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CORRELATION OF SOME TRAITS IN OFFSPRING WHEN MATING KARAKOL SHEEP IN DIFFERENT VARIANTS ACCORDING TO THE PATTERN OF FLOWER ARRANGEMENT

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Abstract
Studying the intercorrelation of important selection traits in generations when mating Karakul sheep in different variants according to the arrangement of flowers.

Keywords: Karakul sheep, lambs, homogenous and heterogenous mating, forms of offspring, picture of location of flowers, length, wool fiber length, durability of flowers, wool-fiber quality.

Introduction

Relevance of the topic. The main product of Karakul sheep is karakul skins. In recent years, changes in market demand for karakul products have necessitated changes in selection processes. The selection process in Karakul breeding is carried out according to many characteristics. Naturally, in such conditions, it becomes difficult to achieve selection efficiency in a short time. Therefore, there is a need to simplify this process. To achieve this goal, it is important to study the degree of correlation between traits and, on this basis, identify important traits that affect other traits and conduct selection and mating based on these traits.

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A number of studies have been conducted by scientists in this direction.

X.E.Matter (1967; 1975) studied the relationship between flower size and wool length in 634 Karakul lambs in the Republic of South Africa. As a result, it was noted that the correlation (r) between the recorded characteristics was 0.547 in tubular lambs, 0.505 in ribbed lambs, and 0.563 in flat lambs.

Studies by S.I. Shuman (1975) revealed a strong negative correlation between the length of the wool fiber and the arrangement of flowers (r=-0.509), a weak correlation between the pattern of flowers and the silkiness of the wool fibers (r=0.202), and a very insignificant correlation between the length of the wool fiber and the silkiness (r=0.202).

A. Gaziyev (1989); A. Gaziyev (2001) in the process of studying the genetic correlations of traits in black Karakul sheep, found that the correlation between these indicators is 0.29 between the length of the wool fiber and live weight, 0.25 with the pattern of flower arrangement, 0.24 with the thickness of the skin tissue, and 0.34 with the length of the flowers.

A. Akhmetshiyev (1989) studied the correlations of important selection traits, and he emphasized that there is a reliable positive correlation between the arrangement of flowers and the length of the wool fiber.

According to the research of S. Yusupov, A. Gaziyev (2016), skin thickness is correlated to a certain extent with important characteristics, and a relationship was observed between skin thickness and live weight (0.43-0.47) and wool-fiber length (0.33-0.41). The results show that regardless of the breeding area, thickening of karakul skins leads to increased skin weight and lengthening of the wool-fiber cover or conversely, when the skins become thinner, their weight decreases and the wool fibers shrink. In the latter case, the quality of the skin improves.

A.Gaziyev, S.Yusupov (2020) studies revealed statistically significant (P<0.005; 0.001) correlations between flower, wool-fiber quality, color, and variegation. It was noted that the correlation coefficients of 0.36-0.48 with flower length, 0.38-0.47 with arrangement pattern, 0.35-0.38 with wool-fiber quality, and 0.61 with color expression among other important characteristics make it possible to simplify the selection process by directing selection work to one of their desired characteristics.

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In the studies of D.T. Rizayeva, A. Gaziyev (2021), it was found that the type and shape of the flower of the mothers have a uniform effect on the type and shape of the flower in the offspring (r=0.48; P<0.001), flower length (r=0.53; P<0.01), and flower strength (r=0.61 P<0.01). It was observed that this characteristic of the mothers has a moderate correlation (r=0.38-0.43) with the flower pattern, hair length, silkiness, luster, pigmentation, and skin thickness of the offspring.

The aim of the study was to study the correlation of important selection traits in offspring obtained from different matings of black Karakul sheep according to the flower arrangement pattern.

Research Source and Methods

The research was conducted on black Karakul sheep bred at the "Muborak" breeding LLC in the Kashkadarya region. Parallel-concentric and parallel-straight pattern rams were mated with parallel-concentric, parallel-straight and mixed pattern ewes, and the levels of manifestation of these indicators in the resulting offspring were studied. Selection evaluation of lambs was carried out based on the "Manual for conducting breeding work in Karakol breeding and evaluating lambs (make banitrovka)" (S.Yu. Yusupov et al., 2015). The obtained data were processed using variational statistical methods (N.A. Plokinsky, 1969; G.F. Lakin, 1968).

Research Results

Correlational relationships are not absolute, but provide guidance for natural and artificial selection. Genetic correlation (caused by the association of genes or their pleiotropic effect), paratypic correlation (the response of related traits to important conditions), phenotypic and other correlations are distinguished. Correlation is observed for qualitative (morphological) and quantitative traits. Polygenes controlling the development of quantitative traits can be in single linkage groups and have complex inheritance. Genetic correlation problems are studied using genetic-mathematical methods, in particular, covariance analysis.

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The table below shows the correlation between the pattern of flower arrangement on the skin of black Karakul lambs and important selection traits.

Table 1 Correlation of flower arrangement pattern with some selection traits

juftlash		Avlodlar bosh soni	Gul uzunligi	Gul kengligi	Gul mustah kamligi	Gul tipi	Jun-tola sifati
♂	♀						
PK	PK	270	0,4±0,003 x)	0,4±0,05 x)	0,15±0,06x	0,3±0,06 x)	0,16±0,06x
	PT	145	0,14±0,08 x	0,2±0,08 x)	0,23±0,08 x)	0,4±0,07x)	0,2±0,08 x
	A	120	0,36±0,08 x)	0,42±0,07x)	0,42±0,07x)	0,4±0,08x)	0,35±0,08 x)
PT	PK	175	0,35±0,06 x)	0,24±0,07x)	0,26±0,07x)	0,25±0,07x)	0,52±0,06x)
	PT	142	0,38±0,07 x)	0,58±0,06x)	0,2±0,08 x	0,47±0,07x)	0,38±0,07 x)
	A	110	0,61±0,06 x)	0,33±0,08x)	0,6±0,06 x)	0,44±0,08x)	0,4±0,08x)

x-P<0,05; x)-P<0,001

The results of the study show that in the progenies from Group 1, there is a moderate positive correlation between flower shape and flower length (r=0.4) and a similar moderate positive correlation between flower width (r=0.4).
In group 5, i.e., in the offspring obtained from the (PTxPT) mating, it was found that there was a coefficient between flower shape and flower length (r=0.38), between flower width (r=0.58), between flower type (r=0.47), and between wool-fiber quality (r=0.38).

Conclusion

The importance of correlations in Karakul breeding is that in this case, the selection of sheep at birth is carried out according to more than 20 characters. Homogenizing sheep as much as possible enhances the influence of heredity on their manifestation and increases the level of genetic stability of valuable characters in generations. As a result of studying the topic, it can be concluded that if selection is carried out in generations based on the arrangement of flowers, we can observe that the resulting generations will improve flower length, width, flower type, and fiber quality, but flower strength may decrease slightly.

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Foydalanilgan adabiyotlar.

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