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Equality of Coloring of the Karakalpak Sur Lambs Obtained From Different Selection Types

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Abstract: According to the parents chosen for this trait, the article's research materials on the investigation of the uniformity of coloration in Karakul lambs of the Karakalpak sura pedigree type are presented.

Keywords: Karakul sheep, lambs, color uniformity, color intensity, contrast, Karakalpak sur, selection, selection.

Relevance of the topic. The harshness, contrast, and evenness of colors are the primary determinants of the value of Karakul sheep with sur colour. Equality holds a unique position among them. Its significance comes from the fact that, even with strong expressiveness and contrast, the animal and commercial karakul are scored poorly if the indicator of uniformity of coloration over the area of the lamb's skin is not the same.

The expression of color uniformity, like other breeding qualities, follows correlation rules, meaning that different attributes have variable degrees of influence on how it appears. It should be noted that the uniformity of hair length, the uniformity of curls on the skin's surface, and other factors, in particular, have a significant impact on color uniformity. The degree of color uniformity is worsened by the significant degree of curl heterogeneity and the unequal distribution of hair length over the surface of the skin.

As you are aware, one of the reasons why karakul lambs are of lower quality than black ones is the length of their hair. According to some sources (N. P. Roldugina, 1966; V. I. Stoyanovskaya, 1972; 1975), the length of hair within the range of hues and colors changes according to the strength of pigmentation; for dark hair, the length is shorter, and for light hair, it is longer. This topic has not been adequately researched in regards to animals of the Karakalpak sur. There are statistics on the length and degree of hair lightening of the Karakalpak sur of the colors of the apricot flower and the sunset in R. U. Turganbaev's (1993) investigations, but there are no studies on the link of the hair length with other breeding features, particularly with color evenness.

In light of the aforementioned, it should be noted that study of this kind using sheep from the Karakalpak sur is pertinent.

Purpose of research. The aim of the study is to investigate the characteristics of the expression of color evenness in sur-colored Karakul lambs that were chosen from a variety of candle flame and steel color parents.

Place, object and research methods. At the Scientific Breeding Experimental Station, which is situated in the Takhtakupir region of the Republic of Karakalpakstan, experiments were conducted on Karakul sheep of the Karakalpak sura. According to the "Instructions for conducting breeding work in astrakhan breeding and evaluation (grading) of lambs" (S. Yu. Yusupov et al., 2015), the evaluation of lambs was done using karakul-specific traits and digital material was processed using N. A. Plokhinsky's approach (1969).

Research results. It should be mentioned that while choosing Karakul sheep with different colorations, color evenness is crucial. It's crucial to take into account this indicator in sheep from the Karakalpak sur, which have a distinct contrast in the transition between their pigmented base and their depigmented tip. At the same time, the length of the depigmented hair might fluctuate, which worsens the color homogeneity throughout the skin's surface and causes variegation to varied degrees, which is not ideal.

In light of the aforementioned, we performed research to examine the uniformity of the coloring of lambs resulting from homogenous and heterogeneous selections of flame candle and steel color parents. The table a displays the outcomes.

Table 1. Evenness of coloring of lambs

Selection options		Got lambs, goal	Of them, % (X±Sx)		
♂	♀		equalized	insufficiently balanced	not equalized
candle flame	Steel-blue	48	56,2±7,15	18,8±5,63	25,0±6,24
Steel-blue	Steel-blue	72	75,0±5,09^{x}	11,1±3,70	13,9±4,07

X-P<0,05

The data gathered during the research demonstrate a considerable impact of the types of parents chosen on the color uniformity of the children. In this instance, a homogenous selection of steel-colored animals (75.05.09%) produced more lambs with even coloring than a heterogeneous selection of "candle flame x steel" (56.27.15%). The superiority of homogenous selection in this indication is also statistically significant (P 0.05), it should be highlighted. The production of lambs with inadequately equalized and imbalanced colors decreases with uniform selection, it should be highlighted. This combination results in a slight decrease in the yield of lambs with equalized colors, which should be taken into consideration in breeding work with sura sheep of the Karakalpak breed type. This incompatibility of mated sheep of the colors of candle flame and steel, in our opinion, is the cause of these results.

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