

**Interrelation of Viability and Productivity Indicators with  
Ethological Characteristics in the Growth and Development of Sur Karakol  
Lambs**

*Mukhitdinov Sh. M.*

*Samarkand State Medical University*

**Abstract:** *The article presents information about the variability of qualitative and quantitative indicators of Sur-Karakol lambs of different ages in connection with the ethological characteristics of Karakol sheep.*

**Key words:** *rough-haired, color, pedigree rams, ethological type, constitutional type, strong, rough, small, rough, hard.*

## **INTRODUCTION**

Breeding of breeding animals in cattle breeding is one of the zootechnical activities that are important in increasing the efficiency of the industry and improving the quality of products. When evaluating the quality of pedigree rams, the skin characteristics of the offspring obtained from them, in particular, constitution types, are one of the most important indicators. From this point of view, generations were obtained by using different mating methods to obtain breeding rams in cattle breeding farms. [11,14].

Constitution is the most important indicator of breeding and production quality of Karakol sheep. Evaluation of animals according to this indicator, along with their productivity characteristics, most accurately characterizes their productivity, allows to carry out the breeding process in a targeted manner, and serves as a basis for creating high-yielding animals that meet the breed standard, its variety adaptation to different conditions and early maturity, productivity and body strength. At the beginning of the development of the scientific basis for the selection and breeding of Karakol sheep, the selection and selection of animals according to the constitutional characteristics of wool was adopted. At the first

stage of raising Karakol sheep, it played an important role in the next type of compulsory work against the background of evaluating lambs according to their quality [1, 2, 3]. At the same time, there is no information about the constitutional characteristics of Karakol sheep grown in the conditions of the gypsum desert. [9].

## **LITERATURE ANALYSIS AND METHODOLOGY**

The constitution is a set of characteristics that show the general body structure of animals, their morphological, functional, physiological, biochemical, biological and psychological properties, and represent the health and productivity of animals and the response of the whole organism to the influence of the external environment. shows ability. The constitution of sheep is formed during the development of several generations under the influence of heredity and external environment. In production conditions, the constitution of sheep is visually determined based on their appearance, exterior and productivity. In the following years, internal information obtained as a result of anatomical, histological, biochemical and other tests is also used to determine constitution types. Based on this point of view, it is important to study the constitution types of the offspring from purebred rams. [3,4,5,6,12].

**Research Methodology.** The experiment was carried out on Surkhandarya and Karakalpak Karakol sheep of different colors, bred at the "Tutli Karakol Zamin" breeding farm, Nurabad District, Samarkand Region.

Numerical data obtained at different ages were mathematically processed in the methods of variational statistics according to the manual "Management of biometry for zootechnics" (N. A. Ploxinsky 1969). Generally accepted methods were used to classify the constitutional characteristics of experimental sheep into types (Belyaev D.K., Martinova V.N., 1973) [2].

The data obtained from the experiment were processed using the methods of variational statistics. The average arithmetic index ( $\bar{X}$ ) of each symbol and its error ( $S_x$ ) were determined.[1; 2].

## **RESULTS**

The constitution of Karakol sheep is divided into 3 types, i.e. robust, coarse, and fine types, the live weight of lambs of the robust constitution type is 4.2-4.7 kg, medium size and body the structure is very nice. All the characteristics of the breed are perfectly formed, healthy, active, and tolerates changing conditions well. The head is solid, the legs are strong, the bones are strong, the skin is thin, dense and wrinkles are normal. The size of the flower is mostly average, the luster, silkiness and oiliness of the wool coating are satisfactory. Velvety flowers are well distributed on the head, abdomen and legs. The surface of the skin is large and the quality is often good. During the research, the type of constitution of rams used for breeding at different ages was studied and presented in Table 1 below.

**Table 1. Constitutive types of offspring**

Rams group	n	group n Constitution types, live weight kg % (X±Sx)		
		Strong	Rough	Delicate
Solid Rough Fine In offspring of 7.5-8.0-month-old rams				
Control	21	66,7±7,3	19,0±6,1	14,3±5,4
Experience	34	69,1±5,6	16,2±4,5	14,7±4,3
In offspring of rams aged 17.5-18.0 months				
Control	26	67,9±6,4	18,9±5,4	13,2±4,6
Experience	26	73,0±5,1	16,2±4,3	10,8±3,6

According to the analysis of the data on the constitution types of the offspring, 66.7% of the offspring of the control group at the age of 7.5-8.0 months belonged to the robust constitution type, while this indicator was relatively high in the experimental group. lib, the dominance rate was 2.4%. It was observed that offspring obtained from rams aged 17.5-18.0 months were higher than those of animals aged 7.5-8.0 months. In the control group aged 17.5-18.0 months, the weight of offspring with a strong constitution was 69.4%, coarse 18.9% and thin 13.2%. In the animals of the experimental group at this age, there was an increase in the weight of lambs with a robust constitution (73.0%) and a decrease in the weight of offspring with a coarse (16.2%) constitution and a thin (10.8%). The rams of the experimental group aged 17.5-18.0 months have increased the ability to transfer their genetic potential to generations, and they have a large number of

progeny with a strong constitution, resistant to external environmental factors, viable, healthy and characterized by high productivity characteristics. led to an increase. In the course of the research, the live weight of lambs at birth obtained from sovliks belonging to the Karakol breed of different constitution types was studied and presented in Table 2 below.

**Table 2. Indicators of live weight at birth of Sur Karakol offspring of different constitutional types**

type of constitution	Number of lambs, hea	Live weight, kg	
		X±Cx	Cv
<b>Strong</b>	30	4,53±0,08	12,9
<b>Rough</b>	30	4,21±0,07 x)	12,2
<b>Delicate</b>	30	4,0±0,06 x)	11,3

The data of the table showed that the generations of Karakol sheep belonging to the first type returned high indicators. The live weight of the first type was 4.53 kg, which was 0.32 kg and 0.53 kg higher than the second and third types, respectively. So, the generations of the first strong type have the characteristic of further growth and development, as well as a high level of meat productivity.

It is known that absolute and relative growth indicators are important in studying the growth rate of an organism by age. Depending on this indicator, it is possible to stabilize the increase in live weight in certain age periods, that is, if the increase in live weight in certain age periods slows down, or stops, or goes back, the necessary measures (treatment in case of illness, giving strong feeds, transfer to good pastures, etc.), and the situation will be corrected.

## **DISCUSSION**

Appearance is an important indicator that reflects the constitutional characteristics and productivity of the animal. At the same time, it is important to evaluate the appearance of sheep involved in breeding and breeding, which is reflected in the appearance and habit of the animal. it also reflects their constitution and quality status, allowing to assess its health and economic value. The study of the external appearance of Karakol lambs at birth, their populations

in different ecological zones and the relationship with the level of nutrition has enriched agricultural science [10, 11].

### **CONCLUSION**

In conclusion, as can be seen from all the tables, it can be seen from the research results in Tables 1 and 2 that in Sur Karakol sheep belonging to the 1st constitution types; growth, development, productivity and internal indicators were found to show higher performance than other types. Lambs of this strong constitution type are medium in size and very handsome in body structure, all breed characteristics are perfectly formed, healthy, active, able to withstand changing conditions, strong legs, strong bones, thin skin, dense and thick. volume is normal. This indicates that Karakol sheep belonging to the 1st constitution type have high productivity and quality indicators (wool, skin, meat).

### **REFERENCES**

1. Гигинейишвили Н. С. Племенная работа в цветном каракулеводстве. М., “Колос”, 1976, 190 с.
2. Плохинский Н.А. Руководство по биометрии для зоотехников. Москва. 1969. -256 с.
3. Юсупов С.Ю. Конституциональная дифференциация и продуктивность каракулских овец. Ташкент 2005 256с
4. Boboqulov N.A va boshqalar. “Qorako,,lchilik ilmiy bazalarini shakillanishi va rivojlanishi” Cho,,l yaylov chorvachiligini rivojlantirish va cho,,llanishning oldini olishning ilmiy-amaliy asoslari” xalqaro ilmiy-amaliy konferensiya materiallari. Samarqand-2019 y. 429-bet.
5. Parmanova D.M., Xatamov A.X. “Naslli qoraqalpoq sur qorako,,l qo,,chqorlaridan olingan avlodlarining konstitutsiya tiplari” Cho“l yaylov chorvachiligining rivojlanish istiqbollari Qorako,,lchilik va cho,,l ekologiyasi ilmiy-tadqiqot institutining 90 yilligiga bag,,ishlangan xalqaro ilmiy-amaliy konferensiya materiallari-Samarqand-2020 y. 354-bet.

6. Komiljon, Ismoilov, Aliyev Dilmurod, and Muxitdinov Shavkat. "SUR QORAKO „L QO „YLARINING HAYOTCHANLIGI, MAHSULDORLIGI VA REPRODUKTIV XUSUSIYATLARINI OSHIRISHNING FIZIOLOGIK KO„RSATKICHLARGA BOG„LIQLIGI." *RESEARCH AND EDUCATION* 1.7 (2022): 49-56.
7. Абдумуминова Р.Н., Махмудов К.Х., & Хожиева Л.Х. (2024). ПРЕДОТВРАТИТЬ РАЗВИТИЕ МЫШЕЧНЫХ НАСЛЕДСТВЕННЫХ ЗАБОЛЕВАНИЙ. *PEDAGOGS*, 64(1), 33–38. Retrieved from <https://pedagogs.uz/index.php/ped/article/view/1776>
8. Abdumuminova Ra'no Narbuvaevna, Maxmudov Kamaliddin Xamidovich, & Hojiyeva Laylo Xazratovna. (2024). ONTOGENESIS. HEREDITARY DISEASES IN CHILD DEVELOPMENT. *PEDAGOGS*, 64(1), 39–42. Retrieved from <https://pedagogs.uz/index.php/ped/article/view/1777>
9. Абдумуминова Р.Н., Махмудов К.Х., & Хожиева Л.Х. (2024). ОПРЕДЕЛЕНИЕ АСКОРБИНОВОЙ КИСЛОТЫ В ЛИСТЬЯХ ПЕРСИКА. *PEDAGOGS*, 64(1), 43–46. Retrieved from <https://pedagogs.uz/index.php/ped/article/view/1778>
10. Абдумуминова Р.Н., Махмудов К.Х., & Хожиева Л.Х. (2024). ИЗУЧЕНИЕ ЛЕЧЕБНЫХ СВОЙСТВ ПЕРСИКА. *PEDAGOGS*, 64(1), 47–50. Retrieved from <https://pedagogs.uz/index.php/ped/article/view/1779>
11. Narbuvaevna AR, Karimovich BZ, Mahramovna MM. Improving Food Safety and Improving the Fundamentals of Reducing the Negative Effects on The Environment. *Eurasian Research Bulletin*. 2022;5:41-6.
12. Abdumuminova, R. N. (2017). Requirements of peach to external environmental factors. *Journal of Agriculture of Uzbekistan.-Tashkent*, 8, 40.
13. Norbuvaevna, A. R., Nurmuminovna, G. G., & Rukhsora, M. (2021, August). HYGIENIC ASSESSMENT OF THE EFFECT OF NITRATES ON HUMAN HEALTH. In *Archive of Conferences* (pp. 24-26).
14. Abdumuminova, R. N., Sh, B. R., & Bulyaev, Z. K. (2021). On The Importance Of The Human Body, Nitrates. *The American Journal of Medical Sciences and Pharmaceutical Research*, 3(04), 150-153.

15. Eshnazarovich TB, Norbuvaevna AR, Nurmuminovna GG. RESEARCH OF ECOLOGICAL AND HYGIENE ASPECTS OF AGROFAKTORS AFFECTING HUMAN HEALTH. Web of Scientist: International Scientific Research Journal. 2021;2(08):7-11
16. Mamurova G.N. Makhmudov K.Kh., Abdumuminova R.N., Mukhitdinov Sh.M. Study of environmental and hygienic aspects of soil pollution with heavy metals PROBLEMS OF BIOLOGY AND MEDICINE 2023/2 142 № 1
17. Тухтаров, Б. Э., Абдумуминова, Р. Н., & Гаппарова, Г. Н. (2021). ИНСОН САЛОМАТЛИГИГА ТАЪСИР ЭТУВЧИ АГРОФАКТОРЛАРНИНГ ЭКОЛОГО-ГИГИЕНИК ЖИХАТЛАРИНИ ТАДҚИҚ ЭТИШ. *Scientific progress*, 2(4), 80-86.
18. Тухтаров, Б., Абдумуминова, Р., Наимова, З., Хакимова, Х., & Каримов, А. (2024). Эколого-гигиеническая оценка загрязнения почв тяжелыми металлами и разработка мероприятий по его улучшению. *Каталог монографий*, 1(1), 2–110. извлечено от <https://inlibrary.uz/index.php/monographs/article/view/27813>
19. Abdumuminova R.N., Tursunqulova S.T., & O'tayev B.J. (2024). SHAFTOLINING DORIVOR XUSUSIYATALARINI TADQIQ ETISH. <https://doi.org/10.5281/zenodo.10500696>
20. Abdumuminova R.N., & Annaqulov S. A. Xasanova G. A. (2024). BOLALAR SALOMATLIK HOLATIGA MAKTAB JIHOZLARINING TAЪSIRINI GIGIYENIK BAHOLASH. <https://doi.org/10.5281/zenodo.10500703>
21. R.N. Abdumo'minova, G. A.Vafaxonova, & Y. M.Shakarboyeva. (2024). SHARQIY ZIRABULOQ AHOLISI HUDUDLARIDAGI OCHIQ SUV HAVZALARINING SANITAR-GELMINTOLOGIK HOLATI. <https://doi.org/10.5281/zenodo.10500719>
22. Abdumuminova R.N., Ismoilov Zoxid Yo'ldashevich Isayev G'ulom Bobonazarovich, & Jalolova Shoxida. (2024). ONTOGENESIS. DEVELOPMENT OF SKULL BONES. *UNIVERSAL JOURNAL OF MEDICAL*

<https://humoscience.com/index.php/mc/article/view/2593>

23. Abdumuminova Ra'no Narbuwayevna, Mukhitdinov Shavkat Mukhamedjanovich, & Kholyarova Gulmira Rabbimovna. (2024). INVESTIGATION OF THE MEDICINAL PROPERTIES OF PEACH. In International Multidisciplinary Research in Academic Science (IMRAS) (Vol. 7, Number 02, pp. 86–189). Zenodo. <https://doi.org/10.5281/zenodo.10728635>
24. Абдумуминова Р.Н., Махмудов К.Х., & Хожиева Л.Х. (2024). ПРЕДОТВРАТИТЬ РАЗВИТИЕ МЫШЕЧНЫХ НАСЛЕДСТВЕННЫХ ЗАБОЛЕВАНИЙ. *PEDAGOGS*, 64(1), 33–38. Retrieved from <https://pedagogs.uz/index.php/ped/article/view/1776>
25. Abdumuminova Ra'no Narbuwayevna, Mahmudov Kamaliddin Xamidovich, & Xojiyeva Laylo Xazratovna. (2024). ONTOGENESIS. HEREDITARY DISEASES IN CHILD DEVELOPMENT. *PEDAGOGS*, 64(1), 39–42. Retrieved from <https://pedagogs.uz/index.php/ped/article/view/1777>
26. Абдумуминова Р.Н., Махмудов К.Х., & Хожиева Л.Х. (2024). ОПРЕДЕЛЕНИЕ АСКОРБИНОВОЙ КИСЛОТЫ В ЛИСТЬЯХ ПЕРСИКА. *PEDAGOGS*, 64(1), 43–46. Retrieved from <https://pedagogs.uz/index.php/ped/article/view/1778>
27. Абдумуминова Р.Н., Махмудов К.Х., & Хожиева Л.Х. (2024). ИЗУЧЕНИЕ ЛЕЧЕБНЫХ СВОЙСТВ ПЕРСИКА. *PEDAGOGS*, 64(1), 47–50. Retrieved from <https://pedagogs.uz/index.php/ped/article/view/1779>