



GROWTH DYNAMICS OF KARAKUL LAMBS UNDER TRADITIONAL HOUSING TECHNOLOGY

Shaptakov E.S.

Ph.D. in agricultural sciences of Samarkand veterinary medicine institute, Republic of Uzbekistan

E-mail: esshaptakov@mail.ru. тел.939939312

Shukurova M.S.

Mater's degree of Samarkand veterinary medicine institute, Republic of Uzbekistan

E-mail: mshukurova@mail.ru. тел.978952297

Shaptakova L.E

Mater's degree of Samarkand veterinary medicine institute, Republic of Uzbekistan

E-mail: lshaptakova@mail.ru. тел.976116415

B.Khasanov

Researcher of Samarkand veterinary medicine institute, Republic of Uzbekistan

E-mail: xasanovbobur528@gmail.com. тел.932202783

Samarkand veterinary medicine institute, Republic of Uzbekistan

Article history:	Abstract:
Received August 11 th 2021 Accepted: September 8 th 2021 Published: October 14 th 2021	The experiment was carried out on three groups of rams with various constitutions that were obtained through various matings. The dynamics of age variability of live weight and the dynamics of average daily and absolute weight gain of lambs under traditional housing technique were also explored in the acquired lambs..
Keywords: Growth, live weight, gain, feeding level, constitution.	

INTRODUCTION.

The traits of an organism are produced during its growth and development as a result of interactions between its genetic foundation and the unique environmental conditions in which it grows and develops. As a result, understanding the rules of individual development that govern considerable variances in the frame, animal productivity, and vitality is critical. Identification of these regularities can considerably speed up the process of enhancing high yield types and groups of animals, establish methods of affecting the body during its most "important periods" of growth and development, and organize focused breeding.

The goal of this study is to investigate the peculiarities of Karakul sheep growth and development in relation to their constitutional distinctiveness under regular pasture management, based on the foregoing reasons. In the works of several authors[4;p.245-248],[6;p.19-25],[5;p.28-39],[2;p.143-149],[3;p.21], the most commonly known and widely used indication for predicting the growth and precocity of a certain species and breed of animals is their live weight.

MATERIAL AND RESEARCH METHODS.

The experiment was carried out on three groups of rams with various constitutions that were obtained through various matings. The dynamics of age variability of live weight and the dynamics of average daily and absolute weight gain of lambs under traditional housing technique were also explored in the acquired lambs.

RESEARCH RESULTS AND THEIR DISCUSSION.

The data in Table 1 and Figure 1 show that there is no homogeneity of live weight of lambs of different constitution types at birth, despite the fact that all mother sheep were fed and housed under the identical conditions. This indicates that during the embryonic period, the growth of Karakul lambs follows a specific schedule linked to the animal's constitution.

Thus, lambs of rough constitution had the highest live weight indicators and surpassed lambs of strong and gentle type by 4.8 and 12.9 %, respectively. The difference in live weight of lambs of strong and tender constitution was 0.3 kg or 7.9% ($P < 0,05$).

Table 1
Dynamics of age-specific variability of live weight of lambs under traditional housing technology, kg

Age of lambs	The constitution of lambs					
	gentle		strong		rough	
	n	X±Sc	n	X±Sc	n	X±Sc
At birth	23	3,8±0,08	23	4,1±0,09 *	23	4,3±0,1*
2 monthly	23	18,1±0,25	23	19,5±0,24**	22	20,0±0,26**
4.5 monthly	22	27,0±0,28	22	30,0±0,29**	22	30,5±0,3**
5.5 monthly	22	22,9±0,21	22	27,0±0,22**	22	27,6±0,27**
8.0 monthly	22	28,0±0,27	21	34,1±0,3**	21	35,6±0,31**
12 monthly	21	21,1±0,21	21	28,2±0,27**	21	29,5±0,28**
18 monthly	21	33,5±0,3	20	40,6±0,31**	21	42,2±0,34**

*P<0,05 **P<0,01

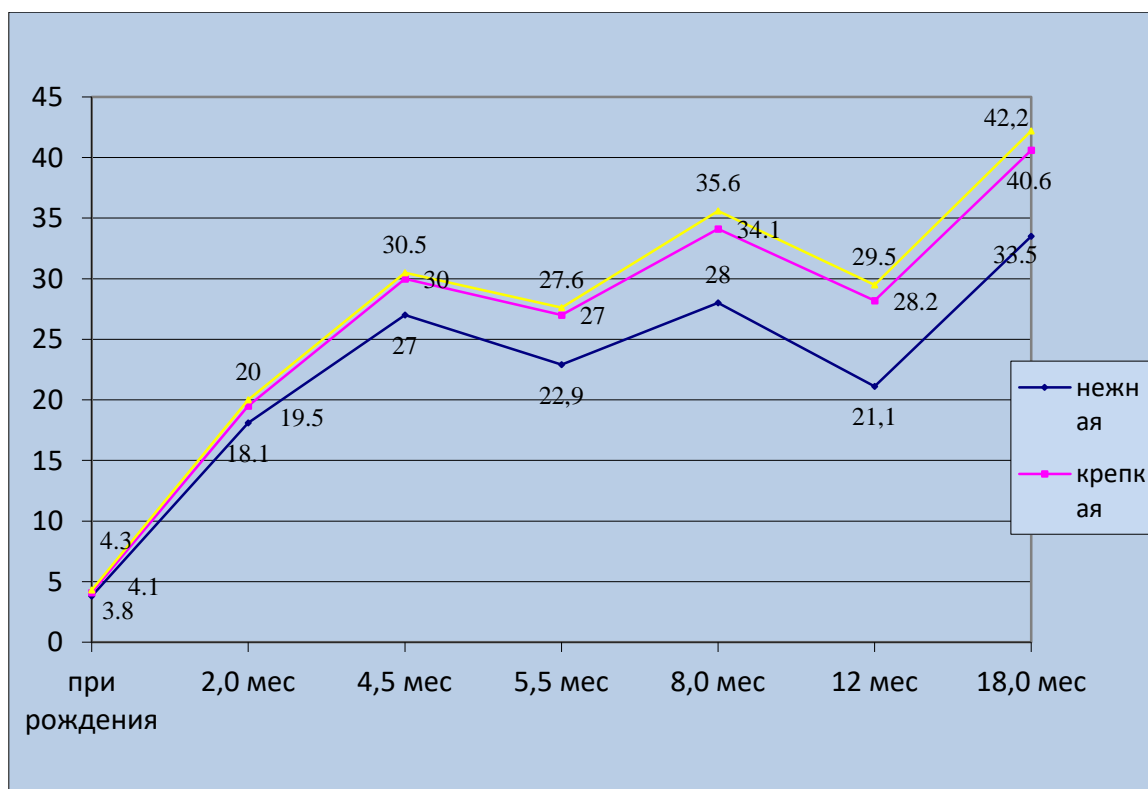


Figure 1. Age variability of live weight of lambs under traditional housing technology

Karakul sheep, while belonging to the medium and even relatively small sheep breeds, are considered to be large-breeding.[1;p.203]The lambs' weight at birth is 10-12% of the mothers' weight. In most other sheep breeds, this figure does not exceed 7-9%. This largesse is apparently the result of centuries of purposeful selection aimed at obtaining large-sized pelts.

Karakul lambs are traditionally produced under the ewe-sheep until they reach the age of 4.0-4.5 months, therefore the rate of post-uterine growth is determined by the milkiness of mothers and the degree of eating and digestion of grazing plants. In our experience, this has also been validated.

Thus, lambs of all types of constitution in the period up to 2 months of age, that is, in the period when sheep lambs have the highest milk yield they had the highest rates of both absolute and average daily gains, while interconstitutional differences persisted, i.e, in lambs of rough constitution they were higher than in lambs of strong and gentle constitution. (see table 2).

In the period from 2,0 to 4,0-4,5 months of age the milking ability of mother sheep gradually decreases, which immediately affects the average daily weights of lambs, with the greatest decrease noted in the group of lambs of tender type and is 119 grams, while the average daily weights of strong and rough types of constitution was 140 grams.

Lambs who are not habituated to grazing soon lose their gained weight after weaning, with gentle type lambs losing 4.1 kg and strong and coarse type lambs losing 3.0 and 2.9 kg in the first thirty days. This is thought to be due to the fact that when lambs are weaned from their mothers, they are denied milk, shade from the mothers they utilized during the hotter parts of the day, and they have not yet properly accustomed to eating and digesting coarse grazing fodder or the limited drinking hole.

Table 2
Dynamics of average daily and absolute weights of lambs of different types of constitution at traditional technology of housing, kg.

Growth periods	Dura-tion period, days	The constitution of lambs					
		Gentle		strong		Грубая	
		average daily	Absolu-te	Average daily	Absolu-te	Average daily	Absolu-te
From birth to 2 months.	60	0,238	14,3	0,256	15,4	0,261	15,70
From 2 months. to 4,5 months.	75	0,119	8,9	1,140	10,5	0,140	10,50
From 4.5 months. to 5.5 months.	30	-0,136	-4,1	-0,1	-3,0	-0,096	-2,9
From 5.5 months. to 8.0 months.	75	0,068	5,1	0,09	7,1	0,1	8,0
From 8.0 months to 12.0 months.	120	-0,06	-6,9	-0,05	-5,9	-0,05	-6,1
From 12.0 months to 18 months.	180	0,068	12,4	0,07	12,4	0,07	12,7
From birth to 18 months	540	0,05	29,7	0,07	36,5	0,07	37,9

The lambs progressively acclimatize to these settings over the course of 20-25 days. Experienced shepherds aid with this by increasing the frequency of watering, moving them to pastures with more diverse grass growth, and using night grazing and other practical grazing practices to help them adjust to new situations.

Lambs gradually recuperate throughout the grazing phase from 5.5 to 8.0 months of age and begin to accelerate their growth rate. During this time, the delicate-constitution experimental lambs fattened relatively well, with an average daily gain of 68 g and an absolute gain of 5.1 kg.

For lambs of strong and coarse constitution, these figures were 90 g and 7.1 kg; 100 g and 8.0 kg, respectively. Thus, the growth rate of lambs of strong and rough constitution was higher than that of lambs of gentle type.

When the winter cold sets in, the nutritional value and volume of plant matter consumed both drop dramatically, affecting lamb growth rates.

Over the winter, lambs with a delicate constitution dropped 6.9 kilos, while lambs with a strong and coarse constitution lost 5.9 and 6.1 kilograms, respectively.

With the onset of spring, the emergence of pasture vegetation growth rates of sheep are gradually restored as a result, the absolute increase in live weight in all three groups of sheep were equal and amounted to 12.6 and 12.7 kg or 70 grams per day. It should be noted that interconstitutional differences persist even at 18 months of age. Lambs of rough constitution had the highest live weight and were 4.4% and 17.0% superior to lambs of strong and tender constitution.

Thus, the results of the conducted studies allow us to conclude that the growth of Karakul lambs is closely related to both the genotype and the level of their feeding. Lambs of different constitutional types reacted ambiguously to the level of feeding - with full feeding they were distinguished by high early maturity, and with scarce - sharply decreased the rate of growth. This means that by creating optimal feeding conditions during the "critical periods" it is possible to achieve growth stabilization and consequently increase their productivity.

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