

One of the main indicators in standardized feeding is the calcium and phosphorus indicators. As usual in roughage, the calcium content exceeds phosphorus. Similarly, in this feed, the calcium content is 9.0 and phosphorus 1.0 g/kg.

Conclusions. The obtained data on the nutritional value and mineral composition of wormwood hay can be used to formulate complete rations in pasture livestock farming.

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INHERITANCE OF SELECTION TRAITS OF KARAKUL SHEEP WITH VARIOUS SELECTION OPTIONS

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Abstract. Our findings revealed that the inheritance of gray and black fur colors across the different selection options occurred in a consistent ratio. In the first selection variant (a gray ram with even silver marking ♂ x a black jacket fur type ewe with intense pigmentation ♀), the proportion of gray offspring was 50.6%. Similarly, in the second selection variant (a black jacket fur type ram with intense pigmentation ♂ x a gray ewe with even silver marking ♀), the proportion of gray offspring was 49.6%. The percentage of black lambs obtained in both selection options was nearly equivalent, with 49.4% and 50.4% in the first and second variants, respectively.

Keywords: black and gray color, classiness, rams, ewes, fur types, curl width, curl length.

In the last century, each intra-breed type of the Karakul sheep breed was characterized by its numbers as a super population and rich genetic diversity. Today, the genetic diversity in the gene pool of the breed has been significantly depleted, and the Karakul breed is represented mainly by only 2 small populations of different colors - black and gray. Consequently, in such situations, genetic progress in breeding activities will be relatively insignificant, especially since they may disappear in the future. Therefore, the preservation and rational use of the existing genetic resources of black and gray Karakul sheep is of particular breeding importance.

In this regard, a problem arises that requires new approaches to solving a number of scientific and practical issues of selection, in particular, selective and genetic improvement of animals based on the selection and selection of the best genotypes.

In particular, the development of new methods for the selection and selection of selectively significant animals increases the efficiency and rational use of the gene pool of the Karakul sheep breed of gray color.

The gray color of Karakul sheep belongs to the category of complex colors and is formed as a result of mixing white and black hair in quantity, length and degree of pigmentation.

Analysis of the results of inheritance of gray color depending on the type of selection for color and coloring of parents of different populations shows that the indicators reflect hereditary predisposition to color and coloring [1, 2, 3, 4, 5].

Material and research methods. The experimental part of the work was carried out in the basic farm "Kumkent" of the Sozak district of the Turkestan region, the Republic of Kazakhstan. To conduct the research, 2 selection options were formed: Type I selection - heterogeneous mating (♂ gray color with equalized silver coloring x ♀ black coloring of the jacket astrakhan type with intense pigmentation); Type II selection - heterogeneous mating (♂ black coloring of the jacket astrakhan type with intense pigmentation x ♀ gray coloring with equalized silver coloring).

Results of the research. In the first variant, where a grey sire with equalized silver coloring was used, the specific weight of jacket-type lambs on black ewes was 75.7%. There is no reliable difference in the yield of jacket-type astrakhan lambs between the selection variants. In the first selection variant (♂ grey with equalized silver coloring x ♀ black jacket-type astrakhan with intense pigmentation), the yield of ribbed and flat astrakhan lambs was 15.6 and 3.3%, respectively. And in the second selection variant (♂ black jacket-type astrakhan with intense pigmentation x ♀ grey with equalized silver coloring), these figures were 14.0 and 2.5%, respectively.

Inheritance of gray and black colors in the given variants of selection by colors in a uniform ratio. In the first variant of selection, where a gray ram was used, the proportion of gray offspring was 50.6%. In the second variant, where a black ram with intense pigmentation was used, this figure was 49.6%. The yield of black lambs in both variants of selection was - 49.4% of lambs were obtained in the first variant, and in the second - 50.4%. It should be noted that the obtained data once again prove the pattern of the ratio of gray and black lambs 50:50, with heterozygous selection by color of gray and black parental pairs.

It was found that in the first variant of selection 64.2% of the offspring inherited silver color, and in the second - 66.7%. Here, there is an insignificant difference in this indicator between the variants, and amounted to 2.1%. It should be noted that the high heritability of the silver color in both selection options is the result of long-term and intensive selection. In both selection options, lambs with normal color expression were obtained from 63.0 to 66.9%. Here, a high proportion of lambs with the desired intensive expression was obtained in the first selection option, where a gray-colored sire ram with equalized color was used and amounted to 28.8%, and in the second selection option this figure was 26.7%. In both selection options, the number of lambs with weakened expression was less (from 6.4 to 8.2%).

The proportion of lambs with the desired equalized color in both variants was obtained from 79.9 to 80.8%. Lambs with uneven color were obtained in the range from 19.2 to 20.3%.

In general, the studies showed that the desired silver color has fairly high rates of expression and uniformity, ensuring the beauty and value of gray karakul.

Based on the analysis of complex selection indicators of lambs and taking into account their breeding value for selection, their class was determined. In the selection option, the proportion of elite + class I lambs was 91.7%. And in the second selection option, this figure was 91.1%. Between the selection options for the output of elite + class I lambs, the statistically insignificant. However, there is an insignificant difference in the output of class I lambs between the selection options - 2.2%. In both selection options, the yield of undesirable class II lambs was low and amounted to 8.3 and 8.9%, respectively.

It was found that in the first selection option, 13.2% of the offspring were lambs with a long curl. And in the second option, this figure was 12.7%. A high proportion is observed in lambs with an average curl length and is 70.8 and 69.9%, respectively, for the options, and the proportion of lambs with a short curl length is 16.0 and 17.4%.

From the data obtained, it is clear that in both selection options, from 83.1 to 83.5% of lambs were obtained with an average curl width. These are the highest indicators for the yield of lambs compared to lambs by curl width. Here, the proportion of lambs with a large curl size is from 12.3 to 13.2%, respectively, for the selection options. The proportion of lambs with a small curl size turned out to be very low, and accordingly, according to the selection options, it was 3.7 and 4.2%.

The quantitative ratio of black and white hair of lambs obtained in the selection options was studied. In gray lambs obtained from the first option, the ratio of white and black hair was, therefore, 51.9: 48.1. In gray lambs of the second option, the ratio is 52.6: 47.4.

In the first selection option, where a gray-colored stud ram with an equalized silver color was used, the proportion of lambs with the desired parallel-concentric pattern was 60.1%, and in the second selection option, where a black-colored stud ram with intense pigmentation was used, this figure was 61.9%. The difference between the selection options in the yield of lambs with this type of pattern was insignificant and amounted to 1.8%.

In both selection options, the lowest number of parallel-straight type of pattern was noted (4.6-4.9%). Lambs with undesirable mixed type of pattern in both selection options were obtained from 33.5 to 35.0%. Thus, the results of the conducted studies allow us to conclude that both the pattern of the arrangement of curls and their size are hereditary traits, they are closely related to other astrakhan qualities of karakul and therefore should be taken into account when selecting lambs, especially their breeding part.

It was found that grey lambs have high hair quality indicators, in particular silkiness and shine. Thus, in the first selection option, the percentage of lambs with very silky hair was 44.0%, normally silky 48.1%, with strong and normal hair shine - 44.9 and 45.7% of the lambs studied. In the second selection option, where a black

sire ram was used, the ratio of lambs with very silky hair was 43.2%, normally silky 49.2%, with strong and normal hair shine - 44.9 and 49.6%. The data obtained show that there is a strong positive correlation between silkiness and shine of the hair of Karakul lambs.

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ТУРЛИ ЖУФТЛАШ ВАРИАНТЛАРИДАН ОЛИНГАН АВЛОДЛАРНИНГ СИНФЛИК ТАҚСИМЛАНИШИ

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Аннотация. Мақолада турли турли йирикликдаги қорақўл қўйларини жуфтлаш хусусиятлари ҳамда авлодларининг синфлилик кўрсаткичларини ўрганиш бўйича олинган натижалар ёритилган.

Калит сўзлар: қорақўл қўйлари, қўзилари, гавда йириклиги, авлодлар синфи.

Кириш. Қорақўлчиликда қўйларнинг ўсиш ва ривожланиш даражалари уларни урчитиш ва селекциялаш жараёнида муҳим аҳамият касб этади. Гавдаси йирик бўлган қўйлардан йирик жуссали қўзилар туғилиши маълум тадқиқотларда аниқланган, лекин унинг чегаралари унчалик маълум эмас.

Охирги йилларда соҳада хўжалик юритиш шакллари ва бозор талабининг ишлаб чиқарилаётган махсулотга нисбатан ўзгариши, ишлаб чиқаришни модернизациялаш талаблари, қорақўлчиликда ҳайвонларни селекциялашни такомиллаштириш асосида янги самарали усулларини яратишни тоқазо этмоқда. Ҳозирги кунда турли хил экологик шароитга яхши