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Variability Of Some Selection Parameters of Karakol Sheep in the Conditions of the Sandy Desert

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Abstract. The article describes the results of the study of the variation of some selection parameters of black Karakol sheep depending on the mating types.

Keywords: Karakol ewes, lambs, mating, flower type, length, variability, environmental conditions, genetic stability, persistence.

Relevance of the topic. The Karakol sheep breed was created by the use of many breeds for many centuries, and then by folk selection based on the homogenous mating of appropriate types. As a result, it has become a valuable gene pool characterized by evolutionary formation, ecological adaptation to desert conditions, genetic strengthening, valuable color, variety, and flower characteristics.

The high adaptability of this breed to the extreme conditions of the desert and having sufficient productivity in these conditions caused its spread throughout the world.

Strengthening the heredity of Karakol sheep and increasing its stability is closely related to breeding conditions. If we consider the degree of manifestation of a certain selective trait in a certain environmental condition as one hundred percent, in another environmental condition, this indicator may be 60 percent, and in the third environmental condition, it may be 50 or 70 percent. This situation depends on the response of the animal's genetics to various environmental conditions, that is, to the influence of the external environment. The different response of affected genes to the external environment creates certain and significant levels of modification variability in the expression of traits.

From this point of view, determining the maximum and minimum levels of symptoms in Karakol sheep, taking into account different environmental conditions, is an urgent problem. Finding its solution depends to a large extent on the organizational conditions created to carry out selection-breeding work at a high level in the field. In this regard, it is appropriate to emphasize the decrees and decisions adopted by the state and government of Uzbekistan.

The level of study of the topic. In the desert and semi-desert regions, under the influence of the external environment, that is, different ecological conditions, the genotype of Karakul sheep undergoes a certain level of phenotypic and genetic changes. The optimal limits of this variability for each ecological region allow to determine the genetic stability of sheep traits. Researching this is important for animal husbandry.

It is known that phenotypic variability depends on the influence of genotypic diversity and paratypic factors. (M.A. Koshevoy, 1975; T.O'. Umurzakov, 1992). When evaluating pedigree animals, the more characters there are, the greater the opportunity for selection and mating, and the decrease in the efficiency of selection is observed. S.Yu.Yusupov, U.T.Fazilov, A.Gaziev (2009), A.Gaziev, U.T.Fazilov (2019) researches through targeted selection of Karakol lambs by wool-fiber coat silkiness, gloss, pigmentation level and length. It has been proved that it is possible to increase the quality of blackberry products to 12.5-15.0%.

The purpose of the study is to study the levels of expression of important floral indicators based on the use of effective methods in the breeding of black-colored Karakol sheep in Kyzylkum conditions.

Research address, source and methods. The researches were carried out in Karakol sheep belonging to high classes of black purebred bred in "Jongeldi" LLC of Bukhara region.

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Zootechnical and statistical methods were used in the performance of works. Evaluation of selective traits in lambs was carried out according to the "Manual for conducting breeding work and evaluation (auditing) of lambs in cattle breeding" (S. Yu. Yusupov et al., 2015).

The degree of manifestation of signs was determined using the statistical method by determining the average arithmetic index ($\bar{X}$), its error ($S\bar{x}$), and the coefficient of variation (Sv) (N.A. Ploxinskiy, 1969).

Research results. In the studies, the levels of expression of the following important selection characters were studied in the offspring obtained from different mating options.

Proportion of flowers. This indicator is one of the important selection indicators, and the increase in the level of homogeneity at the level of the lamb's skin increases their breeding value. The results of research conducted in this direction are presented in Table 1.

Table 1

Proportion of flowers in generations in different variant matings

Pairing option		n	Flower ratio, % ($\bar{X}$±$S\bar{x}$)				
			pencil flowers			grain	yolgul
♂	♀		semi-circle	ribbed	flat		
Semicircle	x Semicircle	45	57,8±7,36	11,4±4,73	12,1±4,86	18,7±5,81	-
Semicircular	x Ribbed	40	34,2±7,50	33,1±7,44	-	11,6±5,06	21,1±6,45
Semicircle	x Osikgul	32	2,5±2,76	2,8±2,92	1,5±2,15	61,8±8,59	31,4±8,20
Ribbed x Osikgul		33	22,4±7,26	41,4±8,57	-	31,2±8,06	2,9±2,77

The obtained results show that homogenous mating of sheep by flower type ensures an increase in the proportion of flowers characteristic of this type in the obtained generations. In this case, it was found that the weight of semicircular pencils (57.8±7.36%) and single flowers (18.7±5.81%) can be increased to 76.5% by homogenous mating of semicircular pencil type sheep. The use of rib-type rams in the selection process ensures an increase in rib-shaped flowers (34.2±7.50%) and single flowers (21.1±6.45%) of this type, as well as a certain improvement in the quality of flowers in the offspring obtained from osikgul-type rams. was recorded.

The length of the flowers. This indicator is also one of the important signs, and the length of the flowers significantly increases the market value of sheep's breeding and black sheep skins. Taking into account this situation, during the research, the scope of the influence of the mating of the cows in different variants on the length of the flower of the offspring was studied (Table 2).

Table 2

Flower length of the resulting offspring

Pairing option		n	Flower length, % ($\bar{X}$±$S\bar{x}$)		
			long	medium	short
♂	♀				
Semicircle	x Semicircle	248	53,6±3,17	33,5±3,00	12,9±2,13
Semicircular x Ribbed		169	54,5±3,83	32,5±3,60	13,0±2,59
Semicircle x Osikgul		156	48,7±4,00	37,8±3,88	13,5±2,74
Ribbed x Osikgul		178	31,5±3,48	45,5±3,73	24,0±3,20

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Based on the mentioned results, it can be said that the use of sheep belonging to semicircular pencil flower and rib-shaped types in the selection process leads to a significant lengthening of flowers in the obtained generations.

Results similar to the mentioned data were also observed in terms of flower width, firmness, and location on the skin surface.

It can be concluded that a certain degree of variability of flower shapes and length is observed when mating sheep in different variants according to flower indicators. Manifestation of these indicators increases in homogeneous mating by flower type, decreases in heterogeneous mating.

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