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WOOL PRODUCTIVITY OF KARAKALPAK SUR SHEEP

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Abstract:

This article presents conclusions based on experimental data on wool productivity of Karakalpak sur sheep. A comparison is made and conclusions are drawn regarding the wool productivity and wool yield of lambs with Shamchiraq-gul coloration versus lambs with Uryuk-gul coloration

Keywords: Sur sheep, wool productivity, coloration, wool quality, quantity, wool yield.

INTRODUCTION. Karakul sheep occupy a leading position among coarse-wooled breeds raised in Uzbekistan in terms of wool productivity and wool production.

When studying the wool productivity of Karakul sheep and the qualitative and quantitative indicators of wool, based on the opinions and findings of numerous scientists in this field, it can be concluded that wool productivity depends on many factors.

In general, according to the biological characteristics of sheep, their wool coat performs a protective function and is the main means of defense against unfavorable conditions, namely heat and cold, as well as mechanical impacts.

Regarding the number of Karakul sheep, if the total number of sheep in the republic is taken as 100%, then approximately 65-70% are Karakul sheep, which occupy a leading position in the republic compared to other breeds. Therefore, the volume of coarse wool production for the light industry is quite substantial.

In general, according to the biological characteristics of sheep, their wool coat performs a protective function and is the main means of defense against unfavorable conditions, namely heat and cold, as well as mechanical impacts.

Karakul sheep are distinguished by the following wool fibers based on their morphological characteristics: down, intermediate wool, guard hair, dry wool, and dead wool [2. pp. 18-20], [4. pp. 34-41]. The color of sheep also plays an important role in the formation of wool fiber and increasing wool productivity of Karakul sheep.

It is emphasized that wool productivity is one of the main factors directly related to the individual characteristics of sheep, that is, their constitutional type. Such opinions and findings are supported by many scientists in the field, who emphasize that wool productivity depends on the color of the sheep, environmental conditions, their belonging to a certain fleece type, constitutional types, feeding technology, wool density on the skin, and many other factors.

Karakul sheep are mainly sheared twice a year. After shearing, wool fibers grow rapidly due to improved skin respiration and metabolism.

Cooling of the ambient temperature accelerates the growth of sheep's wool. Spring wool yield is significantly higher than autumn wool yield.

PURPOSE OF THE RESEARCH. The aim of the research is to develop methods for increasing the wool productivity potential of Sur Karakul sheep of the Shamchiroq-gul and Uryuk-gul color varieties of the Karakalpak breed type.

THE OBJECT OF THE RESEARCH consists of karakul wool samples from Sur Karakul sheep of the Karakalpak breed type, specifically of the Shamchiroq-gul and Uryuk -gul color varieties.

RESEARCH METHODS. The research utilized generally accepted zootechnical, biological, and statistical analysis methods. The accuracy and reliability of the data were analyzed using the SPSS (Statistical Package for Social Science) computer program.

Main Part. In our research work, we determined the wool productivity of Karakalpak Sur sheep of the Shamchiroq-gul and Uryuk-gul color varieties, and the obtained data are summarized in Table 1.

Table 1
Wool productivity of Karakalpak Sur sheep with Shamchiroq-Gul and Uryuk -Gul color variations

Cross-section indicators	Wool productivity by colors, grams.			
	Shamchiroq-gul		Uryuk-gul	
	$X \pm S_x$	Oscillation	$X \pm S_x$	Oscillation
Lamb wool	707,6±56,7	675,3-801,3	789,3±54,8	687,7-845,6
Spring wool	894,4±64,2	802,5-955,3	937,2±67,8	843,2-989,6

Autumn wool	689,5±48,4	612,8-789,2	715,6±54,1	605,7-804,2
Total annual (spring+autumn)	1583,9±89,4	1498,3-1646,6	1652,8±92,15	1563,6-1729,7

Analysis of the data presented in Table 1 shows that in the quantitative indicators of wool productivity for Karakalpak Sur sheep, the lambs of the Shamchiroq-gul variety produced 707,6±56,7 g of wool, while this indicator for lambs of the Uryuk-gul variety was 789,3±54,8 g. Thus, lambs of the uryuk-gul variety have a larger body compared to lambs of the shamchiroq-gul variety, and consequently, their wool quantity is correspondingly higher. If the sheep were put to autumn shearing in September, then the period until spring shearing would be 8 months, and autumn shearing would cover a total of 4 months. In this regard, wool is characterized by a longer growth period, which, in turn, affects wool productivity. If spring wool is taken as 100%, then the amount of autumn wool in lambs of the shamchiroq-gul variety is 77,1%, and in lambs of the uryuk-gul variety this indicator is 76,4%. The total annual (spring+autumn) wool content in sheep of the shamchiroq-gul variety was 1583,9±89,4 g, while in sheep of the uryuk -gul variety, the indicator of the annual wool content was 4,4% higher than in sheep of the shamchiroq-gul variety.

According to the information provided in [1. p. 33] and [5. p. 206], the wool productivity of Karakul sheep of different wool-constitutional types varies, and they mainly emphasize that the amount of wool shearing is higher in animals with a strong constitutional type and lower in sheep with a delicate constitutional type.

The wool productivity of Karakul sheep also depends on the age of their lambing, and an increase was observed in the first, second, and third lambing years. It should also be noted that the age of sheep affects the quality of their wool. In young animals, there is a predominance of down and intermediate wool fibers, while in older animals, an increase in coarse wool fibers was observed.

The results of studying the wool productivity of Sur Karakul sheep in our experimental work are presented in Table 2.

Table 2

Annual wool yield in the dynamics of lambing age of sheep belonging to the Shamchiroq-gul and Uryuk-gul color variations, in grams

Age of lambing of sheep	n	Color variety and wool productivity	
		Shamchiroq-gul	Uryuk-gul
		X±Sx	
1st age at childbirth	30	1578,5±65,6	1621,5±67,9
2nd age at childbirth	30	1607,5±55,7	1646,2±68,3
3rd age at childbirth	30	1668,4±76,3	1731,3±79,4
Average	75	1618,1±65,9	1666,3±71,9

Analysis of the data in Table 2 shows that if the amount of wool sheared from sheep of the 1st lambing age is taken as 100%, then in sheep of the 2nd lambing age of the shamchiroq-gul variety, the annual wool content increased by 1,8%, and in the 3rd lambing age - by 5,7%. It can be seen that this trend is preserved in the uryuk-gul variety of sheep. It was equal to 1,5% and 5,8%, respectively.

In Karakul sheep, the yield of clean wool is an important indicator of wool purity and determines the degree of contamination of sheep wool before shearing [3. pp. 20-23]. Sheep wool can be contaminated by various plant seeds and grease-sweat mixtures released with the wool. The lower the degree of wool contamination, the higher the expected clean wool yield.

According to the data obtained on wool yield, the wool yield of lambs of the shamchiroq-gul variety (n=5) was 89,7%, while in lambs of the uryuk-gul variety, this indicator was 88,9%. In samples obtained from spring wool shearing, the clean yield was slightly lower, equal to 77,9% in sheep of the shamchiroq-gul variety, while this indicator was 76.4% in sheep of the uryuk-gul variety. In the autumn shearing samples, sheep of the shamchiroq-gul variety yielded 95,7%, and the wool samples obtained from uryuk-gul sheep yielded 95,1%. In spring shearing (during the 12-month period), due to the high grease-sweat content in the wool fiber and the longer shearing period, the clean wool yield is considered lower.

CONCLUSION: The conclusion of the experimental data obtained on wool productivity of Karakalpak sur sheep is that lambs of the uryuk-gul variety exceeded lambs of the shamchiroq-gul variety in wool productivity by 4,4%, while lambs of the shamchiroq-gul variety, conversely, exceeded those of the uryuk-gul variety in clean wool yield by 0,8%. These data should be taken into account in wool production.

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