rumen

Feed rations of experimental groups were supplemented with 20 g feed chalk and salt was provided at discretion as rock salt [3]. After studying how the consumption of feed, it was concluded that feed concentrates were consumed whole, the clover hays were consumed at a rate of over 95% and the silage in a rate of 93-94% , and in a long time.

3. Results and discussion

After registering births and weighing lambs were calculated key reproduction indices made of sheep breeding lots (table 4).

Table 4 The main realize indices of reproduction

Lotul	Mounted sheep	Calving sheep	Obtained lambs	Fecundit %	Prolificacy %
Lot I	300	276	313	92.00	113.40
Lot II	300	277	380	92.33	137.18
Total	600	553	693	92.16	125.31

The main indices of reproductive fecundity and prolificacy made experimental lots were made as follows:

Fecundity index was influenced by the preparation for the breeding of the sheep, the organization and conduct of breeding.

Fecundity index of the lot no. I was 92.00%.

Fecundity index of the lot no. II was 92.33%

Realized fecundity index of the entire population of sheep was 92.16%

Prolificacy index determined in relation to the number of obtained lambs had the following values.

Prolificacy index of the lot no. I was 113.40%

Prolificacy index of the lot no. II was 137.18%

Realized prolificacy index of the entire population of sheep was 125.31%.

The data obtained as a result of researches are comparable to existing data in the literature for the Merino breed.

So, the fecundity rate of 92.00% by lot I and 92.33% achieved from lot II, are close to the values obtained from the IDCOC Palas, 90-94% [4].

Prolificacy index for experimental lot I, of 113.40% is lower thet the literature data from 128% to 135%, a value which can be explained by the fact that a lot more sheep was in the first calving.

Prolificacy index determined from experimental group II, 137.18 % exceeds the maximum limit of prolificacy communicated in the literature for the Merino sheep breed, but somewhat lover that the realized values of Ile de France sheep breed.

Statistical calculation showed that prolificacy index of group II differs very significantly from prolificacy index made by group I (Fisher test, $P<0.05$).

4. Conclusions

The two experimental groups of sheep have made good values of main reproductive indices.
The fecundity index shows similar values to the two lots and this is due to good preparation for mounting.
Prolificacy index had significantly higher values in group II than group I, Ile de France sheep breed having a better superiority than Merino Palace prolificacy.

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