Sur Color Expression and Transition Sharp in Sur Colored Lambs of Karakul

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Annotation: The article describes the data obtained on the skin surface of the Saribel plant type and the local population of red-colored karakul lambs on color expression and transition intensity.

Key words: Karakul sheep, lambs, variety, color expression, color transition intensity, selection trait, variability, level of reliability.

Introduction. Karakulsheeping is a unique field that develops in severe extreme desert areas, the main product of which is karakul leather, which is characterized by different flower shapes, colors and shades, and high-quality fur characteristics.

Kara karakul sheep of the Bukhara breed of the Karakul breed is one of the most valuable color groups of the breed, and the demand for karakul products of this color is high in the domestic and foreign markets. In this regard, the effective use of the potential of these colored sheep, improving the quality of the product and expanding the range is one of the pressing issues. At the same time, color expression and color intensity in sheep are important indicators of skin quality.

Materials and methods. The research was carried out at the Yangikazgan Nurli Diyor Limited Liability Company in Konimex district of Navoi region in the Saribel plant-type flat-rooted (experimental) and semi-circular black-robed (control) karakul sheep of the local population. In the study, the selection of karakul sheep, individual assessment of the obtained offspring was carried out on the basis of "Guidelines for breeding (assessment) of lambs in karakul" (Yusupov S.Y. et al., 2015). The data obtained were processed using variational statistical methods (Ploxinsky N.A., 1969; However G.F., 1968). In this case, the average value of the characters ($\overline{X}$), its error ($S\overline{x}$), variability (Cv), reliability criteria of specific indicators (td, P) were determined.

Results and their analysis. In the study, color expression and color transition intensity indicators, which are considered to be important selection traits of lambs obtained, were studied.

Expression of Sur color. This indicator is determined by the fact that the color of the sur creates a clear appearance at the level of the lamb skin, and it is one of the main selection indicators of lamb breeding and product marketability. The low expression of the color weakens the appearance of the sur color and as a result the pedigree of the sheep and the qualitative value of the product decreases. In this context, the noted importance of this mark is justified and should be taken into account in the selection process.

Based on the above considerations, the levels of expression of this trait in different groups of sheep breeds were studied during the study. The data obtained are presented in Table 1.

Table 1. Expression of sur color in generations

Groups	n	Expressionofcolor in generations, %, ($\overline{X}\pm S\overline{x}$)		
		excellent	medium	low
Experiment	50	$54,0\pm7,04^{x)}$	$42,0\pm6,97$	$4,0\pm2,77^{x)}$
Control	50	$36,0\pm6,78$	$48,0\pm7,06$	$16,0\pm5,18$

P<0,001;

The results of the study show that the offspring from the experimental group have significantly superior performance over the control group offspring in terms of excellent expression of the sur color. This advantage was found to be 18.0% in the experimental group and 5.0% in the control group lambs on average. It was observed that the experimental group also had a significant advantage in terms of lamb weight with low color expression from the control group. If the weight of such generations was 4.0% in the experimental group, this figure proves our opinion that it is 17.0% in the control group. In all cases, the mutual differences were statistically highly reliable (R <0.001).

The observed superiority of the indicator under analysis can be explained mainly by two reasons. The first and most important is the purposeful selection work carried out by the experimental group, and the second is that in the curl of flat-shaped flowers, the tip of the wool fiber does not penetrate to the bottom of the flower circle like a semicircle.

Color transition intensity. One of the important selection indicators is that its intensity depends on the sharp difference in the pigmentation of the lower and third parts of the wool fiber. The hereditary and commodity properties of lambs and astrakhan skins with high color transition intensity are highly valued.

Studies aimed at studying the breeding potential of sheep on the manifestation of this important selection trait were conducted, and the results obtained are summarized in Table 2.

Table 2. Transition intensity of sur color in generations

Groups	n	Color transition intensity%, ($\overline{X}\pm S\overline{x}$)		
		high	medium	low
Experiment	50	$66,0\pm6,69^{x)}$	$28,0\pm6,34$	$6,0\pm3,35^{x)}$
Control	50	$54,0\pm7,04$	$34,0\pm6,64$	$12,0\pm4,75$

P<0,001;

The results show that, in general, this indicator was well demonstrated in the offspring of experimental and control group sheep. However, the differences observed across groups indicate the hereditary characteristics of the sheep to which they belong. Analysis of intergroup indicators suggests that there are significant differences. It was noted that the weight of lambs with abrupt color transition intensity averaged 66.0% in the experimental group, while in the control group this feature was significantly lower (54.0%). The statistical reliability of the differences is high (R <0.001).

It should be noted that sheep belonging to the experimental group also have a clear advantage in terms of the weight of offspring, in which the intensity of color transition in different groups is insignificant. This difference was 6.0% (R <0.001) in the experimental group compared to the control group, indicating that the experimental group of sheep had a high pedigree.

Conclusion. In Saribel factory type sur karakul sheep, it was found that the excellent color rendering was 18% higher than in the control group, and the sharpness of color transition was 12% higher. This allows the use of high-breeding characteristics of factory-type sheep to improve the average performance of the farm.

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