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Features of the Manifestation of Coloring in the Lambs of the Karakalpak Sur

PhD, Urimbetov A. A [1], Gaziev A.[2]

[1] Doctoral student, doctor of agricultural sciences, Samarkand, Republic Uzbekistan

[2] Doctor of agricultural sciences (DSc)., Senior Researcher, Research Institute of Karakul and Desert Ecology, Samarkand, Republic Uzbekistan

Abstract: The article highlights research materials in the direction of studying the characteristics of the manifestation of colors in lambs, depending on the selection of parents for this trait. Established similarities and differences in the manifestation of colors with different selection options.

Keywords: Karakul sheep, lambs, coloring, colouration, hereditary factor, selection, selection, breeding, inheritance, stability, variability.

Introduction. The Karakalpak sur is one of the most valuable genotypes of the Karakul sheep breed. In the structure of sheep of this color, there are such original colors as the flame of a candle flame (shamchirok), stell-blue (poolaty), apricot flower (uruk-gul), sunset (kambar) and others, which, due to their nobility and beauty, are in high demand on the domestic and foreign markets.

It is difficult to understand the coloring of this color on the investigation and it is too difficult to establish a definite cause. On this occasion, when breeding sheep and taking selection and selection, there is a great variability in the manifestation of colors.

In the studies conducted by A. S. Akhmetshiev (1989), with a homogeneous selection of sheep, the following distribution of lambs of parental color was observed: “stell-blue x stell-blue ” - 83.6 ± 3.3%; “candle flame x candle flame” -89.3±2.5%; "apricot flower x apricot flower" -78.7±4.0%.

The same rebounds of a homogeneous nature, carried out by R.U. Turganbaev (2017) gave somewhat different results. In this case, with a homogeneous selection of sheep of the color of the candle flame in the offspring, the yield of lambs of the parent color was 71.6%. These indicators in the offspring of the parents of the apricot flower were at the level of 68.5%, poolaty - 71.5%, kambar - 65.9%.

Similar results with the data of R. U. Turganbaev can be observed in the studies of A. Kh. Khatamov (2019) and other researchers.

In connection with the foregoing, research on the inheritance of colors of Karakul sheep of the Karakalpak sur remains relevant and in demand.

The study purpose. The aim of the study is to study the features of the manifestation of the colors of the Karakalpak sur in offspring obtained from homogeneous and heterogeneous variants of the selection of parents for this indicator.

Place, object and research methods. The studies were carried out on Karakul sheep of the Karakalpak sur, bred at the Scientific Breeding Experimental Station, located in the Takhtakupir region of the Republic of Karakalpakstan. The evaluation of lambs was carried out according to the “Instructions for conducting breeding work in astrakhan breeding and evaluation (grading) of lambs” (S. Yu. Yusupov et al., 2015), processing of digital material according to the method of N. A. Plokhinsky (1969).

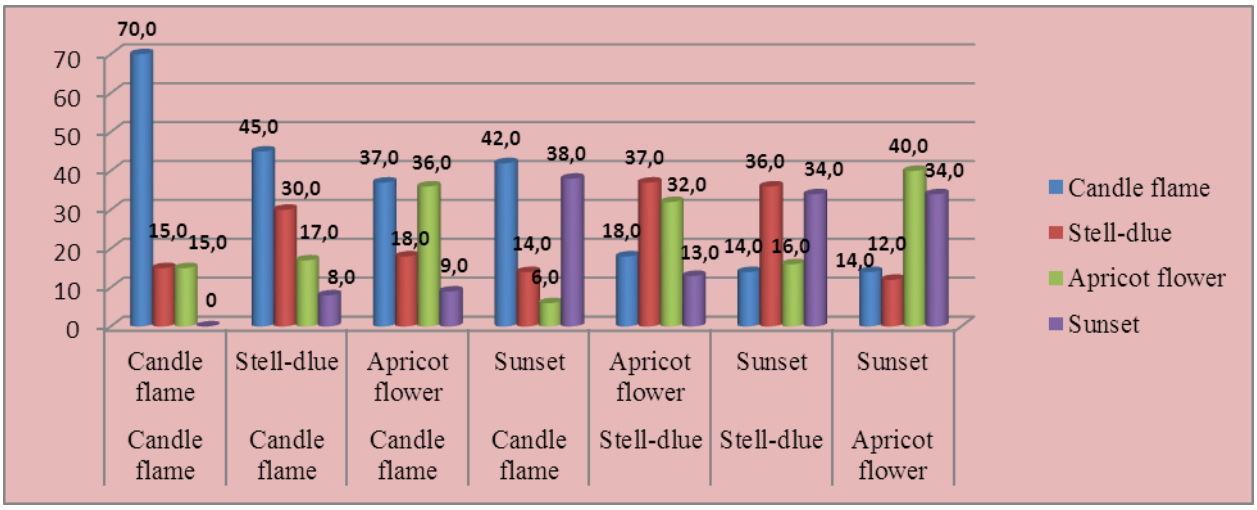
Research results. Coloring is considered one of the important traits in the selection of Karakul sur sheep. Its vivid expression determines the value of the animal and commercial karakul. The transmission of this trait from parents to offspring occurs according to the laws of inheritance of quantitative traits, i.e. even with a homogeneous selection, splitting into different colors occurs.

In the conducted studies, the degree of manifestation of colors was studied with different options for selecting parents on this basis.

The results are shown in table 1.

Table 1. The manifestation of colors in lambs

Selection options		Received lambs, head.	Distribution of lambs by colouration, % (X±Sx)			
♂	♀		Candle flame	Stell-blue	Apricot flower	Sunset
Candle flame	Candle flame	100	70,0±4,58	15,0±3,57	15,0±3,57	-
Candle flame	Stell-blue	100	45,0±4,97	30,0±4,58	17,0±3,75	8,0±2,71
Candle flame	Apricot flower	100	37,0±4,82	18,0±3,84	36,0±4,8	9,0±2,71
Candle flame	Sunset	100	42,0±4,93	14,0±3,46	6,0±2,37	38,0±4,85
Stell-blue	Apricot flower	100	18,0±3,84	37,0±4,82	32,0±4,66	13,0±3,36
Stell-blue	Sunset	50	14,0±4,90	36,0±6,78	16,0±5,18	34,0±6,69
Apricot flower	Sunset	50	14,0±4,90	12,0±4,59	40,0±6,92	34,0±6,69



Picture 1. The manifestation of colors in lambs

Studies have found that a homogeneous selection as a whole provides an increase in the yield of lambs with a parental trait. At the same time, such an increase in the selection of "candle flame x candle flame" reaches 70.0 ± 4.57%, the transition to heterogeneous selection leads to a decrease in the yield of such lambs to 37.0-45.0%. The selection of a heterogeneous character provides an increase in the variability of the splitting of other colors.

Based on the results of the studies, we can conclude that when choosing parents, although the bulk of the offspring have a parental trait, there is a certain splitting of other colors, which should be taken into account in breeding work.

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