WOOL PRODUCTIVITY OF LOCAL GOATS IN USTYURT CONDITIONS

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Abstract
This article examines the dependence of wool productivity in local goats on pasture areas under the conditions of the Ustyurt Plateau. The study identifies differences in wool productivity based on various pasture areas and presents relevant conclusions.

Keywords. Ustyurt Plateau, local goats, wool productivity, pasture areas, conclusions.

Introduction

Numerous scientific studies have been conducted in many countries aimed at improving the breeding and genotype of goats to enhance their productivity to a certain extent. Today, meat, wool, and dairy products from goat farming play a crucial role in ensuring food security, and the development of new modern methods to increase both the quantity and quality of goat products remains relevant.
In increasing the productivity of goats, it is important to determine their dependence on age, sex, constitutional type, and pasture types, as well as to develop alternative methods.

Research objective: To develop and recommend methods for increasing wool productivity of local goats in the pasture conditions of the Ustyurt Plateau in the Republic of Karakalpakstan.

The object of the research is the indicators of wool productivity of local goats and their dependence on pasture areas.

The subject of the research is the indicators of wool productivity.

Research methods: In conducting the scientific research, generally accepted zootechnical methods were used to determine wool, meat and milk productivity, live weight, and growth and development of goats. The methods of N.A. Plokhinsky were used to determine "Arithmetic mean (X), its error (Sx), and coefficient of variation (Cv)."

Research Location: The experimental work for this dissertation was conducted from 2023 to 2025 on the farms of the "Usturt Karakolchilik Orayi" production cooperative, which belongs to the "Ustyurt" rural citizens' assembly in the Kungrad district of the Republic of Karakalpakstan (Head: A. Jazikbaev).

There are many unexplored aspects of producing goods from local goats, especially in the conditions of the Ustyurt plateau. The Ustyurt plateau environment is considered suitable for nomadic practices, necessitating movement from one pasture to another. In this context, the productivity and types of pasture plants are crucial, and it's important to determine their usage periods and regularly rotate pastures. This approach serves two purposes: firstly, to increase the productivity of goats, and secondly, to ensure the rational use of pastures.

Research results. In our experimental work, we determined the wool productivity of local goats in relation to the pasture areas of the Ustyurt plateau. These findings are summarized in Table 1 below.

Table 1 Dependence of wool productivity on pasture areas

Regions	Sex	n	Wool clip, g	Oscillation
			$X \pm S_x$	
Northern Ustyurt region	♂	11	897,6±76,8*	823-921
	♀	75	801,8±69,3*	759-836
Aral Sea region	♂	13	785.4±71,2	701-812
	♀	69	709.5±65,8	679-765
Southern Ustyurt region	♂	14	854,4±79,3*	802-889
	♀	53	769.6±66,7*	732-796
Average across all regions	♂	38	845,8±81,5	701-921
	♀	197	760,3±71,3	679-836

*p<0,001

Analysis of the data in Table 1 reveals that the wool productivity of local goats is dependent on pasture areas. During our experimental work, we studied the wool productivity of local goats raised in the "Northern Region of Ustyurt," "Aral Sea Region," and "Southern Region of Ustyurt" of the Ustyurt Plateau. Differences in wool productivity between male and female goats were observed across regions. In the northern region of Ustyurt, the amount of wool sheared from male goats averaged 897.6±76.8 grams (n=11), while for female goats, this indicator was 801.8±69.3 grams (p<0.001).

It can be said that male animals showed superiority over female animals in sexual dimorphism, with this advantage amounting to 98.0 grams. For goats kept on pastures in the Aral Sea region, this indicator was 785.4±71.2 grams in male goats and 709.5±65.8 grams in female goats, respectively (p<0.001). A similar pattern was observed in goats bred in the southern region of

Ustyurt, where the values were 854.4±79.3 and 769.6±66.7 grams for males and females, respectively ($p<0.001$).

The correlation between wool productivity and pasture areas was observed, with high indicators recorded in the northern part of the Ustyurt Plateau. In conclusion, it can be stated that pasture productivity is high in the northern regions of the Ustyurt Plateau. One of the main reasons for this is that the amount of precipitation in this region is higher than in other areas, and annual plants serve as suitable fodder for goats. Goats are kept in this region throughout the summer, and in mid-autumn they are herded to the southern part of Ustyurt, which is considered the southern region.

Determining the differences in wool productivity among local goats in the studied areas and the efficient use of pasture lands is considered important. Therefore, variations in wool productivity of local goats were identified across different pasture areas, and this data is presented in Figure 1.

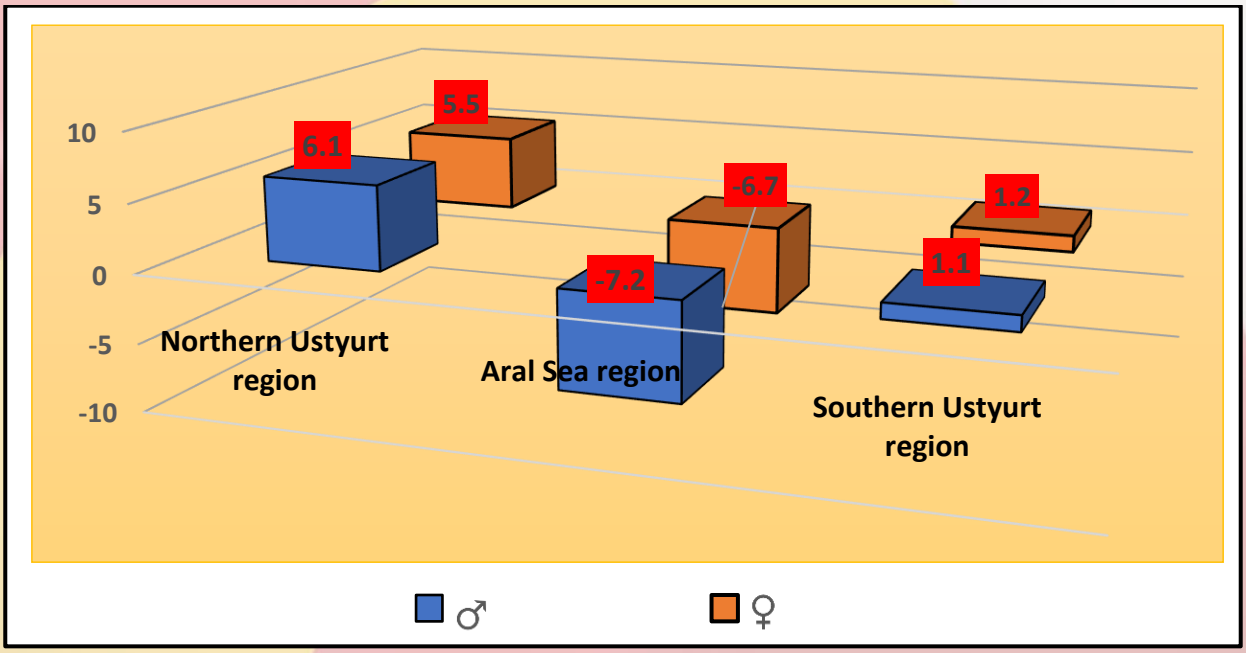

Figure 1 Differences in wool productivity across regions compared to the average indicator of the Ustyurt Plateau, %

Analysis of the data in Figure 1 shows that, compared to the average indicators of the Ustyurt Plateau pastures, the wool productivity of local female goats in the northern part of Ustyurt was 5.5% higher, and that of male goats was 6.1% higher. In contrast, in the Aral Sea region, wool productivity was 6.7% lower for female goats and 7.2% lower for male goats. In the southern regions of the Ustyurt Plateau, this indicator was 1.2% higher for female goats and 1.1% higher for male goats ($p<0.001$). It has been proven that wool productivity is directly related to pasture conditions. Therefore, to obtain as much wool as possible from local goats,

it is recommended to maintain the goats in a planned system within the pasture conditions of the Ustyurt Plateau.

Conclusions

It has been proven that wool productivity is related to pasture conditions, and in the northern regions of the Ustyurt Plateau, local goats show superior quantitative and qualitative aspects of wool productivity. This data should be taken into account in wool production.

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