

ANALYSE OF AVERAGE DURATION OF PREGNANCY AND OESTRUS IN SHEEP BREED MERINO PALAS AND TIGAIE

Lavinia Moise^{1*}, Al. Sonea², V. Moise¹

¹ Valahia University of Targoviște, Romania

² Faculty of Veterinary Medicine Bucharest, Romania

Abstract

In this paper, the average duration of oestrus and pregnancy in Merinos of Palas and Tigaie is analyzed to maximize reproductive function in these breeds. Application of a proper management, of planning and control methods of the sexual cycle, of conducting the rate of sexual life, of the fertility and prolificity can lead to high production parameters. The research was conducted in three different locations, in adult sheep and young sheep of Merinos of Palas breed, Tigaie and half-breeds. Oestrus in sheep suddenly appears and gradually disappears after 24-36 hours of its appearance being accompanied by less obvious behavioral changes. In sheep with short oestrus, fertility and twinning are smaller, so it is recommended the separation of male and female sheep, avoiding the permanent contact of sheep with rams. Sheeps taken in study, average duration of oestrus was 24 hours (54.46% of adult sheep, respectively 64% of sheep young). From the analysis of the data obtained, shows that at adult sheeps, average duration of pregnancy is less than 148 days, and as regards the young sheep, average duration of pregnancy in all three units in the survey is with just over 148 days. Knowledge of gestation duration period allows the breeders the lambing planning and the creation of optimal conditions for lambing.

Key words: oestrus, pregnancy, sheep

INTRODUCTION

The growth and exploitation of sheep, due to differences in biological productivity and performance thereof and their ability to adapt to environmental conditions, enjoy a special appreciation in many countries of the world.

In our country in the present circumstances the requisite measures for productions headed for to meat and milk, where demand is greater than supply, but lately the prices offered for these products were maintained at a high level. Among species of farm animals, the sheeps provides the widest range of products.

The sheeps differs from the other species of farm animals and in function reproduction. The breeding sheeps has a seasonal nature.

A stronger seasonal character means breeding season short, anoestrus long and a shorter period of lactation [3].

The breeding season depends on the type morpho-productive, breed, feeding and maintenance [1].

Of great importance in the work of reproduction in sheep is the expression of quiet heat.

Oestrus or heat suddenly appears and disappears progressively after 24-36 hours after his appearance, being accompanied by behavioural, slightly specific to sheep [5]. Ovulation occurs in 24-36 hours after the occurrence heat and variations, depending on the breed, age and especially conditions for feeding and maintenance [6]. Primiparous sheep have heat period shorter and adult sheep. Application in performance management, methods of planning and control cycle sexual, the pace sexual life, fecundity and prolificity can lead to achieving productive lift parameters. Performance reproductive in sheep can be appreciated through analysis of various indices of breeding (birth rate, fecundity, prolificity, etc.) [2].

*Corresponding author: moise_v@yahoo.com

The manuscript was received: 15.04.2012

Accepted for publication: 05.05.2012

MATERIAL AND METHODS

Research has been carried out in three different locations, in adult sheep and young sheep, in breed Merino Palas, Tigaie and half-breed, to which it was analysed the duration pregnancy and oestrus. Duration of oestrus was split on five intervals time (table. no. 1). Research has been conducted on a flock of sheep adult on 2194 and 840 young sheep, on period three years in three units. Average duration of pregnancy was calculated based on the existing data in the registers to the three units taken in the study.

RESULTS AND DISCUSSIONS

Study on scrolling out sexual cycles (intensity, duration, etc.) to be as well known as their length is different from one race to another, in order to be able to determine the optimum time for service or A.I..

Oestrus in this species appears suddenly and disappear gradually after 24-36 hours after his appearance, being accompanied by modification behavioural less obvious to the sheep [4]. At sheep with short duration of the oestrus, fecundity and twins are smaller, that is why it is recommended separation of the males and females and not contact permanently the sheeps with rams. If the sheep are not seeded or mounted, oestrus repeat every 18 days.

Table 1 Estrus duration of sheep in the studied units

Unit.	Cat.	Estrus duration (h)									
		12		24		36		48		60	
		n	%	n	%	n	%	n	%	n	%
A	Sheep	6	0.67	532	59.44	242	27.03	115	12.84	-	-
	Young sheep	6	1.79	234	69.85	56	16.71	39	11.64	-	-
B	Sheep	26	3.42	376	49.53	278	36.62	74	9.74	5	0.65
	Young sheep	15	4.73	187	58.99	63	19.87	52	16.40	-	-
C	Sheep	3	0.55	287	53.14	226	41.85	21	3.88	3	0.55
	Young sheep	5	2.65	117	62.23	66	35.10	2	1.06	-	-
Total	Sheep	35	1.59	1195	54.46	746	34.00	210	9.57	8	0.36
	Young sheep	26	3.09	538	64.00	185	22.02	91	10.83	-	-

Sheeps taken in study, average duration of oestrus was 24 hours (54.46% of adult sheep, respectively 64% of sheep young), duration oestrus is between 12-hour (1.59% of adult sheep, respectively 3.09% of sheep young).

A smaller percentage of ewes and sheep young, record duration of oestrus the 48 hours (9.57% of adult sheep, respectively 10.83% of sheep young). On 60 the hours, this value was recorded only in adult sheep, resulting duration that the young sheep oestrus is shorter.

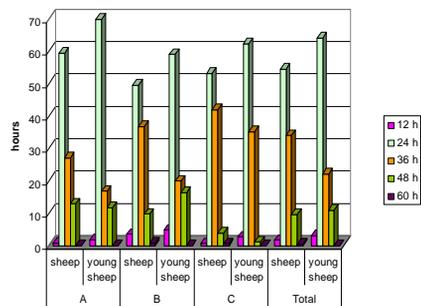


Fig. 1 Estrus duration of sheep in the studied units

In Fig. 1 shows that sheeps and young sheeps from unit A (breed Tigaie), the percentage in heat entrance to adult sheep is 59.44%, and about young sheep is 69.85%,

vis a vis the sheeps in the unit B (breed Merinos de Palas), in this case, the percentage of heat input in sheep is 49.53%, and the young sheep is 58.99%. These results demonstrate that improved breeds of sheep (breed Merinos de Palas) longer have an oestrus (12-60 hours), while primitive breeds (Turcana, Tigaie) it has shorter oestrus (12-48 hours). This peculiarity at sheeps Țigaie and Țurcană, fosters the emergence of two or three cycles per season, increasing rates of

fecundity and achieve higher yields. Ovulation occurs at this species due to increased levels of seric gonadotrophin in the late follicular phase. Ovulation occurs towards the end of oestrus, it is spontaneous and is often double or triple.

These features demonstrates, once more that it is absolutely necessary for particularities the knowledge of the species, breed, individual [2].

Table 2 The average duration of the sheep pregnancy between 2009 and 2011

Unit	Year	Category	No. sheep in the studied	Days
A	2009	Sheep	325	148.01
		Young sheep	135	148.16
	2010	Sheep	290	147.93
		Young sheep	100	148.06
	2011	Sheep	280	147.91
		Young sheep	100	148.03
Total		Sheep	895	147.95
		Young sheep	335	148.08
B	2009	Sheep	266	147.85
		Young sheep	115	148.01
	2010	Sheep	246	147.83
		Young sheep	105	148.03
	2011	Sheep	247	147.86
		Young sheep	297	147.91
Total		Sheep	759	147.84
		Young sheep	317	147.98
C	2009	Sheep	190	147.88
		Young sheep	72	148.05
	2010	Sheep	180	147.92
		Young sheep	58	148.07
	2011	Sheep	170	147.87
		Young sheep	58	148.02
Total		Sheep	540	147.89
		Young sheep	188	148.04

In the drive A (breed Țigaie) to note that the average duration of pregnancy (in days), between the years 2009-2011 was between 147.91-148.01 days, at adult sheep and at the same all time young sheep registered an average duration of pregnancy from the 148.03 -148.16 days (table no. 2).

In unit B (Breed Merinos de Palas) average duration of pregnancy was between 147.83-147.86 days at adult sheeps, and young sheep was between 147.91-148.03 days. From the analysis of table 2, it appears that the average length of gestation in adult sheep in drive C (breed half), was between

147.87-147.92 days, and the young sheep, ranged between-148.02 148.07 days.

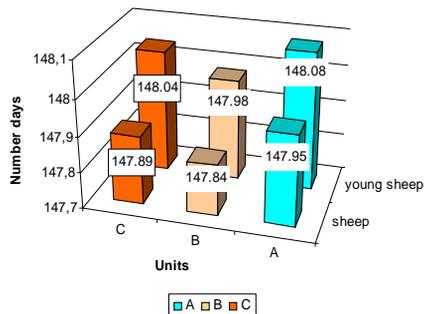


Fig. 2 The average duration of the sheep pregnancy between 2009 and 2011

Looking at figure 2 shows that at adult sheeps, average duration of pregnancy is less than 148 days, and as regards the young sheep, average duration of pregnancy in all three units in the survey is with just over 148 days. This may vary depending on several factors (sex, alimentation, number of lambs, age mother, etc.) but the average amount is between 147 and 150 days, as is in literature on the subject [4]. The results obtained from the research carried out, at the three units, falling within these values.

CONCLUSIONS

The results obtained in this study are consistent with those found in the literature, indicating that the average life of the sheep oestrus is 24-48 hours with limits between 2-92 hours.

By knowing and determining best moment, we can practice a assisted breeding which is aimed at improving reproductivi parameters.

Knowledge with reference to duration of pregnancy, allows farmers parturition planning and creation necessary conditions for farrowing.

ACKNOWLEDGEMENTS

This work was co financed from the European Social Fund through Sectoral Operational Programme Human Resources Development 2007-2013, project number POSDRU/89/1.5/S/63258 "Postdoctoral school for zootechnical biodiversity and food biotechnology based on the eco-economy and the bio-economy required by eco-san- genesys"

REFERENCES

- [1] Crețu Lidia, 2005, Cercetari privind dirijarea ciclului sexual la ovinele din S.C.P.C.O. Rusetu. Teza de doctorat.
- [2] Moise Lavinia, Șonea C., Moise V., Ivănuș Maria Marcela, The investigations for misleading and synchronization heats of meals. Second Joint Meeting of the Balkan Countries "BALNIMALCON - 2003", 2003
- [3] Roșu I., Șonea C., Colceri D., Research on morphological and yielding traits in Sibiu Țurcana sheep breed. *Lucrări Științifice vol. 55 Seria Zootehnie Iași*, 2011, p. 97-98
- [4] Taftă V., Vintilă I., Zamfirescu Stela, Producția, ameliorarea și reproducția ovinelor. Editura Ceres – București, 1997.
- [5] Zamfirescu Stela, Ionescu Florentina, Dumitrescu I., Influența lactației asupra indicilor de reproducție la oaie. *Lucrări Științifice ale I.C.P.C.O.C. – Palas, Constanța*, vol. IV, 1989.
- [6] Zamfirescu Stela (1997) – Contribuții la diagnosticul și tratamentul stărilor de infertilitate la ovine. Teza de doctorat.